54th EDITION



ISO 9001: 2008 Certified



CHICAGO CINCINNATI GREENSBORO PORTAGE

Web Site: www.centralsteel.com

FOR ACCURACY, SPECIFY BY DECIMAL — NOT BY GAGE

	Decimals	Millimeters
1/64	.0156	0.3969
1/32	.0312	0.7925
3/64	.0469	1.1906
1/16	.0625	1.5875
5/64	.0781	1.9844
3/32	.0938	2.3813
7/64	.1094	2.7781
1/8	**.125**	3.1750
9/64	.1406	3.5719
5/32	.1562	3.9675
11/64	.1719	4.3656
3/16	.1875	4.7625
13/64	.2031	5.1594
7/32	.2188	5.5563
15/64	.2344	5.9531
1/4	**.250**	6.3500
17/64	.2656	6.7469
9/32	.2812	7.1425
19/64	.2969	7.5406
5/16	.3125	7.9375
21/64	.3281	8.3344
11/32	.3438	8.7313
23/64	.3594	9.1281
3/8	**.375**	9.5250
25/64	.3906	9.9219
13/32	.4062	10.3175
27/64	.4219	10.7156
7/16	.4375	11.1125
29/64	.4531	11.5094
15/32	.4688	11.9063
31/64	.4844	12.3031
1/2	**.500**	12.700

Millimeters	Decimals	
13.0969	.5156	33/64
13.4925	.5312	17/32
13.8906	.5469	35/64
14.2875	.5625	**9/16**
14.6844	.5781	37/64
15.0813	.5938	19/32
15.4781	.6094	39/64
15.8750	**.625**	**5/8**
16.2719	.6406	41/64
16.6675	.6562	21/32
17.0656	.6719	43/64
17.4625	.6875	**11/16**
17.8594	.7031	45/64
18.2563	.7188	23/32
18.6531	.7344	47/64
19.0500	**.750**	**3/4**
19.4469	.7656	49/64
19.8425	.7812	25/32
20.2406	.7969	51/64
20.6375	.8125	**13/16**
21.0344	.8281	53/64
21.4313	.8438	27/32
21.8281	.8594	55/64
22.2250	**.875**	**7/8**
22.6219	.8906	57/64
23.0175	.9062	29/32
23.4156	.9219	59/64
23.8125	.9375	**15/16**
24.2094	.9531	61/64
24.6063	.9688	31/32
25.0031	.9844	63/64
25.4000	**1.000**	**1**

ISO 9001:2008 Certified

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ALL ORDERS ARE SUBJECT TO THE TERMS AND CONDITIONS IN THIS STOCK LIST

TERMS AND CONDITIONS OF SALE

QUOTATIONS AND ORDERS—All quotations by Central Steel and Wire Company (whether oral or written) shall be offers to sell by us at the quoted prices and on the terms hereinafter set-forth. All such quotations are subject to change without notice and to continued availability of the quoted material and, unless other-wise agreed, are binding upon us only if the buyer immediately submits an order. All contracts to sell are subject to strikes, accidents, or other causes of any kind beyond our reasonable control. No order placed with us shall be binding upon us until full specifications identifying the material being ordered have been provided to us and the order has been accepted by us.

A buyer may not, except with our written consent, cancel any order for material which we have special ordered from the mill, which we have cut or otherwise processed in accordance with the buyer's instructions, or which has been shipped by us.

We will, at a buyer's request, estimate the anticipated time of delivery of any order, but we will have no liability for any non-timely delivery.

Confirming orders should be marked "Confirmation," across the face of the order. We may treat confirming orders not so marked as additional original orders, and we will not be responsible for any resulting expense and inconvenience. In the event that an order is placed with us by telephone and the buyer does not send us a confirming order before we ship in response to the order, our records as to the terms of the order shall be conclusive.

TITLE AND RISK OF LOSS—If material is shipped to a buyer via a carrier designated by the buyer, title and risk of loss to the material shall pass to the buyer when the material is loaded at our plant.

If material is shipped to a buyer via any other carrier, title and risk of loss to the material shall pass to the buyer upon delivery at the buyer's plant and buyer's release of the shipping documents. However, buyer must note any shortage or damage on both the buyer's copy and the carrier's copy of the carrier's receipt, freight bill or delivery memo, and cause both copies to be signed by the carrier's driver or representative. If buyer does not do so, we will be responsible for any shortage or damage only (i) in the case of a carrier that is owned or operated by or affiliated with us, if we establish to our reasonable satisfaction that there was in fact a shortage in the delivery or that the damage occurred prior to receipt of the material by buyer, as applicable, or (ii) in the case of any carrier that is not owned or operated by or affiliated with us, if we are able to recover for the shortage or damage from such carrier.

TECHNICAL ADVICE—None of our agents, employees or representatives have any authority to bind us to any affirmation, representation, or warranty other than those stated herein or on our delivery receipt or invoice form. In particular, any technical advice we furnish with respect to the use of material is given without charge, and we shall have no obligation or liability for the advice given or the results obtained, all such advice being given and accepted at buyer's risk.

LIMITED WARRANTY—We warrant that all material, at the time of shipment by us, shall conform to any specifications set forth on the face of our delivery receipt or invoice and shall conform to the description contained in the Certificate of Tests or Certificate of Compliance if either has been furnished by us in connection with a sale. We do not warrant against any non-conformity to the extent that such non-conformity results from damage, misuse, abrasion, corrosion, negligence, accident, tampering, faulty installation, improper storage, inadequate maintenance, or any other cause affecting the material after shipment of the material. THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY. WE DISCLAIM ALL OTHER WARRANTIES WITH RESPECT TO MATERIAL SOLD OR SERVICES RENDERED, WHETHER EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS OF THE MATERIAL OR SERVICES FOR ANY PARTICULAR PURPOSE.

BY PLACING AN ORDER WITH US, A BUYER AFFIRMS THAT THE BUYER HAS NOT RELIED UPON THE SKILL OR JUDGMENT OF US OR ANY OF OUR AGENTS, EMPLOYEES, OR REPRESENTATIVES TO SELECT OR FURNISH MATERIAL FOR ANY PARTICULAR PURPOSE, AND THE SALE IS MADE WITHOUT ANY WARRANTY BY US THAT THE MATERIAL IS SUITABLE FOR ANY PARTICULAR PURPOSE.

Except for the specifications and certificates (if any) specifically referred to above, any description of the material or service contained on our sales forms or any other correspondence is for the sole purpose of identifying it, is not part of the basis of the bargain, and does not constitute a warranty that the material or service shall conform to that description. The use of any sample in connection with a sale is for illustrative purposes only, is not part of the basis of the bargain, and is not to be construed as a warranty that the material will conform to the sample. Any affirmation of fact or promise made by us is not part of the basis of the bargain and shall not constitute a warranty that the material will conform to the affirmation or promise.

EXCLUSIVE REMEDY—We will, at our option and as a buyer's exclusive remedy, replace with new material, or refund the purchase price for, material that is defective or non-conforming at the time of shipment if the buyer gives written notice of the defect or non-conformity to us within 45 days after receipt. After such 45 day period, all material shall be deemed to have been accepted. If we elect to refund the purchase price, you must return the material to us immediately. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as we are willing and able to replace defective or non-conforming material or refund the purchase price within the time specified. UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DAMAGE, INCLUDING ATTORNEY FEES OR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGE OR LOSS ARISING FROM CONTRACT, TORT OR OTHERWISE, INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, LOSS OR DAMAGE TO BUILDINGS, CONTENTS, PRODUCTS, OR PERSONS (OTHER THAN INJURY TO PERSONS IN RESPECT OF WHICH LIABILITY IS IMPOSED BY LAW), EVEN IF WE WERE ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event shall our liability exceed the purchase price of the material sold or services rendered by us. Buyer must immediately discontinue use of any item claimed to be defective. No charge for labor or expense required to repair defective material or occasioned by it will be allowed.

GOVERNING LAW AND VENUE—You agree that all disputes relating to any material sold or services rendered by us to you shall be governed by the laws of the State of Illinois. You agree that any legal action or proceeding shall be brought only in either United States District Court for the Northern District of Illinois or in the Circuit Court of Cook County and you consent to both venue and personal jurisdiction in those courts to the exclusion of all others.

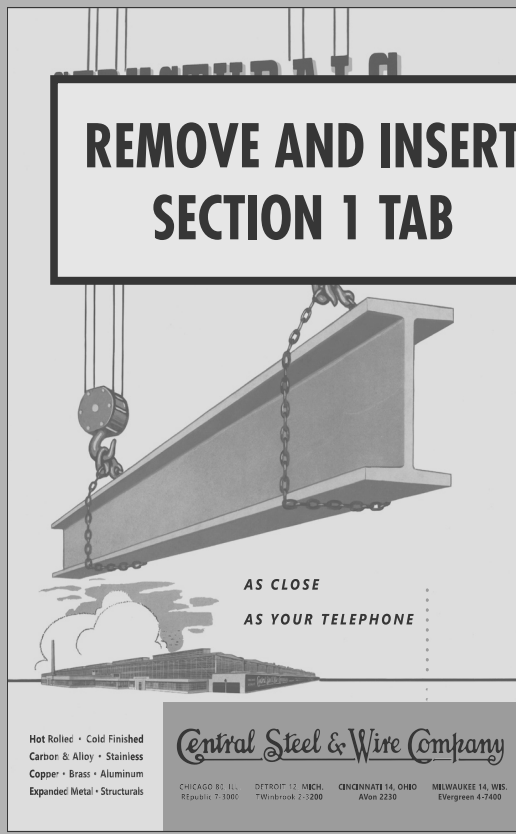
LIMITATION ON ACTIONS—No action against us for breach of any sales agreement may be brought more than one year after the delivery of material.

ACCEPTANCE—All sales made by Central Steel and Wire Company are pursuant to these terms and conditions. If we receive a purchase order or other document from a buyer that limits acceptance to its terms or states that our acknowledgement, shipping of material, commencing work, or other act or failure to act constitutes acceptance of an offer on the terms of the purchase order or other document, any responding document sent by us which expresses acceptance or confirms the order is expressly conditioned on buyer's assent to the terms set forth herein and in such responding document. Such assent shall be deemed given when the buyer accepts shipment of any of the material described. We hereby object to any term contained in a buyer's purchase order or other document if the term is different from or in addition to the terms herein.

SECTION 1

BEAMS, CHANNELS, TEES, ANGLES, RAILS

REMOVE AND INSERT SECTION 1 TAB



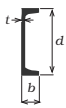
Central Steel & Wire Newspaper Ad from October 1952

REMOVE AND INSERT
SECTION 1 TAB

STEEL STRUCTURALS



Beams
Standard (I Beams)
"S" Shapes 4
Wide Flange
"W" Shapes 5-7



Channels
Carbon Steel - Bar Size 8
- "C" Shapes 9
- "MC" Shapes 9
High Strength Low Alloy - "C" Shapes 12



Tees
Bar Size 8



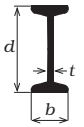
Rails
ASCE Sections - New Billet Steel 8



Angles
Carbon Steel - Bar Size 10
- "L" Shapes 11
High Strength Low Alloy - Bar Size 12
- "L" Shapes 12



Tubing - A 500
Round, Square, Rectangular 120-121, 123



STEEL I BEAMS

"S" SHAPES

Structural

ASTM A 36 ASME SA-36

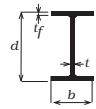
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Identification Color: Plain Ends

Section Number	Weight Per Ft. Lbs.	Depth *d* In.	Width *b* In.	Web *t* In.
S 3 x	**5.7**	3.00	2.330	.170
	7.5	3.00	2.509	.349
S 4 x	**7.7**	4.00	2.663	.193
	9.5	4.00	2.796	.326
S 5 x	**10**	5.00	3.004	.214
S 6 x	**12.5**	6.00	3.332	.232
	17.25	6.00	3.565	.465
S 8 x	**18.4**	8.00	4.001	.271
	23	8.00	4.171	.441
S10 x	**25.4**	10.00	4.661	.311
S12 x	**31.8**	12.00	5.000	.350
	35	12.00	5.078	.428
	40.8	12.00	5.252	.462
	50	12.00	5.477	.687
S15 x	**42.9**	15.00	5.501	.411
	50	15.00	5.640	.550
S18 x	**54.7**	18.00	6.001	.461
	70	18.00	6.251	.711
S20 x	**66**	20.00	6.250	.505
	75	20.00	6.375	.635
	86	20.25	7.000	.660
	96	20.25	7.250	.800
S24 x	**80**	24.00	7.000	.500
	90	24.00	7.125	.625
	100	24.00	7.250	.745
	106	24.50	7.875	.620
	121	24.50	8.050	.800

STEEL WIDE FLANGE BEAMS "W" SHAPES*



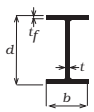
ASTM A 992 ASTM A 572 Grade 50 ASTM A 709 Grade 50

Chemical Composition and Mechanical Properties, *Page 263*
Identification Color: Red

Section Number	Weight Per Ft. Lbs.	Depth d In.	Flange Width b In.	Flange Thick t_f In.	Web t In.
W 4 x	**13****	4.16	4.060	.345	.280
W 5 x	**16**	5.01	5.000	.360	.240
	19	5.15	5.030	.430	.270
W 6 x	**9**	5.90	3.940	.215	.170
	12	6.03	4.000	.280	.230
	15	5.99	5.990	.260	.230
	16	6.28	4.030	.405	.260
	20	6.20	6.020	.365	.260
	25	6.38	6.080	.455	.320
W 8 x	**10**	7.89	3.940	.205	.170
	13	7.99	4.000	.255	.230
	15	8.11	4.015	.315	.245
	18	8.14	5.250	.330	.230
	21	8.28	5.270	.400	.250
	24	7.93	6.495	.400	.245
	28	8.06	6.535	.465	.285
	31	8.00	7.995	.435	.285
	35	8.12	8.020	.495	.310
	40	8.25	8.070	.560	.360
	48	8.50	8.110	.685	.400
	58	8.75	8.220	.810	.510
	67	9.00	8.280	.935	.570
W10 x	**12**	9.87	3.960	.210	.190
	15	9.99	4.000	.270	.230
	17	10.11	4.010	.330	.240
	19	10.24	4.020	.395	.250
	22	10.17	5.750	.360	.240
	26	10.33	5.770	.440	.260
	30	10.47	5.810	.510	.300
	33	9.73	7.960	.435	.290
	39	9.92	7.985	.530	.315
	45	10.10	8.020	.620	.350
	49	9.98	10.000	.560	.340
	54	10.09	10.030	.615	.370
	60	10.22	10.080	.680	.420
	68	10.40	10.130	.770	.470
	77	10.60	10.190	.870	.530
	88	10.84	10.265	.990	.605
	100	11.10	10.340	1.120	.680
	112	11.36	10.415	1.250	.755
W12 x	**14**	11.91	3.970	.225	.200
	16	11.99	3.990	.265	.220
	19	12.16	4.005	.350	.235
	22	12.31	4.030	.425	.260
	26	12.22	6.490	.380	.230
	30	12.34	6.520	.440	.260
	35	12.50	6.560	.520	.300
	40	11.94	8.005	.515	.295
	45	12.06	8.045	.575	.335
	50	12.19	8.080	.640	.370
	53	12.06	9.995	.575	.345
	58	12.19	10.010	.640	.360
	65	12.12	12.000	.605	.390
	72	12.25	12.040	.670	.430
	79	12.38	12.080	.735	.470
	87	12.53	12.125	.810	.515
	96	12.71	12.160	.900	.550
	106	12.89	12.220	.990	.610
	120	13.12	12.320	1.105	.710
	136	13.41	12.400	1.250	.790
	152	13.71	12.480	1.400	.870
	170	14.03	12.570	1.560	.960
	190	14.38	12.670	1.735	1.060
W14 x	**22**	13.74	5.000	.335	.230
	26	13.91	5.025	.420	.255
	30	13.84	6.730	.385	.270

***ASTM A 36, ASME SA-36, ASTM A 709 Grade 36 Available—Plain Ends
****Inside flange surfaces are sloped.

Continued on following page



STEEL WIDE FLANGE BEAMS
"W" SHAPES*
ASTM A 992 ASTM A 572 Grade 50
ASTM A 709 Grade 50

Chemical Composition and Mechanical Properties, *Page 263*

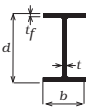
Identification Color: Red

Section Number	Weight Per Ft. Lbs.	Depth *d* In.	Flange Width *b* In.	Flange Thick t_f In.	Web *t* In.
W14 x	**34**	13.98	6.745	.455	.285
	38	14.10	6.770	.515	.310
	43	13.66	7.995	.530	.305
	48	13.79	8.030	.595	.340
	53	13.92	8.060	.660	.370
	61	13.89	9.995	.645	.375
	68	14.04	10.035	.720	.415
	74	14.17	10.070	.785	.450
	82	14.31	10.130	.855	.510
	90	14.02	14.520	.710	.440
	99	14.16	14.565	.780	.485
	109	14.32	14.605	.860	.525
	120	14.48	14.670	.940	.590
	132	14.66	14.725	1.030	.645
	145	14.78	15.500	1.090	.680
	159	14.98	15.565	1.190	.745
	176	15.22	15.650	1.310	.830
	193	15.48	15.710	1.440	.890
	211	15.72	15.800	1.560	.980
	233	16.04	15.890	1.720	1.070
	257	16.38	15.995	1.890	1.175
	283	16.74	16.110	2.070	1.290
	311	17.12	16.230	2.260	1.410
	342	17.54	16.360	2.470	1.540
	370	17.92	16.475	2.660	1.655
	398	18.29	16.590	2.845	1.770
W16 x	**26**	15.69	5.500	.345	.250
	31	15.88	5.525	.440	.275
	36	15.86	6.985	.430	.295
	40	16.01	6.995	.505	.305
	45	16.13	7.035	.565	.345
	50	16.26	7.070	.630	.380
	57	16.43	7.120	.715	.430
	67	16.33	10.235	.665	.395
	77	16.52	10.295	.760	.455
	89	16.75	10.365	.875	.525
	100	16.97	10.425	.985	.585
W18 x	**35**	17.70	6.000	.425	.300
	40	17.90	6.015	.525	.315
	46	18.06	6.060	.605	.360
	50	17.99	7.495	.570	.355
	55	18.11	7.530	.630	.390
	60	18.24	7.555	.695	.415
	65	18.35	7.590	.750	.450
	71	18.47	7.635	.810	.495
	76	18.21	11.035	.680	.425
	86	18.39	11.090	.770	.480
	97	18.59	11.145	.870	.535
	106	18.73	11.200	.940	.590
	119	18.97	11.265	1.060	.655
	130	19.25	11.160	1.200	.670
	143	19.49	11.220	1.320	.730
	158	19.72	11.300	1.440	.810
W21 x	**44**	20.66	6.500	.450	.350
	50	20.83	6.530	.535	.380
	57	21.06	6.555	.650	.405
	62	20.99	8.240	.615	.400
	68	21.13	8.270	.685	.430
	73	21.24	8.295	.740	.455
	83	21.43	8.355	.835	.515
	93	21.62	8.420	.930	.580
	101	21.36	12.290	.800	.500
	111	21.51	12.340	.875	.550
	122	21.68	12.390	.960	.600
	132	21.83	12.440	1.035	.650
	147	22.06	12.510	1.150	.720
	166	22.48	12.420	1.360	.750

*****ASTM A 36, ASME SA-36, ASTM A 709 Grade 36 Available—Plain Ends

Continued on following page

STEEL WIDE FLANGE BEAMS "W" SHAPES*

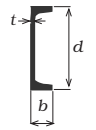


ASTM A 992 ASTM A 572 Grade 50
ASTM A 709 Grade 50

Chemical Composition and Mechanical Properties, *Page 263*
Identification Color: Red

Section Number	Weight Per Ft. Lbs.	Depth d In.	Flange Width b In.	Flange Thick t_f In.	Web t In.
W24 x	**55**	23.57	7.005	.505	.395
	62	23.74	7.040	.590	.430
	68	23.73	8.965	.585	.415
	76	23.92	8.990	.680	.440
	84	24.10	9.020	.770	.470
	94	24.31	9.065	.875	.515
	103	24.53	9.000	.980	.550
	104	24.06	12.750	.750	.500
	117	24.26	12.800	.850	.550
	131	24.48	12.855	.960	.605
	146	24.74	12.900	1.090	.650
	162	25.00	12.955	1.220	.705
	176	25.24	12.890	1.340	.750
	192	25.47	12.950	1.460	.810
W27 x	**84**	26.71	9.960	.640	.460
	94	26.92	9.990	.745	.490
	102	27.09	10.015	.830	.515
	114	27.29	10.070	.930	.570
	129	27.63	10.010	1.100	.610
	146	27.38	13.965	.975	.605
	161	27.59	14.020	1.080	.660
	178	27.81	14.085	1.190	.725
	194	28.11	14.035	1.340	.750
W30 x	**90**	29.53	10.400	.610	.470
	99	29.65	10.450	.670	.520
	108	29.83	10.475	.760	.545
	116	30.01	10.495	.850	.565
	124	30.17	10.515	.930	.585
	132	30.31	10.545	1.000	.615
	148	30.67	10.480	1.180	.650
	173	30.44	14.985	1.065	.655
	191	30.68	15.040	1.185	.710
	211	30.94	15.105	1.315	.775
	235	31.30	15.055	1.500	.830
W33 x	**118**	32.86	11.480	.740	.550
	130	33.09	11.510	.855	.580
	141	33.00	11.535	.960	.605
	152	33.49	11.565	1.055	.635
	169	33.82	11.500	1.220	.670
	201	33.68	15.745	1.150	.715
	221	33.93	15.805	1.275	.775
	241	34.18	15.860	1.400	.830
W36 x	**135**	35.55	11.950	.790	.600
	150	35.85	11.975	.940	.625
	160	36.01	12.000	1.020	.650
	170	36.17	12.030	1.100	.680
	182	36.33	12.075	1.180	.725
	194	36.49	12.115	1.260	.765
	210	36.69	12.180	1.360	.830
	230	35.90	16.470	1.260	.760
	232	37.12	12.120	1.570	.870
	245	36.08	16.510	1.350	.800
	256	37.43	12.215	1.730	.960
	260	36.26	16.550	1.440	.840
	280	36.52	16.595	1.570	.885
	300	36.74	16.655	1.680	.945
	328	37.09	16.630	1.850	1.020
W40 x	**149**	38.20	11.810	.830	.630
	167	38.59	11.810	1.025	.650
	199	38.67	15.750	1.065	.650
	211	39.37	11.810	1.415	.750
	249	39.38	15.750	1.420	.750
	277	39.69	15.830	1.575	.830
	297	39.84	15.825	1.650	.930
	362	40.55	16.020	2.010	1.120
	397	40.95	16.120	2.200	1.220

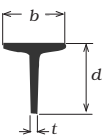
***ASTM A 36, ASME SA-36, ASTM A 709 Grade 36 Available—Plain Ends



STEEL CHANNELS
Bar Size
ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*
Random Lengths 20 Ft.
Identification Color: Plain Ends

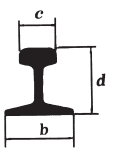
Size in Inches d	b	t	Lbs. Per Foot	Est. Lbs. 20′
3/4	3/8	1/8	.56	11.20
1	1/2	1/8	.84	16.80
1 1/4	1/2	1/8	1.01	20.20
1 1/2	1/2	1/8	1.12	22.40
1 1/2	9/16	3/16	1.44	28.80
2	1/2	1/8	1.43	28.60
2	9/16	3/16	1.86	37.20
2	5/8	1/4	2.28	45.60
2	1	1/8	1.59	31.80
2	1	3/16	2.32	46.40
2 1/2	5/8	3/16	2.27	45.40



STEEL TEES
Bar Size
ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*
Random Lengths 20 Ft.
Identification Color: Plain Ends

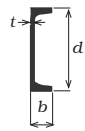
Flange Inches b	Stem Inches d	Thickness Inches t	Lbs. Per Foot	Est. Lbs. 20′
1 1/2	1 1/2	3/16	1.80	36.00
		1/4	2.43	48.60
2	2	1/4	3.62	72.40



STEEL RAILS
New Billet Steel
ASCE Sections
(Standard holes both ends)
Identification Color: Plain Ends

Lbs. per Yard	Section No.	Height in Inches d	Width of Base b	Width of Head c	Random Lengths Feet	Track Bolts to Be Used
25	**2540**	2 3/4	2 3/4	1 1/2	30	1/2 x 2 1/4
30	**3040**	3 1/8	3 1/8	1 11/16	30	5/8 x 2 1/2
40	**4040**	3 1/2	3 1/2	1 7/8	30	3/4 x 3
60	**6040**	4 1/4	4 1/4	2 3/8	33	3/4 x 3 1/2

STEEL CHANNELS
"C" SHAPES
"MC" SHAPES



ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Identification Color: Plain Ends

Section Number	Weight Per Ft. Lbs.	Depth *d* In.	Width *b* In.	Web *t* In.
C 3 x	**4.1**	3	1.410	.170
	5	3	1.498	.258
	6	3	1.596	.356
MC 3 x	**7.1**	3	1.938	.312
C 4 x	**5.4**	4	1.584	.184
	7.25	4	1.721	.321
MC 4 x	**13.8**	4	2.500	.500
C 5 x	**6.7**	5	1.750	.190
	9	5	1.885	.325
C 6 x	**8.2**	6	1.920	.200
	10.5	6	2.034	.314
MC 6 x	**12**	6	2.497	.310
C 6 x	**13**	6	2.157	.437
MC 6 x	**15.3**	6	3.500	.340
	16.3	6	3.000	.375
	18	6	3.504	.379
C 7 x	**9.8**	7	2.090	.210
	12.25	7	2.194	.314
	14.75	7	2.299	.419
MC 7 x	**19.1**	7	3.452	.352
	22.7	7	3.603	.503
MC 8 x	**8.5**	8	1.874	.179
C 8 x	**11.5**	8	2.260	.220
	13.75	8	2.343	.303
MC 8 x	**18.7**	8	2.978	.353
C 8 x	**18.75**	8	2.527	.487
MC 8 x	**20**	8	3.025	.400
	21.4	8	3.450	.375
	22.8	8	3.502	.427
C 9 x	**13.4**	9	2.433	.233
	15	9	2.485	.285
MC 9 x	**23.9**	9	3.450	.400
	25.4	9	3.500	.450
MC 10 x	**6.5**	10	1.127	.152
	8.4	10	1.500	.170
C 10 x	**15.3**	10	2.600	.240
	20	10	2.739	.379
MC 10 x	**22**	10	3.315	.290
C 10 x	**25**	10	2.886	.526
MC 10 x	**28.5**	10	3.950	.425
C 10 x	**30**	10	3.033	.673
MC 10 x	**33.6**	10	4.100	.575
MC 12 x	**10.6**	12	1.500	.190
C 12 x	**20.7**	12	2.942	.282
	25	12	3.047	.387
	30	12	3.170	.510
MC 12 x	**35**	12	3.767	.467
	45	12	4.012	.712
	50	12	4.135	.835
MC 13 x	**31.8**	13	4.000	.375
	40	13	4.185	.560
C 15 x	**33.9**	15	3.400	.400
MC 18 x	**42.7**	18	3.950	.450
	45.8	18	4.000	.500
	51.9	18	4.100	.600
	58	18	4.200	.700



STEEL ANGLES
Bar Size*
ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*
Random Lengths 20, 40 Ft.
Identification Color: Plain Ends

Size in Inches	t	Lbs. Per Ft.	Est. Lbs. 20 Ft.	Est. Lbs. 40 Ft.
L 1/2 x 1/2 x	1/8	.38	7.60	
L 5/8 x 5/8 x	1/8	.48	9.60	
L 7/8 x 7/8 x	1/8	.70	14.00	
L 1 x 5/8 x	1/8	.64	12.80	
L 1 x 3/4 x	1/8	.70	14.00	
L 1 x 1 x	1/8	.80	16.00	32.00
	3/16	1.16	23.20	
	1/4	1.49	29.80	
L 1 1/4 x 1 1/4 x	1/8	1.01	20.20	40.40
	3/16	1.48	29.60	59.20
	1/4	1.92	38.40	76.80
L 1 3/8 x 7/8 x	1/8	.91	18.20	
	3/16	1.32	26.40	
L 1 1/2 x 1 1/4 x	3/16	1.65	33.00	
L 1 1/2 x 1 1/2 x	1/8	1.23	24.60	49.20
	3/16	1.80	36.00	72.00
	1/4	2.34	46.80	93.60
L 1 3/4 x 1 1/4 x	1/8	1.23	24.60	
	3/16	1.80	36.00	
	1/4	2.34	46.80	
L 1 3/4 x 1 3/4 x	1/8	1.44	28.80	57.60
	3/16	2.12	42.40	84.80
	1/4	2.77	55.40	110.80
L 2 x 1 1/4 x	3/16	1.96	39.20	
	1/4	2.55	51.00	
L 2 x 1 1/2 x	1/8	1.44	28.80	
	3/16	2.12	42.40	84.80
	1/4	2.77	55.40	110.80
L 2 x 2 x	1/8	1.65	33.00	66.00
	3/16	2.44	48.80	97.60
	1/4	3.19	63.80	127.60
	5/16	3.92	78.40	156.80
	3/8	4.70	94.00	188.00
L 2 1/2 x 1 1/2 x	3/16	2.44	48.80	97.60
	1/4	3.19	63.80	127.60
	5/16	3.92	78.40	
L 2 1/2 x 2 x	3/16	2.75	55.00	110.00
	1/4	3.62	72.40	
	5/16	4.50	90.00	180.00
	3/8	5.30	106.00	
L 2 1/2 x 2 1/2 x	3/16	3.07	61.40	122.80
	1/4	4.10	82.00	164.00
	5/16	5.00	100.00	200.00
	3/8	5.90	118.00	236.00
	1/2	7.70	154.00	308.00

*Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized

Continued on following page

STEEL ANGLES
"L" SHAPES*



ASTM A 36 ASME SA-36

ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Identification Color: Plain Ends

Continued from preceding page

Size in Inches	t	Lbs. Per Foot
L 3 x 2 x	3/16	3.1
	1/4	4.1
	5/16	5.0
	3/8	5.9
	1/2	7.7
L 3 x 2 1/2 x	1/4	4.5
	5/16	5.6
	3/8	6.6
L 3 x 3 x	3/16	3.7
	1/4	4.9
	5/16	6.1
	3/8	7.2
	1/2	9.4
L 3 1/2 x 2 1/2 x	1/4	4.9
	5/16	6.1
	3/8	7.2
	1/2	9.4
L 3 1/2 x 3 x	1/4	5.4
	5/16	6.6
	3/8	7.9
L 3 1/2 x 3 1/2 x	1/4	5.8
	5/16	7.2
	3/8	8.5
	1/2	11.1
L 4 x 3 x	1/4	5.8
	5/16	7.2
	3/8	8.5
	1/2	11.1
L 4 x 3 1/2 x	1/4	6.2
	5/16	7.7
	3/8	9.1
	1/2	11.9
L 4 x 4 x	1/4	6.6
	5/16	8.2
	3/8	9.8
	1/2	12.8
	5/8	15.7
	3/4	18.5
L 5 x 3 x	1/4	6.6
	5/16	8.2
	3/8	9.8
	1/2	12.8
L 5 x 3 1/2 x	1/4	7.0
	5/16	8.7
	3/8	10.4
	1/2	13.6
	5/8	16.8
	3/4	19.8
L 5 x 5 x	5/16	10.3
	3/8	12.3
	1/2	16.2
	5/8	20.0
	3/4	23.6
L 6 x 3 1/2 x	5/16	9.8
	3/8	11.7
	1/2	15.3
L 6 x 4 x	5/16	10.3
	3/8	12.3
	1/2	16.2
	5/8	20.0
	3/4	23.6
L 6 x 6 x	3/8	14.9
	1/2	19.6
	5/8	24.2
	3/4	28.7
	7/8	33.1
	1	37.4
L 7 x 4 x	3/8	13.6
	1/2	17.9
	5/8	22.1
	3/4	26.2
L 8 x 4 x	1/2	19.6
	3/4	28.7
L 8 x 6 x	1/2	23.0
	3/4	33.8
	1	44.2
L 8 x 8 x	1/2	26.4
	5/8	32.7
	3/4	38.9
	1	51.0

*Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized



STEEL SHAPES

HIGH STRENGTH LOW ALLOY

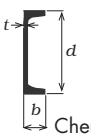
ASTM A 588
ASTM A 709 Grade 50W

Chemical Composition and Mechanical Properties, *Page 253*
Identification Color: Pink

ANGLES

Random Lengths
Bar Angles 20 Ft.
"L" Angles (Structural) 20, 40 Ft.

Size in Inches	*t*	Lbs. Per Foot
1½ x 1½ x	**3/16**	1.80
L 3 x 3 x	**3/8**	7.2
L 3½ x 3½ x	**3/8**	8.5



HIGH STRENGTH LOW ALLOY

ASTM A 588
ASTM A 709 Grade 50W

Chemical Composition and Mechanical Properties, *Page 253*
Identification Color: Pink

"C" SHAPES (Channels)

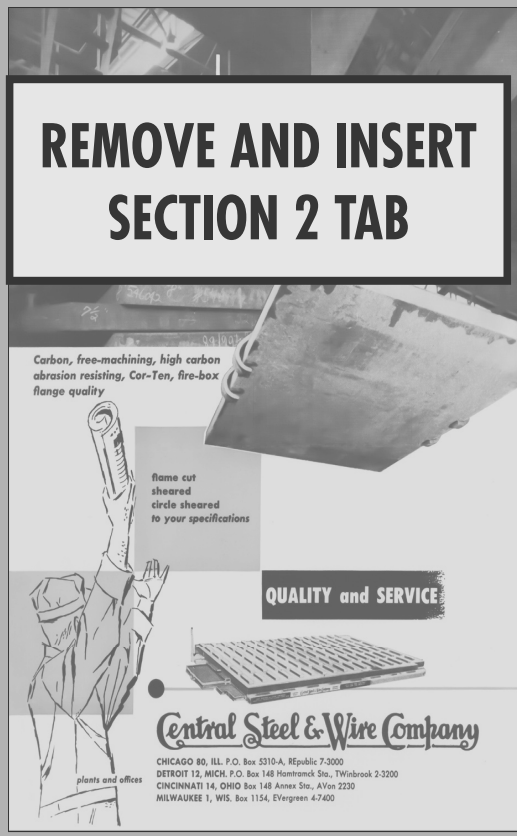
Random Lengths 20 Ft.

Section Number	Weight Per Ft. Lbs.	Depth *d* In.	Width *b* In.	Web *t* In.
C 8 x	**11.5**	8.00	2.260	.220

SECTION 2

PLATES AND SAFETY PRODUCTS

REMOVE AND INSERT SECTION 2 TAB



Central Steel & Wire Newspaper Ad from April 1955

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SECTION 2 TAB

STEEL PLATES



1045 ASTM A 830 15-17
ASTM A 36 15-17
Ipsco/SSAB 16
Pickled & Oiled 15
SCS® 18
ASTM A 709 ..... 14,15-18, 20, 23
Abrasion Resisting
Medium Hard 22
AR 400 22
Alloy
T-1 or ASTM A 514 23
ASTM A 709 23
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Regular Quality 15-17
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SCS® 18
Expanded Metal 26-27
Floor Plate 24
Grating 25, 26
High Strength Low Alloy
ASTM A 656 21
ASTM A 709 20
CleanForm® 100 21
Cor-Ten® or ASTM A 588 20
DOMEX® 100 XF 21
Ex-Ten® 50 or ASTM A 572 20
SCS® 18
Metric
Ex-Ten® 50 or ASTM A 572 14
Pressure Vessel Quality (PVQ)
ASTM A 516 19
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SAFETY PRODUCTS



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Expanded Metal 26-27
Planks 28, 29
Walkway 28, 29
Sheets 30
Ladder Rungs 30
Floor Plate 24,136,165

SHAPE CUTTING



Ordering by Sketch Number 264

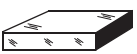


STEEL PLATES
UNIVERSAL MILL

ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Random Lengths 20 Ft.
Identification Color: Plain Ends

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′
3/16 x 7 to 12 — See H.R. Strip Page 52		
1/4 x 9	7.66	153.2
10	8.51	170.2
12	10.21	204.2
3/8 x 9	11.49	229.8
10	12.77	255.4
12	15.32	306.4
1/2 x 9	15.32	306.4
10	17.02	340.4
12	20.42	408.4
3/4 x 9	22.97	459.4
10	25.53	510.6
12	30.63	612.6
1 x 9	30.63	612.6
10	34.03	680.6
12	40.84	816.8
1 1/2 x 10	51.05	1021.0
12	61.26	1225.2



STEEL PLATES
METRIC

EX-TEN® 50 or
ASTM A 572 Grade 50, ASTM A 709 Grade 50

Chemical Composition and Mechanical Properties, *Page 253*
Identification Color: Orange and Blue

10 mm x 1829 mm x 6096 mm . . . . . 78.51 kg.
(.3937″ x 72″ x 240″) . . . . . (16.08#)

12 mm x 1829 mm x 6096 mm . . . . . 94.18 kg.
(.4724″ x 72″ x 240″) . . . . . (19.29#)

Metric/English conversion: mm x .03937 = in. kg x 2.2046 = lb

STEEL PLATES



COMMERCIAL* QUALITY ASTM A 830 | **ASTM A 36 ASME SA-36 ASTM A 709 Grade 36** | **1045 ASTM A 830**

Chemical Composition and Mechanical Properties, *Pages 252-254*
Identification Colors: Commercial Quality — No Paint
A 36 — Green and White
1045 — Brown

Size in Inches	Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Commercial Quality	ASTM A 36	1045
36 to 72 — Also see H.R. Sheets, *page 32*					
3/16 x 48	7.66	30.64	X**	X**	
60		38.30	X**	X**	
72		45.96	X	X	
84		53.62	X	X	
96		61.28	X	X	
120		76.60		X	
.2362 x 48	9.64	38.60	X†		
60		48.25	X†		
1/4 x 36	10.21	30.63	X**		
48		40.84	X**	X**	
60		51.05	X**	X**	
72		61.26	X**	X	
84		71.47	X	X	
96		81.68	X	X	
5/16 x 36	12.76	38.28	X		
48		51.04	X**	X	
60		63.80	X**	X**	
72		76.56	X**		
84		89.32	X		
96		102.08	X	X	
120		127.60		X	
3/8 x 36	15.32	45.96	X		
48		61.28	X**	X**	
60		76.60	X**	X**	X
72		91.92	X**	X	X
84		107.24	X	X	
96		122.56	X	X	X
120		153.20		X	
7/16 x 96	17.87	142.96	X		
.4724 x 60	19.29	96.46	X††		
1/2 x 36	20.42	61.26	X	X**	
48		81.68	X**	X**	
60		102.10	X**	X**/†	
72		122.52	X†	X	X
84		142.94	X	X	
96		163.36	X	X	X
120		204.20		X†	

Continued on following page

* Also known as Regular Quality or Mild Steel
** Also Pickled & Oiled
† Also Pickled & Oiled Cat Spec 1E0166
†† Also Pickled & Oiled Cat Spec 1E0065



STEEL PLATES

COMMERCIAL* QUALITY ASTM A 830 | **ASTM A 36 ASME SA-36 ASTM A 709 Grade 36** | **1045 ASTM A 830**

Chemical Composition and Mechanical Properties, *Pages 252-254*

Identification Colors: Commercial Quality — No Paint
A 36 — Green and White
1045 — Brown

Continued from preceding page

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Commercial Quality	ASTM A 36	1045
9/16	x	**84**	22.97	160.79		X	
5/8	x	**48**	25.53	102.12	X	X	
		60		127.65	X**	X	
		72		153.18	X	X	X
		84		178.71		X	X
		96		204.24		X†	
		120		255.30		X	
3/4	x	**48**	30.63	122.52	X	X	X
		60		153.15	X	X	
		72		183.78	X	X	
		96		245.04		X†	X
		120		306.30		X†	
7/8	x	**60**	35.74	178.70		X	
		72		214.44		X	
		96		285.92		X	X
1	x	**48**	40.84	163.36		X	X
		60		204.20		X†	
		72		245.04		X	
		84		285.88		X	
		96		326.72		X†	X
		120		408.40		X	
1 1/8	x	**60**	45.95	229.75		X	
		84		321.65		X	
		96		367.60		X	X
1 1/4	x	**48**	51.05	204.20		X	
		60		255.25		X	
		72		306.30		X	
		84		357.35		X	
		96		408.40		X	X
		120		510.50		X	
1 3/8	x	**60**	56.16	280.80		X	
		84		393.12		X	
		96		449.28		X	

*Also known as Regular Quality or Mild Steel

Continued on following page

**Also Pickled & Oiled

†Ipsco/SSAB NA also available

STEEL PLATES



COMMERCIAL* QUALITY ASTM A 830 | **ASTM A 36 ASME SA-36 ASTM A 709 Grade 36** | **1045 ASTM A 830**

Chemical Composition and Mechanical Properties, *Pages 252-254*
Identification Colors: Commercial Quality — No Paint
A 36 — Green and White
1045 — Brown

Continued from preceding page

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Commercial Quality	ASTM A 36	1045
1 1/2	x	48	61.26	245.04		X	
		60		306.30		X	
		72		367.56		X	
		84		428.82		X	
		96		490.08		X	X
		120		612.60		X	
1 5/8	x	60	66.37	331.85		X	
		96		530.96	X	X	X
1 3/4	x	60	71.47	357.35		X	
		72		428.82	X		
		84		500.29		X	
		96		571.76		X	
2	x	60	81.68	408.40		X	
		72		490.08		X	
		84		571.76		X	
		96		653.44		X	X
2 1/4	x	60	91.89	459.45		X	
		96		735.12		X	
2 1/2	x	60	102.10	510.50		X	
		96		816.80		X	
2 3/4	x	96	112.31	898.48		X	
3	x	60	122.52	612.60		X	
		96		980.16		X	
3 1/4	x	96	132.73	1061.84		X	
3 1/2	x	96	142.94	1143.52		X	
3 3/4	x	96	153.15	1225.20		X	
4	x	96	163.36	1306.88		X	
4 1/4	x	96	173.57	1388.56		X	
4 1/2	x	96	183.78	1470.24		X	
5	x	96	204.20	1633.60		X	
5 1/4	x	96	214.41	1715.28		X	
5 1/2	x	96	224.62	1796.96		X	
6	x	96	245.04	1960.32		X	
7	x	96	285.88	2287.04		X	
8	x	96	326.72	2613.76		X	

*Also known as Regular Quality or Mild Steel



STEEL PLATES
HOT ROLLED SCS® *†

Commercial Quality, ASTM A 830
ASTM A 36, ASME SA-36, ASTM A 709 Grade 36

The SCS process cleans as-rolled (HR) material to produce an extremely clean surface, which approximates a cold rolled finish that also resists rust without oil or preservatives.

Identification Colors: Commercial Quality — No Paint
ASTM A 36 — Green and White

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	CQ	ASTM A 36
3/16	x	**48**	7.66	30.64	X	
		60		38.30	X	X
1/4	x	**48**	10.21	40.84	X	X
		60		51.05	X	X
		72		61.26	X	
5/16	x	**60**	12.76	63.80	X	X
3/8	x	**48**	15.32	61.28	X	X
		60		76.60	X	X
		72		91.92	X	X
1/2	x	**48**	20.42	81.68	X	X
		60		102.10	X	X
		72		122.51		X

For SCS Sheets, see page 34

* Other sizes and grades are available upon request
† A patented process of The Material Works, Ltd.



STEEL PLATES
HOT ROLLED HSLAS‡ SCS® *†

Ex-Ten® 50 or ASTM A 572 Grade 50, ASTM A 709 Grade 50
ASTM A 656 Grade 80 Type 7

The SCS process cleans as-rolled (HR) material to produce an extremely clean surface, which approximates a cold rolled finish that also resists rust without oil or preservatives.

Identification Colors: Ex-Ten or A 572 — Orange and Blue
ASTM A 656 — Green and Blue

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Ex-Ten or ASTM A 572	ASTM A 656
3/16	x	**48**	7.66	30.64	X	
		60		38.30	X	
1/4	x	**48**	10.21	40.84	X	
		60		51.05	X	
5/16	x	**60**	12.76	63.80	X	
3/8	x	**48**	15.32	61.28	X	
		60		76.60	X	X
1/2	x	**48**	20.42	81.68	X	X
		60		102.10	X	
		72		122.52	X	

For SCS Sheets, see page 34

* Other sizes and grades are available upon request
† A patented process of The Material Works, Ltd.
‡ HSLAS = High Strength Low Alloy Steel



STEEL PLATES
PRESSURE VESSEL QUALITY
AS ROLLED

ASME SA-516 Gr. 70 ASTM A 516 Gr. 70* S4.1

Chemical Composition and Mechanical Properties, *Page 253*

Identification Color: Blue and White

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot
3/16	x	**84**	7.66	53.62
1/4	x	**84**	10.21	71.47
		96		81.68
5/16	x	**96**	12.76	102.08
3/8	x	**84**	15.32	107.24
7/16	x	**96**	17.87	142.96
1/2	x	**84**	20.42	142.94
		96		163.36
5/8	x	**96**	25.53	204.24
		120		255.30
3/4	x	**84**	30.63	214.41
		96		245.04
7/8	x	**96**	35.74	285.92
1	x	**96**	40.84	326.72
1¼	x	**96**	51.05	408.40
1½	x	**96**	61.26	490.08

*****Subdivided marking per ASTM A 20 Para.13.5.3 unless otherwise specified



STEEL PLATES
HIGH STRENGTH LOW ALLOY
COR-TEN® or ASTM A 588, ASTM A 709 Grade 50W
EX-TEN® 50 or ASTM A 572 Grade 50, ASTM A 709 Grade 50

Chemical Composition and Mechanical Properties, *Page 253*

Identification Colors: Cor-Ten — Pink and Blue
Ex-Ten — Orange and Blue

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Cor-Ten	Ex-Ten
3/16	x	**48**	7.66	30.64	X	X
		60		38.30	. .	X§
		72		45.96	. .	X
		96		61.28	. .	X
.197	x	**60**	8.05	40.25		X*
1/4	x	**48**	10.21	40.84		X
		60		51.05	. .	X§
		72		61.26	. .	X
		84		71.47	. .	X
		96		81.68	. .	X
5/16	x	**48**	12.76	51.04	X.	X§
		60		63.80	. .	X§
		72		76.56	. .	X
		84		89.32	. .	X
		96		102.08	. .	X
.315	x	**60**	12.86	64.30		X*
3/8	x	**48**	15.32	61.28	X	X§
		60		76.60	X	X§
		72		91.92	. .	X§
		84		107.24	. .	X
		96		122.56	X	X
10mm†	x	**72**	16.08	96.48		X§
.472	x	**60**	19.29	96.45		X*
12mm†	x	**72**	19.29	115.74		X§
1/2	x	**48**	20.42	81.68		X§
		60		102.10	X	X
		72		122.52	. .	X
		84		142.94	. .	X
		96		163.36	X	X
5/8	x	**48**	25.53	102.12		X
		60		127.65	. .	X
		72		153.18	. .	X
		96		204.24	X	X
3/4	x	**48**	30.63	122.52		X
		60		153.15	. .	X
		72		183.78	. .	X
		84		214.41	X	X
		96		245.04	. .	X
7/8	x	**96**	35.74	285.92		X
1	x	**84**	40.84	285.88	X	X
		96		326.72	X	X
1.181	x	**96**	48.23	385.84		X*
1 1/4	x	**84**	51.05	357.35	X.	
		96		408.40	. .	X
1 1/2	x	**84**	61.26	428.82	X.	
		96		490.08	. .	X
1 3/4	x	**96**	71.47	571.76		X
2	x	**96**	81.68	653.44		X
2 1/2	x	**96**	102.10	816.80		X
4	x	**96**	163.36	1306.83		X

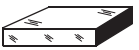
***** Cat Spec 1E0650

HSLAS Sheets, see *page 35*

† 1 mm = .03937"

§ Also available Pickled and Oiled

STEEL PLATES



HIGH STRENGTH LOW ALLOY

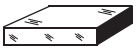
CleanForm® 100
DOMEX® 100 XF*
ASTM A 656 Grade 80 Type 7

Chemical Composition and Mechanical Properties, *Page 253*

Identification Colors: CleanForm — Green and Yellow
DOMEX — Green and Black
ASTM A 656 — Green and Blue

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	Clean Form	Domex*	ASTM A 656
3/16	x	**48**	7.66	30.64			X
		60		38.30	X	X	X
		72		45.96	. .	. .	X
1/4	x	**48**	10.21	40.84			X
		52		44.24	. .	X	. .
		60		51.05	. .	X	X
		72		61.26	. .	. .	X
5/16	x	**48**	12.76	51.04			X
		52		55.29	. .	X	. .
		60		63.80	. .	. .	X
		72		76.56	. .	. .	X
3/8	x	**48**	15.32	61.28			X
		52		66.39	. .	X**	. .
		60		76.60	. .	. .	X
		72		91.92	. .	. .	X
1/2	x	**48**	20.42	81.68			X
		60		102.10	. .	. .	X
		72		122.52	. .	. .	X
3/4	x	**96**	30.63	245.03			X

***Produced by SSAB. Other sizes are available upon request.
****Also Domex® 110 XF (Pink and Brown) and also available SCS



STEEL PLATES
ABRASION RESISTING

MEDIUM HARD **AR 400 FORMABLE**

Chemical Composition and Hardness, *Page 252*
Technical Data, *Page 256*

Identification Colors: Medium Hard — Gold
AR 400 — Green and Orange

Size in Inches	Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	**Medium Hard**	**AR 400**
3/16 x 60	7.66	38.30	X	
96		61.28	X	
1/4 x 48	10.21	40.84	X	
60		51.05	X	
72		61.26	X	
96		81.68		X
5/16 x 96	12.76	102.08	X	X
3/8 x 48	15.32	61.28	X	
60		76.60	X	
72		91.92		X
84		107.24	X	
96		122.56		X
1/2 x 60	20.42	102.10	X	
72		122.52		X
84		142.94	X	
96		163.36		X
5/8 x 96	25.53	204.24		X
3/4 x 96	30.63	245.04	X	X
1 x 96	40.84	326.72	X	X
1¼ x 84	51.05	357.35		X
1½ x 84	61.26	428.82		X

STEEL PLATES ALLOY



T-1® TYPE A or ASTM A 514 Gr. B ASTM A 709 Grade 100

T-1® TYPE B or ASTM A 514 Gr. H ASTM A 709 Grade 100 (4" Max)

T-1® or ASTM A 514 Gr. F ASTM A 709 Grade 100 (4" Max)

T-1® TYPE C or ASTM A 514 Gr. Q ASTM A 709 Grade 100 (4" Max)

Chemical Composition and Mechanical Properties, *Page 254*

Identification Colors: T-1 Type A; Type B; Type C; T-1 — Red

Size in Inches	Lbs. Per Sq. Ft.	Est. Lbs. Per Foot	T-1 Type A or A514	T-1 Type B or A514	T-1 or A514	T-1 Type C or A514
3/16 x 96	7.66	61.28	X	. .	. .	. .
1/4 x 60	10.21	51.05	X	. .	. .	. .
96		81.68	X	. .	. .	. .
5/16 x 96	12.76	102.08	X	. .	. .	. .
3/8 x 96	15.32	122.56	X	. .	. .	. .
1/2 x 84	20.42	142.94	X	. .	. .	. .
96		163.36	X	. .	. .	. .
5/8 x 96	25.53	204.24	X	. .	. .	. .
3/4 x 96	30.63	245.04	X	. .	. .	. .
7/8 x 96	35.74	285.92	X	. .	. .	. .
1 x 84	40.84	285.88	X	. .	. .	. .
96		326.72	X	. .	. .	. .
1 1/4 x 84	51.05	357.35	X	. .	. .	. .
96		408.40	X	. .	. .	. .
1 3/8 x 96	56.16	449.28	. .	X	. .	. .
1 1/2 x 84	61.26	428.82	. .	X	. .	. .
96		490.08	. .	X	. .	. .
1 3/4 x 96	71.47	571.76	. .	X	. .	. .
2 x 96	81.68	653.44	. .	X	. .	. .
2 1/4 x 96	91.89	735.12	. .	. .	X	. .
2 1/2 x 96	102.10	816.80	. .	. .	X	. .
3 x 96	122.52	980.16	. .	. .	. .	X
3 1/2 x 96	142.94	1143.52	. .	. .	. .	X
4 x 96	163.36	1306.88	. .	. .	. .	X
4 1/2 x 96	183.78	1470.24	. .	. .	. .	X
5 x 96	204.20	1633.60	. .	. .	. .	X
6 x 96	245.04	1960.32	. .	. .	. .	X

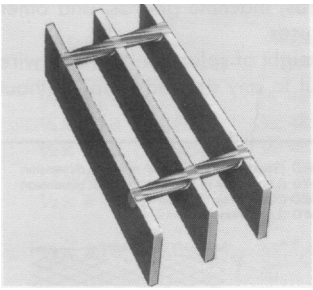
STEEL FLOOR PLATE
ASTM A 786 Raised Pattern
1009

Size in Inches*			Lbs. per Sq. Ft.	Est. Lbs. Per Ft.
12 Ga.	**x**	**48**	5.25	21.00
		60		26.25
1/8	**x**	**48**	6.16	24.64
		60		30.80
		72		36.96
3/16	**x**	**48**	8.71	34.84
		60		43.55
		72		52.26
1/4	**x**	**48**	11.26	45.04
		60		56.30
		72		67.56
3/8	**x**	**60**	16.37	81.85

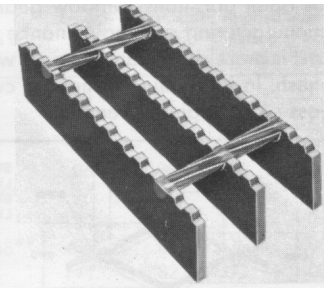
***Thickness is measured exclusive of projections

OPEN STEEL FLOOR GRATING

Conforms to Specification RR-G-661



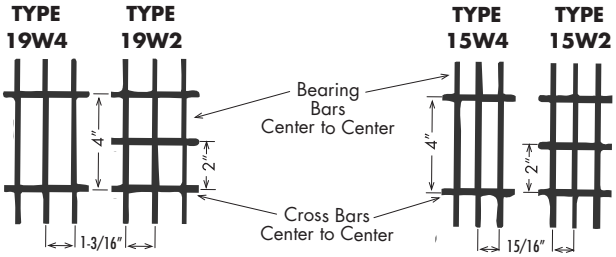
Smooth-surface grating



Serrated-surface safety grating

Grating available in Carbon Steel, Aluminum, Stainless, & Fiberglass

STANDARD MESH TYPES **CLOSE MESH TYPES**



Lbs. Per Sq. Ft.

Bearing Bars	Type **19W4**	Type **19W2**	Type **15W4**	Type **15W2**
3/4 x 1/8	4.0	4.6	4.8	5.5
3/4 x 3/16	5.6	6.3	6.9	7.5
1 x 1/8	5.1	5.7	6.2	6.9
1 x 3/16	7.3	8.0	9.0	9.6
1 1/4 x 1/8	6.1	6.8	7.5	8.2
1 1/4 x 3/16	8.9	9.6	11.1	11.7
1 1/2 x 1/8	7.3	7.9	9.0	9.6
1 1/2 x 3/16	10.6	11.2	13.1	13.8
1 3/4 x 3/16	12.2	12.9	15.2	15.8
2 x 3/16	13.9	14.5	17.3	17.9
2 1/4 x 3/16	15.4	16.1	19.2	19.9
2 1/2 x 3/16	17.1	17.7	21.3	22.0

Stock Sizes

Panel Width in Inches	Panel Length in Inches
24, 36	240, 288

Other bearing bar sizes and spacings are available.
All grating can be cut to your specifications.

When ordering GRATING, specify:

Type of GRATING
Size of BEARING BARS (Depth & Width)
Span (direction of bearing bars)
Dimensions of area
Unpainted, Painted or Galvanized, Smooth or Serrated
Special shapes can be furnished with, or without, edge banding.

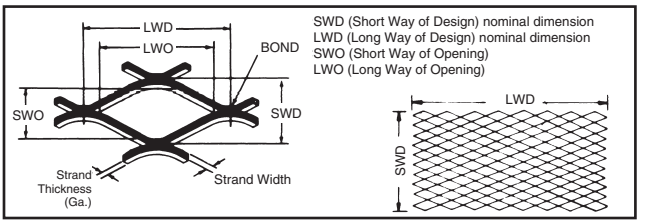
When ordering STAIR TREADS, also specify:

Width & Length
Type of Nosing (Checker Plate or Cast Iron Abrasive)
Punching in side plates or standardized dimensions may be altered to suit special conditions.

EXPANDED METAL

Expanded Metal may be used for many industrial purposes such as open partitions, window guards, machine guards, and other manufacturing and maintenance uses.

It is more rigid than an equal weight of solid steel plate or wire mesh. In fabricating, it may be cut to any desired shape without loss of its original strength.



EXPANDED STEEL STANDARD

Carbon (MIL-M-17194 Type I Class 1, ASTM F 1267 Type I Class 1) and Stainless Steels** (MIL-M-17194 Type I Class 3)

Style Designation*	Approx. Thickness	Width in Inches	Length in Inches	Est. Lbs. Per Sq. Ft.	Approx. Size of Opening in Inches SWO	LWO
1/4 x #20	(.036)	36, 48	96	.86	.140 x	.718
1/4 x #18	(.048)	48	96	1.14	.145 x	.718
1/2 x #18	(.048)	48	96	.70	.438 x	.938
1/2 x #16	(.060)	48	96	.86	.375 x	.938
		48	120	.86	.375 x	.938
1/2 x #13	(.092)	48	96	1.47	.312 x	.938
3/4 x #16	(.060)	48, 72	96	.54	.813 x	1.750
3/4 x #13	(.092)	48, 72	96	.80	.750 x	1.688
		48	120	.80	.750 x	1.688
3/4 x #10	(.092)	48	96	1.20	.750 x	1.625
3/4 x #9	(.134)	48, 72	96	1.80	.688 x	1.562
		48	120	1.80	.688 x	1.562
1 1/2 x #13	(.092)	48, 72	96	.60	1.188 x	2.500
		72	120	.60	1.188 x	2.500
1 1/2 x #9	(.134)	72	96	1.20	1.125 x	2.375
		48, 72	120	1.20	1.125 x	2.375
2 x #9	(.134)	48	96	.90	1.563 x	3.375

* The first number represents the nominal width of diamond in inches measured from center to center of bonds; the second number usually represents the approximate gage of sheet or plate before expanding. Sheets of special size can be furnished.

** Stainless Steel weights are slightly higher

EXPANDED STEEL GRATING

STANDARD

Style Designation	Width in Inches	Length in Inches	Est. Lbs. Per Sq. Ft.	Approx. Size of Opening in Inches
3.0 Lb. Grating	72	120	3.00	15/16 x 3 7/16
3.14 Lb. Grating	48	120	3.14	1 5/8 x 4 7/8
4.0 Lb. Grating	48	96	4.00	15/16 x 3 7/16
4.27 Lb. Grating	48, 72	96	4.27	1 x 2 7/8
6.25 Lb. Grating	48	96	6.25	13/16 x 3 3/8

EXPANDED STEEL FLATTENED

Carbon (MIL-M-17194 Type II Class 1, ASTM F 1267 Type II Class 1) and Stainless Steel Type 304** (MIL-M-17194 Type II Class 3)

Style Designation*	Approx. Thk. After Flattening	Width in Inches	Length in Inches	Est. Lbs. Per Sq. Ft.	Approx. Size of Opening in Inches SWO	LWO
1/4 x #20	(.030)	48	96	.82	.110 x	.715
1/4 x #18	(.040)	48	96	1.08	.118 x	.715
1/2 x #20	(.029)	48	96	.40	.375 x	1.000
1/2 x #18	(.039)	36, 48**	96	.66	.312 x	1.000
		48	120	.66	.312 x	1.000
1/2 x #16	(.050)	36, 48**	96	.82	.312 x	1.000
1/2 x #13	(.070)	48**	96	1.40	.265 x	1.000
		48	120	1.40	.265 x	1.000
3/4 x #18	(.040)	48†	96	.46	.750 x	1.812
3/4 x #16	(.048)	36**, 48**	96	.51	.750 x	1.750
		48	120	.51	.750 x	1.750
3/4 x #14	(.061)	48	96	.63	.688 x	1.813
3/4 x #13	(.070)	48**	96	.75	.688 x	1.781
3/4 x #9	(.120)	36, 48**	96	1.71	.563 x	1.688
		48	120	1.71	.563 x	1.688
1 1/2 x #16	(.048)	48†	96	.38	1.062 x	2.750
1 1/2 x #13	(.070)	48**	96	.57	1.062 x	2.750
1 1/2 x #9	(.110)	36, 48**	96	1.14	1.000 x	2.563
		48	120	1.14	1.000 x	2.563

***** The first number represents the nominal width of diamond in inches measured from center to center of bonds; the second number usually represents the approximate original gage before expanding. Sheets of special size can be furnished.

****** Also available in Stainless Steel. Weights will be slightly higher.

† Stainless Steel only. Weights will be slightly higher.

EXPANDED ALUMINUM STANDARD

3003-H14

Style Designation	Width in Inches	Length in Inches	Est. Lbs. Per Sq. Ft.	Approx. Size of Opening in Inches SWO	LWO
1/2 — .051	36, 48	96	.27	.375 x	.937
1/2 — .081	48	96	.44	.375 x	.937
3/4 — .051	48	96	.17	.812 x	1.75
3/4 — .081 Heavy	48	96	.41	.750 x	1.68
3/4 — .125	48	96	.65	.687 x	1.68

EXPANDED ALUMINUM FLATTENED

3003-H14

Style Designation	Width in Inches	Length in Inches	Est. Lbs. Per Sq. Ft.	Approx. Size of Opening in Inches SWO	LWO
1/2 — .051	48	96	.26	.312 x	1.00
1/2 — .081	48	96	.42	.312 x	1.00
3/4 — .051	48	96	.16	.750 x	1.81
3/4 — .081 Heavy	48	96	.39	.687 x	1.75
3/4 — .125	48	96	.62	.625 x	1.75

MORTON SAFETY PRODUCTS

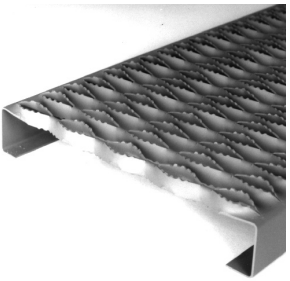
Designed to meet Federal Spec. RR-G-1602C

DECK SPAN® and GRIP-TRAC® PLANKS

Stock Lengths: 10 Ft. and 12 Ft.

DECK SPAN® Pre-Galvanized Steel*

Gage x Width & Depth	Weight Per Lineal Ft. in Lbs.
14 Ga. x 4¾ x 1½	2.30
14 Ga. x 7 x 1½	3.00
14 Ga. x 9½ x 1½	3.60
14 Ga. x 11¾ x 1½	4.40
14 Ga. x 18¾ x 1½	6.10
14 Ga. x 4¾ x 2	2.60
14 Ga. x 7 x 2	3.20
14 Ga. x 9½ x 2	3.80
14 Ga. x 11¾ x 2	4.40
14 Ga. x 18¾ x 2	6.30
12 Ga. x 4¾ x 1½	3.20
12 Ga. x 7 x 1½	4.10
12 Ga. x 9½ x 1½	5.00
12 Ga. x 11¾ x 1½	5.90
12 Ga. x 18¾ x 1½	8.50
12 Ga. x 4¾ x 2	3.60
12 Ga. x 7 x 2	4.50
12 Ga. x 9½ x 2	5.40
12 Ga. x 11¾ x 2	6.20
12 Ga. x 18¾ x 2	8.90
12 Ga. x 24 x 2	10.40



GRIP-TRAC® Aluminum 5052-H32

Gage x Width & Depth	Weight Per Lineal Ft. in Lbs.
.080 x 4¾ x 2	.90
.080 x 7 x 2	1.20
.080 x 9½ x 2	1.40
.080 x 11¾ x 2	1.60
.100 x 4¾ x 2	1.20
.100 x 7 x 2	1.50
.100 x 9½ x 2	1.70
.100 x 11¾ x 2	2.00
.100 x 18¾ x 2	2.80

*****Also available as Hot Rolled Pickled & Oiled Steel, and as 16 Ga. T304 & T316L Stainless Steel 9½" wide & 11¾" wide x 2" deep

GRIP-TRAC® WALKWAY

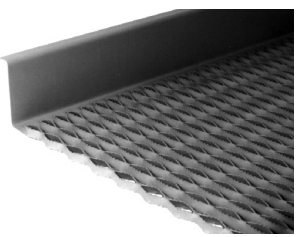
Pre-Galvanized Steel*

Stock Lengths: 10 Ft. and 12 Ft.

Gage	Width	Toeboard Height	Weight Per Lineal Ft. in Lbs.
#14	24"	4½"	8.90
#12	24"	4½"	12.50

*****Also available as Hot Rolled Pickled & Oiled Steel

Central Steel & Wire Co. offers a complete line of Grip-Trac products and will be able to fabricate to your desired specifications.



MORTON SAFETY PRODUCTS

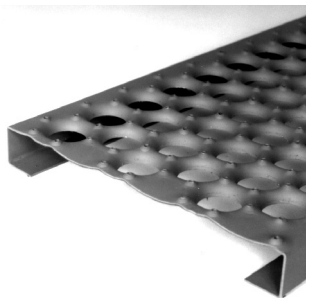
Designed to meet Federal Spec. RR-G-1602C

OPEN-GRIP® PLANKS

Stock Lengths: 10 Ft. and 12 Ft.

Pre-Galvanized Steel*

Gage x Width & Depth	Weight Per Lineal Ft. in Lbs.
13 Ga. x 5 x 1½	2.56
13 Ga. x 7 x 1½	3.25
13 Ga. x 10 x 1½	4.02
13 Ga. x 12 x 1½	4.40
13 Ga. x 18 x 1½	5.63
13 Ga. x 5 x 2	2.87
13 Ga. x 7 x 2	3.25
13 Ga. x 10 x 2	4.02
13 Ga. x 12 x 2	4.40
13 Ga. x 18 x 2	5.63
11 Ga. x 5 x 1½	3.41
11 Ga. x 7 x 1½	4.33
11 Ga. x 10 x 1½	5.36
11 Ga. x 12 x 1½	5.87
11 Ga. x 18 x 1½	7.51
11 Ga. x 5 x 2	3.83
11 Ga. x 7 x 2	4.33
11 Ga. x 10 x 2	5.36
11 Ga. x 12 x 2	5.87
11 Ga. x 18 x 2	7.51



Aluminum 5052-H32

Gage x Width & Depth	Weight Per Lineal Ft. in Lbs.
.125 x 5 x 2	1.36
.125 x 7 x 2	1.55
.125 x 10 x 2	1.91
.125 x 12 x 2	2.09
.125 x 18 x 2	2.67

***Also available as Hot Rolled Pickled and Oiled Steel

OPEN-GRIP® WALKWAY

Pre-Galvanized Steel*

Stock Lengths: 10 Ft. and 12 Ft.

Gage	Width	Toeboard Height	Weight Per Lineal Ft. in Lbs.
#13	24″	5″	9.25
#13	30″	5″	10.63
#11	24″	5″	12.33
#11	30″	5″	14.17
#11	36″	5″	15.94

***Also available as Hot Rolled Pickled & Oiled Steel

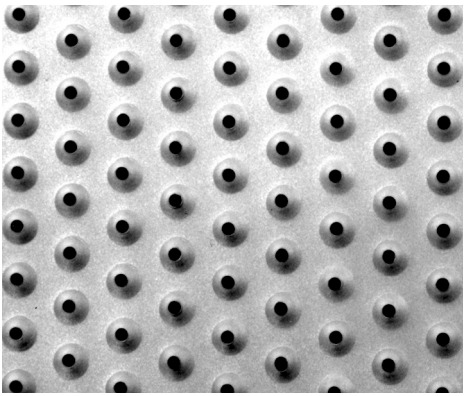


MORTON SAFETY PRODUCTS

Designed to meet Federal Spec. RR-G-1602C

TREAD-GRIP® SHEETS

Hot Rolled Pickled and Oiled*



A permanent, non-skid surface for positive gripping action on steps and walkways. Made of mild steel.

Size in Inches	Lbs. Sq. Ft.	Est. Lbs. Per Sht.
16 Ga. x 36 x 120	2.40	72.0
13 Ga. x 36 x 120	3.61	108.3
11 Ga. x 36 x 120	4.81	144.3

***Also available as Pre-Galvanized Steel, .125" thick Aluminum 5052-H32, and 16 Ga. T304 2B Stainless Steel

TREAD-GRIP® LADDER RUNGS

Hot Rolled Pickled and Oiled*



Size in Inches	Type	Est. Lbs. Per Rung
13 Ga. x 1 5/8 x 48 3/4	3 Row	4.0
13 Ga. x 2 1/4 x 48 3/4	4 Row	6.3

***Also available as Pre-Galvanized Steel, .125" thick Aluminum 5052-H32, and 16 Ga. T304 2B Stainless Steel

SECTION 3

SHEET AND STRAPPING

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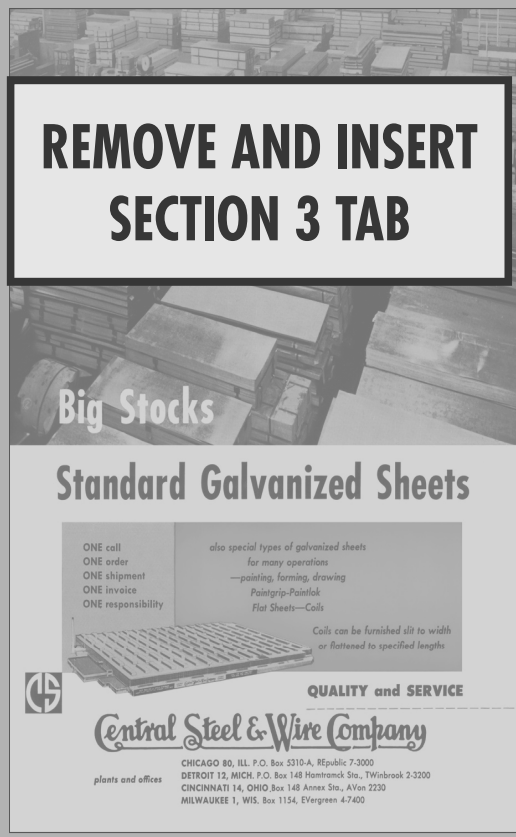

Central Steel & Wire Newspaper Ad
from June 1955

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STEEL SHEET and COIL



Hot Rolled

Commercial Steel –

Flat - Dry 32

- Pickled & Oiled 33

Coils 38

1050 33

SCS® 34

High Strength Low Alloy

ASTM A 1011-F 35

Cor-Ten® or ASTM A 606 35

Ex-Ten® H50 or ASTM A 1011 35

DOMEX® 100 XF 35

SCS® 34

Cold Rolled

Commercial Steel

Flat 36

Coil 37

Drawing Steel

Flat 37

Coil 38

Coated

Aluminized 43

Corrugated Galvanized 44

Electro-Galvanized 42

Galvanized

Flat 40

Coil 39

Galvannealed 41

Paintgrip Galvanized 44

Paintlok® or ASTM A 879 42

Strapping 45

SHAPE CUTTING



Ordering by Sketch Number 264



STEEL SHEET
HOT ROLLED

ASTM A 1011 CS Type B*
Commercial Steel, Dry

Gage & Size in Inches	Est. Lbs. Per Sheet
14 Ga. (.0747) 3.125 # Sq. Ft.	
36 x 144	112.5
48 x 96	100.0
48 x 120	125.0
48 x 144	150.0
60 x 96	125.0
60 x 120	156.3
60 x 144	187.5
12 Ga. (.1046) 4.375 # Sq. Ft.	
36 x 96	105.0
36 x 120	131.3
36 x 144	157.5
48 x 96	140.0
48 x 120	175.0
48 x 144	210.0
60 x 96	175.0
60 x 120	218.8
60 x 144	262.5
72 x 96	210.0
72 x 120	262.5
72 x 144	315.0
84 x 240	613.0
11 Ga. (.1196) 5.000 # Sq. Ft.	
36 x 96	120.0
36 x 120	150.0
48 x 96	160.0
48 x 120	200.0
48 x 144	240.0
60 x 96	200.0
60 x 120	250.0
60 x 144	300.0
72 x 96	240.0
72 x 120	300.0
72 x 144	360.0
96 x 240	800.0

Gage & Size in Inches	Est. Lbs. Per Sheet
10 Ga. (.1345) 5.625 # Sq. Ft.	
36 x 120	168.8
36 x 144	202.5
48 x 96	180.0
48 x 120	225.0
48 x 144	270.0
60 x 96	225.0
60 x 120	281.3
60 x 144	337.5
72 x 96	270.0
72 x 120	337.5
72 x 144	405.0
72 x 240	675.0
84 x 240	788.0
96 x 240	900.0
9 Ga. (.1495) 6.25 # Sq. Ft.	
48 x 120	250.0
8 Ga. (.1644) 6.875 # Sq. Ft.	
48 x 96	220.0
48 x 120	275.0
60 x 96	275.0
60 x 120	343.8
7 Ga. (.1793) 7.500 # Sq. Ft.	
36 x 120	225.0
36 x 144	270.0
48 x 96	240.0
48 x 120	300.0
48 x 144	360.0
60 x 120	375.0
60 x 144	450.0
72 x 96	360.0
72 x 120	450.0
72 x 144	540.0
Over 72" See Plates, *page 15*	

*****.10 max. carbon

STEEL SHEET
HOT ROLLED PICKLED AND OILED



ASTM A 1011 CS Type B*
Commercial Steel

Gage & Size in Inches	Est. Lbs. Per Sheet
14 Ga. (.0747) 3.125 # Sq. Ft.	
36 x 96	75.00
36 x 120	93.75
36 x 144	112.5
48 x 96	100.0
48 x 120	125.0
48 x 144	150.0
60 x 96	125.0
60 x 120	156.3
60 x 144	187.5
13 Ga. (.0897) 3.750 # Sq. Ft.	
36 x 120	112.5
48 x 96	120.0
48 x 120	150.0
60 x 120	187.5
12 Ga. (.1046) 4.375 # Sq. Ft.	
36 x 96	105.0
36 x 120	131.3
48 x 96	140.0
48 x 120	175.0
48 x 144	210.0
60 x 96	175.0
60 x 120	218.8
60 x 144	262.5
72 x 96	210.0
72 x 120	262.5
72 x 144	315.0
11 Ga. (.1196) 5.000 # Sq. Ft.	
36 x 96	120.0
36 x 120	150.0
48 x 96	160.0
48 x 120	200.0
48 x 144	240.0
60 x 96	200.0

Gage & Size in Inches	Est. Lbs. Per Sheet
11 Ga. (.1196) 5.000 # Sq. Ft.	
60 x 120	250.0
60 x 144	300.0
72 x 96	240.0
72 x 120	300.0
72 x 144	360.0
10 Ga. (.1345) 5.625 # Sq. Ft.	
36 x 96	135.0
36 x 120	168.8
48 x 96	180.0
48 x 120	225.0
48 x 144	270.0
60 x 96	225.0
60 x 120	281.3
60 x 144	337.5
72 x 96	270.0
72 x 120	337.5
72 x 144	405.0
9 Ga. (.1495) 6.25 # Sq. Ft.	
48 x 96	200.0
48 x 120	250.0
8 Ga. (.1644) 6.875 # Sq. Ft.	
48 x 96	220.0
48 x 120	275.0
7 Ga. (.1793) 7.500 # Sq. Ft.	
36 x 96	180.0
36 x 120	225.0
36 x 144	270.0
48 x 96	240.0
48 x 120	300.0
48 x 144	360.0
60 x 96	300.0
60 x 120	375.0
60 x 144	450.0
72 x 96	360.0
72 x 120	450.0
72 x 144	540.0
6 Ga. (.1943) 8.125 # Sq. Ft.	
48 x 96	260.0
48 x 120	325.0

*.10 max. carbon

STEEL SHEET
AISI/SAE 1050
HOT ROLLED, DRY



Identification Color: Yellow

Gage & Size in Inches	Est. Lbs. Per Sheet
12 Ga. (.1046) 4.375 # Sq. Ft.	
40 x 120	149.5
11 Ga. (.1196) 5.000 # Sq. Ft.	
40 x 120	166.7

Gage & Size in Inches	Est. Lbs. Per Sheet
10 Ga. (.1345) 5.625 # Sq. Ft.	
40 x 120	187.5
7 Ga. (.1793) 7.500 # Sq. Ft.	
49 x 120	250.0



STEEL SHEET
HOT ROLLED SCS® *†

Commercial Steel

EX-TEN® H50 or ASTM A 1011 HSLAS‡ Gr. 50 Class 1

The SCS process cleans as-rolled (HR) material to produce an extremely clean surface, which approximates a cold rolled finish that also resists rust without oil or preservatives.

Identification Colors: Commercial Steel — No Paint
Ex-Ten or A 1011 — Orange

Gage & Size in Inches	Est. Lbs. Per Sheet	CS	Ex-Ten or ASTM A 1011
14 Ga. (.0747) 3.125 # Sq. Ft.			
48 x 96	100.0	X	. .
48 x 120	125.0	. .	X
60 x 120	156.3	X	. .
60 x 144	187.5	X	. .
12 Ga. (.1046) 4.375 # Sq. Ft.			
36 x 120	131.3	X	. .
48 x 96	140.0	X	. .
48 x 120	175.0	X	. .
60 x 120	218.8	X	X
60 x 144	262.5	X	. .
72 x 120	262.5	X	. .
72 x 144	315.0	X	. .
11 Ga. (.1196) 5.000 # Sq. Ft.			
48 x 120	200.0	X	X
60 x 120	250.0	X	. .
60 x 144	300.0	X	. .
72 x 144	360.0	X	. .
10 Ga. (.1345) 5.625 # Sq. Ft.			
48 x 120	225.0	X	X
60 x 120	281.3	X	. .
60 x 144	337.5	. .	X
72 x 120	337.5	X	. .
72 x 144	405.0	X	. .
7 Ga. (.1793) 7.500 # Sq. Ft.			
48 x 96	240.0	X	. .
48 x 120	300.0	X	X
60 x 120	375.0	X	X
72 x 96	360.0	X	. .

For SCS Plates, see page 18

* Other sizes and grades are available upon request
† A patented process of The Material Works, Ltd.
‡ HSLAS = High Strength Low Alloy Steel

STEEL SHEET
HIGH STRENGTH LOW ALLOY



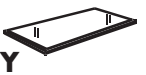
COR-TEN® A or ASTM A 606 Type 4
EX-TEN® H50 or ASTM A 1011 HSLAS* Gr. 50 Class 1
ASTM A 1011 HSLAS-F* Gr. 80

Forming Data, *Page 257*
Chemical Composition and Mechanical Properties, *Page 255*
Identification Colors: Cor-Ten — Pink; Ex-Ten — Orange
A 1011-F Gr. 80 — No Color

Gage & Size in Inches	Est. Lbs. Per Sheet	Cor-Ten	Ex-Ten	A 1011-F Gr 80
14 Ga. (.0747) 3.125 # Sq. Ft.				
48 x 120	125.0	X	X	
48 x 144	150.0	X		
12 Ga. (.1046) 4.375 # Sq. Ft.				
48 x 96	140.0		X	
48 x 120	175.0	X	X	
48 x 144	210.0	X		
60 x 96	175.0		X	X
60 x 120	218.8		X**	
11 Ga. (.1196) 5.000 # Sq. Ft.				
48 x 120	200.0	X	X	
48 x 144	240.0	X		
60 x 96	200.0			X
10 Ga. (.1345) 5.625 # Sq. Ft.				
48 x 96	180.0	X		
48 x 120	225.0	X	X	
48 x 144	270.0	X		
60 x 96	225.0		X	X
60 x 120	281.3	X	X	X
60 x 144	337.5	X	X	X
9 Ga. (.1495) 6.25 # Sq. Ft.				
60 x 120	312.5		X	
8 Ga. (.1644) 6.875 # Sq. Ft.				
48 x 144	330.0	X		
4.5mm (.1773) 7.42 # Sq. Ft.				
48 x 120	225.0	X		
7 Ga. (.1793) 7.500 # Sq. Ft.				
48 x 96	240.0	X	X	
48 x 120	300.0	X	X	
60 x 120	375.0			X

For High Strength Plates, see *page 20*
*****HSLAS = High Strength Low Alloy Steel
******Also Pickled and Oiled A 1011 Gr. 50

STEEL SHEET
HIGH STRENGTH LOW ALLOY



DOMEX® 100 XF*

Chemical Composition and Mechanical Properties, *Page 255*
Identification Color: Green and Black

Size in Inches	Est. Lbs. Per Sheet	Size in Inches	Est. Lbs. Per Sheet
.100 nom. (4.181 # Sq. Ft.)		**.160 nom. (6.691 # Sq. Ft.)**	
41½ x 120	144.6	60 x 120	334.6
.120 nom. (5.018 # Sq. Ft.)			
52 x 120	217.5		

*****Produced by SSAB.
Other sizes are available upon request.



STEEL SHEET
COLD ROLLED

ASTM A 1008 CS Type B
Commercial Steel, Oiled

Gage & Size in Inches	Est. Lbs. Per Sheet
26 Ga. (.0179) .750 # Sq. Ft.	
48 x 120	30.00
24 Ga. (.0239) 1.000 # Sq. Ft.	
36 x 96	24.00
36 x 120	30.00
48 x 96	32.00
48 x 120	40.00
22 Ga. (.0299) 1.250 # Sq. Ft.	
36 x 96	30.00
36 x 120	37.50
48 x 96	40.00
48 x 120	50.00
48 x 144	60.00
20 Ga. (.0359) 1.500 # Sq. Ft.	
36 x 96	36.00
36 x 120	45.00
36 x 144	54.00
48 x 96	48.00
48 x 120	60.00
48 x 144	72.00
60 x 96	60.00
60 x 120	75.00
60 x 144	90.00
19 Ga. (.0418) 1.750 # Sq. Ft.	
36 x 96	42.00
48 x 96	56.00
48 x 120	70.00
18 Ga. (.0478) 2.000 # Sq. Ft.	
36 x 96	48.00
36 x 120	60.00
36 x 144	72.00
42 x 120	70.00
48 x 96	64.00
48 x 120	80.00
48 x 144	96.00
60 x 96	80.00
60 x 120	100.0
16 Ga. (.0598) 2.500 # Sq. Ft.	
36 x 96	60.00
36 x 120	75.00
36 x 144	90.00

Gage & Size in Inches	Est. Lbs. Per Sheet
16 Ga. (.0598) 2.500 # Sq. Ft.	
48 x 96	80.00
48 x 120	100.0
48 x 144	120.0
60 x 96	100.0
60 x 120	125.0
60 x 144	150.0
72 x 120	150.0
72 x 144	180.0
14 Ga. (.0747) 3.125 # Sq. Ft.	
36 x 96	75.00
36 x 120	93.75
42 x 120	109.4
48 x 96	100.0
48 x 120	125.0
48 x 144	150.0
60 x 96	125.0
60 x 120	156.3
60 x 144	187.5
72 x 120	187.5
72 x 144	225.0
13 Ga. (.0897) 3.750 # Sq. Ft.	
36 x 96	90.00
36 x 120	112.5
48 x 96	120.0
48 x 120	150.0
48 x 144	180.0
60 x 120	187.5
12 Ga. (.1046) 4.375 # Sq. Ft.	
36 x 96	105.0
36 x 120	131.3
48 x 96	140.0
48 x 120	175.0
48 x 144	210.0
60 x 96	175.0
60 x 120	218.8
60 x 144	262.5
11 Ga. (.1196) 5.000 # Sq. Ft.	
36 x 96	120.0
36 x 120	150.0
48 x 96	160.0
48 x 120	200.0
48 x 144	240.0
60 x 120	250.0
10 Ga. (.1345) 5.625 # Sq. Ft.	
36 x 96	135.0
36 x 120	168.8
48 x 96	180.0
48 x 120	225.0

STEEL SHEET COLD ROLLED



ASTM A 1008 DS Type B
Drawing Steel Aluminum Killed

Non-Age Hardening, Oiled

Intended for difficult drawing, spinning, and forming operations.

Gage & Size in Inches	Est. Lbs. Per Sheet
24 Ga. (.0239) 1.000 # Sq. Ft.	
48 x 120	40.00
22 Ga. (.0299) 1.250 # Sq. Ft.	
48 x 96	40.00
48 x 120	50.00
20 Ga. (.0359) 1.500 # Sq. Ft.	
36 x 96	36.00
36 x 120	45.00
48 x 96	48.00
48 x 120	60.00
19 Ga. (.0418) 1.750 # Sq. Ft.	
48 x 96	56.00
48 x 120	70.00
18 Ga. (.0478) 2.000 # Sq. Ft.	
36 x 96	48.00
36 x 120	60.00
48 x 96	64.00
48 x 120	80.00
16 Ga. (.0598) 2.500 # Sq. Ft.	
36 x 96	60.00
36 x 120	75.00

Gage & Size in Inches	Est. Lbs. Per Sheet
16 Ga. (.0598) 2.500 # Sq. Ft.	
48 x 96	80.00
48 x 120	100.0
48 x 144	120.0
14 Ga. (.0747) 3.125 # Sq. Ft.	
36 x 96	75.00
36 x 120	93.75
48 x 96	100.0
48 x 120	125.0
48 x 144	150.0
13 Ga. (.0897) 3.750 # Sq. Ft.	
48 x 96	120.0
48 x 120	150.0
12 Ga. (.1046) 4.375 # Sq. Ft.	
48 x 96	140.0
48 x 120	175.0
11 Ga. (.1196) 5.000 # Sq. Ft.	
36 x 120	150.0
48 x 120	200.0
10 Ga. (.1345) 5.625 # Sq. Ft.	
36 x 120	168.8
48 x 120	225.0

STEEL SHEET IN COIL COLD ROLLED



ASTM A 1008 CS Type B
Commercial Steel, Oiled

Size in Inches Minimum	Stock Length
.017 x 48	Coil
.023 x 36, 48	Coil
.028 x 36, 48	Coil
.033 x 36, 48, 60	Coil
.038 x 36, 48	Coil
.044 x 36, 42, 48, 60	Coil
.055 x 36, 48, 60	Coil

Size in Inches Minimum	Stock Length
.057 x 48	Coil
.070 x 36, 42, 48, 60	Coil
.085 x 36, 48, 60	Coil
.098 x 36, 48, 60	Coil
.114 x 36, 48, 60	Coil
.128 x 36, 48	Coil



STEEL SHEET IN COIL
COLD ROLLED

ASTM A 1008 DS Type B
Drawing Steel Aluminum Killed
Oiled

Intended for difficult drawing, spinning, and forming operations.

Size in Inches Minimum	Stock Length	Size in Inches Minimum	Stock Length
.023 x 48	Coil	**.070 x 36, 48**	Coil
.028 x 48	Coil	**.085 x 48**	Coil
.033 x 36, 48	Coil	**.098 x 48**	Coil
.038 x 48	Coil		
.044 x 36, 48	Coil	**.114 x 36, 48**	Coil
.055 x 36, 48	Coil	**.128 x 36, 48**	Coil



STEEL SHEET IN COIL
HOT ROLLED
PICKLED AND OILED

ASTM A 1011 CS Type B
Commercial Steel

Size in Inches Minimum	Stock Length	Size in Inches Minimum	Stock Length
.071 x 36, 48, 60	Coil	**.112 x 36, 48, 60**	Coil
.083 x 36, 48, 60	Coil	**.127 x 36, 48, 60**	Coil
.097 x 36, 48, 60	Coil	**.171 x 48**	Coil

STEEL COIL GALVANIZED



ASTM A 653 CS Type B (Commerical Steel)
Surface Chem. Treated - Dry

ASTM A 653 SS Grade 33 (Structural Steel)**
Surface Chem. Treated - Oiled

G90 or G60 Coating* Minimum Spangle

Chemical Composition and Mechanical Properties, *Page 255*

Gage & Size in Inches	A 656 Type B		A 656 Gr. 33
	G90*	G60*	G90*
26 Ga. (.0217) .906 # Sq. Ft.			
48 x Coil	X	X	. .
60 x Coil	X	. .	. .
24 Ga. (.0276) 1.156 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	. .
50 x Coil	. .	X	. .
60 x Coil	X	. .	. .
22 Ga. (.0336) 1.406 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	. .
60 x Coil	X	. .	. .
20 Ga. (.0396) 1.656 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	. .
60 x Coil	X	. .	. .
.038 min. **1.798 # Sq. Ft.**			
48 x Coil	. .	. .	X
18 Ga. (.0516) 2.156 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	. .
60 x Coil	X	. .	. .
16 Ga. (.0635) 2.656 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	. .
60 x Coil	X	. .	. .
14 Ga. (.0785) 3.281 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	X	X
13 Ga. (.0935) 3.906 # Sq. Ft.			
48 x Coil	. .	. .	X
12 Ga. (.1084) 4.531 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	. .	X
11 Ga. (.1233) 5.156 # Sq. Ft.			
48 x Coil	X	. .	X
60 x Coil	X	. .	. .
10 Ga. (.1382) 5.781 # Sq. Ft.			
36 x Coil	X	. .	. .
48 x Coil	X	. .	. .

***UL® (Underwriters Laboratories Inc.) approval available. Can be selected to comply to RoHS.
****Other sizes are available upon request



STEEL SHEET GALVANIZED

ASTM A 653 CS Type B G90

Surface Chem. Treated
G90 Coating* Minimum Spangle
Commercial Steel

Gage & Size in Inches	Est. Lbs. Per Sheet
26 Ga. (.0217) .906 # Sq. Ft.	
48 x 96	28.99
48 x 120	36.24
60 x 120	45.30
24 Ga. (.0276) 1.156 # Sq. Ft.	
36 x 96	27.74
36 x 120	34.68
48 x 96	36.99
48 x 120	46.24
48 x 144	55.49
60 x 120	57.80
22 Ga. (.0336) 1.406 # Sq. Ft.	
36 x 96	33.74
36 x 120	42.18
48 x 96	44.99
48 x 120	56.24
60 x 120	70.30
20 Ga. (.0396) 1.656 # Sq. Ft.	
36 x 96	39.74
36 x 120	49.68
48 x 96	52.99
48 x 120	66.24
48 x 144	79.49
60 x 120	82.80
18 Ga. (.0516) 2.156 # Sq. Ft.	
36 x 96	51.74
36 x 120	64.68
48 x 96	68.99
48 x 120	86.24
48 x 144	103.5
60 x 120	107.8
60 x 144	129.4

Gage & Size in Inches	Est. Lbs. Per Sheet
16 Ga. (.0635) 2.656 # Sq. Ft.	
36 x 96	63.74
36 x 120	79.68
36 x 144	95.60
48 x 96	84.99
48 x 120	106.2
48 x 144	127.5
60 x 120	132.8
60 x 144	159.4
14 Ga. (.0785) 3.281 # Sq. Ft.	
36 x 96	78.74
36 x 120	98.43
36 x 144	118.1
48 x 96	105.0
48 x 120	131.2
48 x 144	157.5
60 x 120	164.1
12 Ga. (.1084) 4.531 # Sq. Ft.	
36 x 96	108.7
36 x 120	135.9
48 x 96	145.0
48 x 120	181.2
48 x 144	217.5
60 x 120	226.6
60 x 144	271.9
11 Ga. (.1233) 5.156 # Sq. Ft.	
48 x 96	165.0
48 x 120	206.2
48 x 144	247.5
10 Ga. (.1382) 5.781 # Sq. Ft.	
36 x 96	138.7
36 x 120	173.4
48 x 96	185.0
48 x 120	231.2
48 x 144	277.5
60 x 120	289.1
8 Ga. (.1681) 7.031 # Sq. Ft.	
48 x 96	225.0
48 x 120	281.2
48 x 144	337.5

***UL® (Underwriters Laboratories Inc.) approval available.
Can be selected to comply to RoHS.



STEEL SHEET AND COIL GALVANNEALED



ASTM A 653 CS Type B A60

A60 Coating*****
Commercial Steel

A zinc-coated sheet which has been annealed after coating. In this way the spelter is fused to the base metal, and the result is a zinc coating which cannot be flaked or peeled in forming. The surface is readily painted without preliminary treating.

Gage & Size in Inches	Est. Lbs. Per Sheet
24 Ga. (.0276) 1.156 # Sq. Ft.	
48 x Coil	
48 x 96	36.99
48 x 120	46.24
22 Ga. (.0336) 1.406 # Sq. Ft.	
48 x Coil	
48 x 96	44.99
48 x 120	56.24
48 x 144	67.49
20 Ga. (.0396) 1.656 # Sq. Ft.	
36 x Coil	
36 x 96	39.74
36 x 120	49.68
48 x Coil	
48 x 96	52.99
48 x 120	66.24
48 x 144	79.49
18 Ga. (.0516) 2.156 # Sq. Ft.	
36 x Coil	
36 x 96	51.74
36 x 120	64.68
36 x 144	77.62
48 x Coil	
48 x 96	68.99
48 x 120	86.24
48 x 144	103.5
60 x Coil	
60 x 96	86.24
60 x 120	107.8

Gage & Size in Inches	Est. Lbs. Per Sheet
16 Ga. (.0635) 2.656 # Sq. Ft.	
36 x Coil	
36 x 96	63.74
36 x 120	79.68
48 x Coil	
48 x 96	84.99
48 x 120	106.2
48 x 144	127.5
60 x Coil	
60 x 120	132.8
60 x 144	159.4
14 Ga. (.0785) 3.281 # Sq. Ft.	
36 x Coil	
36 x 120	98.43
48 x Coil	
48 x 96	105.0
48 x 120	131.2
48 x 144	157.4
60 x Coil	
60 x 120	164.1
60 x 144	196.9
12 Ga. (.1084) 4.531 # Sq. Ft.	
48 x Coil	
48 x 96	145.0
48 x 120	181.2
60 x Coil	
60 x 120	226.6
60 x 144	271.9
11 Ga. (.1233) 5.156 # Sq. Ft.	
48 x Coil	
48 x 120	206.2

*****UL® (Underwriters Laboratories Inc.) approval available



STEEL SHEET AND COIL ELECTRO-GALVANIZED



PAINTLOK® OR ASTM A 879 CS

Phosphate Treated

Dry

Gage & Size in Inches	Est. Lbs. Per Sheet
26 Ga. (.0179) .750 # Sq. Ft.	
48 x Coil	
48 x 96	24.00
48 x 120	30.00
24 Ga. (.0239) 1.000 # Sq. Ft.	
48 x Coil	
48 x 96	32.00
48 x 120	40.00
22 Ga. (.0299) 1.250 # Sq. Ft.	
36 x Coil	
36 x 96	30.00
36 x 120	37.50
48 x Coil	
48 x 96	40.00
48 x 120	50.00
48 x 144	60.00
20 Ga. (.0359) 1.500 # Sq. Ft.	
36 x Coil	
36 x 96	36.00
36 x 120	45.00
48 x Coil	
48 x 96	48.00
48 x 120	60.00

Gage & Size in Inches	Est. Lbs. Per Sheet
18 Ga. (.0478) 2.000 # Sq. Ft.	
36 x Coil	
36 x 96	48.00
36 x 120	60.00
48 x Coil	
48 x 96	64.00
48 x 120	80.00
16 Ga. (.0598) 2.500 # Sq. Ft.	
36 x Coil	
36 x 96	60.00
36 x 120	75.00
48 x Coil	
48 x 96	80.00
48 x 120	100.0
48 x 144	120.0
14 Ga. (.0747) 3.125 # Sq. Ft.	
36 x Coil	
36 x 96	75.00
36 x 120	93.75
48 x Coil	
48 x 96	100.0
48 x 120	125.0



STEEL SHEET AND COIL ALUMINIZED



ASTM A 463 Type 1

Coating T1-40, Oiled

Aluminized Steel is sheet steel coated with aluminum by a patented hot-dip process. The finished product, coated on both sides, combines the surface characteristics of aluminum with the mechanical properties of steel.

Type #1 – Aluminum-silicon alloy coating used for its high heat reflectivity and resistance to a combination of heat and corrosion.

Gage & Size in Inches	Est. Lbs. Per Sheet
22 Ga. (.0336) 1.363 # Sq. Ft.	
36 x 96	32.72
48 x Coil	
48 x 96	43.62
48 x 120	54.52
20 Ga. (.0396) 1.613 # Sq. Ft.	
36 x Coil	
36 x 96	38.71
36 x 120	48.39
48 x Coil	
48 x 96	51.62
48 x 120	64.52
60 x Coil	
60 x 120	80.65
60 x 144	96.78
18 Ga. (.0516) 2.113 # Sq. Ft.	
36 x Coil	
36 x 96	50.71
36 x 120	63.39
48 x Coil	
48 x 96	67.62
48 x 120	84.52
60 x Coil	
60 x 120	105.65
60 x 144	126.8

Gage & Size in Inches	Est. Lbs. Per Sheet
16 Ga. (.0635) 2.613 # Sq. Ft.	
36 x Coil	
36 x 96	62.71
36 x 120	78.39
48 x Coil	
48 x 96	83.62
48 x 120	104.5
60 x Coil	
60 x 120	130.7
60 x 144	156.8
14 Ga. (.0785) 3.238 # Sq. Ft.	
48 x Coil	
48 x 120	129.5
48 x 144	155.4
60 x Coil	
60 x 120	161.9
12 Ga. (.1084) 4.488 # Sq. Ft.	
48 x Coil	
48 x 96	143.6
48 x 120	179.5
48 x 144	215.4
60 x Coil	
60 x 120	224.4
60 x 144	269.3



STEEL SHEET AND COIL PAINTGRIP GALVANIZED



ASTM A 653 CS Type B G90

Minimum Spangle, Dry
G90 Coating* Commercial Steel

The surface has a full zinc coating and is phosphate treated for painting. Recommended for forming.

Gage & Size in Inches	Est. Lbs. Per Sheet
24 Ga. (.0276) 1.156 # Sq. Ft.	
48 x Coil	
48 x 96	36.99
48 x 120	46.24
48 x 144	55.49
22 Ga. (.0336) 1.406 # Sq. Ft.	
48 x Coil	
48 x 120	56.24
20 Ga. (.0396) 1.656 # Sq. Ft.	
48 x Coil	
48 x 96	52.99
48 x 120	66.24
18 Ga. (.0516) 2.156 # Sq. Ft.	
48 x Coil	
48 x 96	68.99
48 x 120	86.24
16 Ga. (.0635) 2.656 # Sq. Ft.	
36 x Coil	
36 x 96	63.74
36 x 120	79.68
48 x Coil	
48 x 96	84.99
48 x 120	106.2
60 x Coil	
60 x 96	106.2
60 x 120	132.8
14 Ga. (.0785) 3.281 # Sq. Ft.	
48 x Coil	
48 x 96	105.0
48 x 120	131.2
60 x Coil	
12 Ga. (.1084) 4.531 # Sq. Ft.	
48 x Coil	
48 x 96	145.0
48 x 120	181.2

*UL® (Underwriters Laboratories Inc.) approval available



STEEL SHEET CORRUGATED GALVANIZED

ASTM A 653 CS Type B G90

Surface Chem. Treated
G90 Coating, Commercial Steel
2½" Corrugations

Gage & Size in Inches	Est. Lbs. Per Sheet
26 Ga. (.0217)	
27½ x 144	27.18
24 Ga. (.0276)	
27½ x 120	28.90
22 Ga. (.0336)	
27½ x 120	35.15
27½ x 144	42.18
20 Ga. (.0396)	
27½ x 96	33.12
27½ x 120	41.40
27½ x 144	49.68
18 Ga. (.0516)	
27½ x 96	43.12
27½ x 120	53.90

Corrugations run the length of sheet.
Other widths and lengths can also be furnished by corrugating material cut and flattened from coil.

STEEL STRAPPING FLAT IN COIL

Painted and Waxed

to ASTM D-3953, Type I, Finish A

Size in Inches	Average Break Strength in Lbs.	Ft. Per Lb.	Lbs. Per 1000 Ft.
REGULAR DUTY* — Oscillated Wound			
1/2 x .020	1180	29.42	34.00
5/8 x .020	1470	23.53	42.50
3/4 x .020	1770	19.61	50.99
HIGH TENSILE* — Oscillated Wound			
3/4 x .023	2470	17.10	58.64
HIGH TENSILE — Ribbon Wound			
3/4 x .029**	3325	13.50	75.19
1 1/4 x .029*	5400	8.10	123.3

***105# average coils**
****75# average coils**

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SECTION 4

HOT ROLLED BARS

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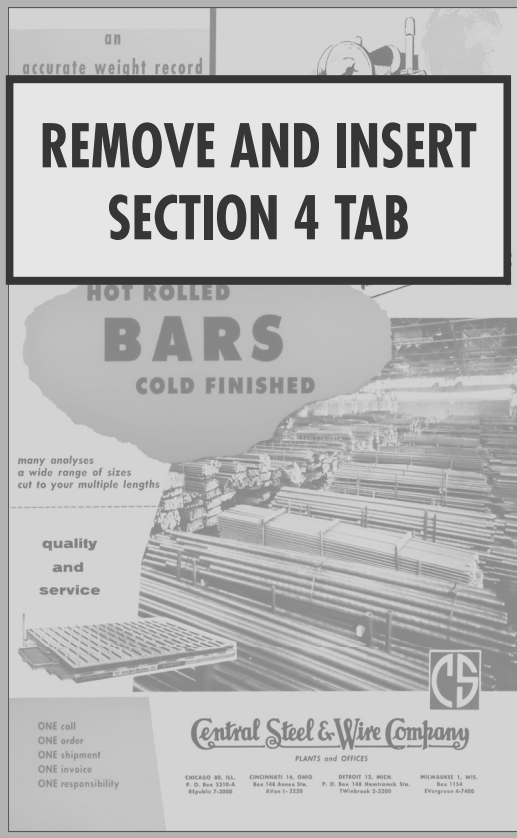

Central Steel & Wire Newspaper Ad from September 1955

CARBON STEEL BARS
Hot Rolled

Rounds 

A 36 47

A 709 Grade 36 47

1018 47-48

1045 47-48

1117 49

1141 49

Forged & Rough Turned

1 48

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Squa

A 3 50

A 7 50

1018 50

1045 50

Half Ovals 

A 36 51

A 709 Grade 36 51

Half Rounds 

A 36 51

A 709 Grade 36 51

Rectangles 

Commercial Quality Strip 52

A 36

Hot Rolled 53-56

Pickled Dry or Oiled 53-56

Mechanically Descaled Dry or Oiled 53-56

Galvanized 53-56

A 709 Grade 36 53-56

M 1044 (.40 to .50) Carbon 57

Universal Mill Plate 53-56

Reinforcing Bars 

. 51

STEEL ROUNDS HOT ROLLED



ASTM A 36 ASME SA-36 ASTM A 709 Grade 36

1018 Special Quality ASTM A 576

1045 Special Quality ASTM A 576

Chemical Composition, *Pages 243, 263*
Mechanical Properties, *Pages 258, 263*

Identification Colors: A 36 — White
1018 — Green
1045 — Yellow

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar	Random Lengths, Feet		
			A 36 SA-36	**1018**	**1045**
1/4	.1669	3.338	. .	20	. .
5/16	.2608	5.216	. .	20	. .
3/8	.3755	7.510	. .	20	. .
7/16	.5111	10.22	20	. .	. .
1/2	.6676	13.35	20	20	. .
9/16	.8449	16.90	20	. .	. .
5/8	1.043	20.86	20	20	. .
3/4	1.502	30.04	20	20	20
7/8	2.045	40.90	20	. .	. .
1	2.670	53.40	20	20	20
1 1/8	3.380	67.60	20	. .	. .
1 1/4	4.173	83.46	20	. .	20
1 3/8	5.049	101.0	20	. .	20
1 1/2	6.008	120.2	20	20	20
1 5/8	7.052	141.0	20	20	20
1 3/4	8.178	163.6	20	. .	20
1 7/8	9.388	187.8	. .	. .	20
2	10.68	213.6	20	20	20
2 1/8	12.06	241.2	20	. .	20
2 1/4	13.52	270.4	20	20	20
2 3/8	15.06	301.2	20	. .	20
2 1/2	16.69	333.8	20	20	20
2 5/8	18.40	368.0	. .	. .	20
2 3/4	20.19	403.8	20	20	20
3	24.03	480.6		20	20
3 1/8	26.08	521.6	. .	. .	20
3 1/4	28.21	564.2	. .	20	20
3 1/2	32.71	654.2	. .	20	20
3 5/8	35.09	701.8	. .	20	20
3 3/4	37.55	751.0	. .	20	20
4	42.73	854.6		20	20
4 1/4	48.23	964.6	. .	20	20
4 1/2	54.08	1081.6	. .	20	20
4 5/8	57.12	1142.4	. .	. .	20
4 3/4	60.25	1205.0	. .	20	20

Continued on following page



STEEL ROUNDS HOT ROLLED

1018 Special Quality ASTM A 576

1045 Special Quality ASTM A 576

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*

Identification Colors: 1018 — Green; 1045 — Yellow

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar	Random Lengths, Feet 1018	1045
5	66.76	1335.2	20	20
5 1/4	73.60	1472.0	20	20
5 1/2	80.78	1615.6	20	20
5 3/4	88.29	1765.8	20	20
6	96.13	1922.6	20	20
6 1/4	104.3	2086.0	20	20
6 1/2	112.8	2256.0	20	20
6 3/4	121.7	2434.0	20	20
7	130.8	2616.0	20	20
7 1/4	140.4	2808.0	20	20
7 1/2	150.2	3004.0	20	20
7 3/4	160.4	3208.0	20	20
8	170.9	3418.0	20	20
8 1/4	181.8	3636.0	20	20
8 1/2	192.9	3858.0	20	20
8 3/4	204.5	4090.0	. .	20
9	216.3	4326.0	20	20
9 1/2	241.0	4820.0	20	20
10	267.0	5340.0	20	20
10 1/2*	294.4	5888.0	20	20
11*	323.0	6460.0	20	20
11 1/2*	353.1	7062.0		20
12*	384.5	7690.0	20	20

***ASTM A 576 chemistry only**



STEEL ROUNDS HOT ROLLED FORGED AND ROUGH TURNED

1018

Chemical Composition, *Page 243*
Identification Color: Green

Size in Inches	Suitable for Finishing To	Est. Lbs. Per Ft. Actual Size	Random Lengths Feet
13 1/4	13	468.8	10-20′R
14 1/4	14	542.2	10-20′R

STEEL ROUNDS HOT ROLLED



1117 1141

Special Quality ASTM A 576

Chemical Composition, *Page 244*
Mechanical Properties, *Page 259*

Identification Colors: 1117— Pink
1141— Aluminum

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20' Bar	Random Lengths, Feet	
			1117	**1141**
2 1/2	16.69	333.8	. .	20
2 3/4	20.19	403.8	20	. .
3	24.03	480.6		20
3 1/4	28.21	564.2	. .	20
3 3/8	30.42	608.4	. .	20
3 1/2	32.71	654.2	20	20
3 5/8	35.09	701.8	. .	20
3 3/4	37.55	751.0	. .	20
4	42.73	854.6		20
4 1/4	48.23	964.6	20	20
4 1/2	54.08	1081.6	20	20
4 3/4	60.25	1205.0	. .	20
5	66.76	1335.2	20	20
5 1/4	73.60	1472.0	20	20
5 1/2	80.78	1615.6	20	20
5 3/4	88.29	1765.8	20	20
6	96.13	1922.6	20	20
7	130.8	2616.0	20	20
7 1/4	140.4	2808.0	. .	20
7 1/2	150.2	3004.0	20	. .
8	170.9	3418.0	20	20
8 1/2	192.9	3858.0	20	20
9	216.3	4326.0	20	20



STEEL SQUARES
HOT ROLLED

ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

1018 Special Quality ASTM A 576

1045 Special Quality ASTM A 576

Chemical Composition, *Pages 243, 263*
Mechanical Properties, *Pages 258, 263*

Identification Colors: A 36 — White
1018 — Green
1045 — Yellow

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar	Random Lengths, Feet		
			A 36 SA-36	**1018**	**1045**
3/8	.4781	9.562	20	. .	. .
7/16	.6508	13.02	20	. .	. .
1/2	.8500	17.00	20		
9/16	1.076	21.52	20	. .	. .
5/8	1.328	26.56	20	. .	. .
3/4	1.913	38.26	20		
7/8	2.603	52.06	20	. .	. .
1	3.400	68.00	20		20
1 1/8	4.303	86.06	20	. .	. .
1 1/4	5.313	106.3	20	. .	20
1 1/2	7.650	153.0	20	. .	20
1 3/4	10.41	208.2	20	. .	. .
2	13.60	272.0	20		20
2 1/4	17.21	344.2	20	. .	. .
2 1/2	21.25	425.0	20	. .	20
2 3/4	25.71	514.2	20	. .	. .
3	30.60	612.0		20	20
3 1/2	41.65	833.0	. .	20	. .
4	54.40	1088.0		20	20
4 1/2	68.85	1377.0	. .	20	20
5	85.00	1700.0		20	20
6	122.40	2448.0		20	20

STEEL HALF OVALS
HOT ROLLED



ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Identification Color: White

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′ Bar	Random Lengths Feet
1 x 1/4	.620	12.40	20
1 1/4 x 5/16	.960	19.20	20
1 1/2 x 5/16	1.18	23.60	20
1 1/2 x 7/16	1.56	31.20	20
1 3/4 x 7/16	1.91	38.20	20

STEEL HALF ROUNDS
HOT ROLLED



ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Identification Color: White

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′ Bar	Random Lengths Feet
1/2	.334	6.68	20
3/4	.7510	15.02	20
1	1.335	26.70	20

STEEL
CONCRETE REINFORCING BARS



New Billet Steel — Deformed Bars
ASTM A 615 Grade 60

Tensile Strength 90 ksi Minimum
Yield Point 60 ksi Minimum

		Nominal Dimensions			
Bar No.*	Lbs. Per Foot	Dia. Inches	Area Sq. Inches	Perimeter Inches	Random Lengths Feet
4	.6676	.500	.20	1.571	20
5	1.043	.625	.31	1.963	20
6	1.502	.750	.44	2.356	20

*Bar number is the number of eighths of an inch in the nominal diameter



STEEL STRIP*
HOT ROLLED

Low Carbon Commercial Quality
ASTM A 1011 CS Type B

Random Lengths 16 Ft.

Gage & Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 16' Bar
1/8 (.125) x		
1/2	.2125	3.400
5/8	.2656	4.250
3/4	.3188	5.101
7/8	.3719	5.950
1	.4250	6.800
1 1/8	.4781	7.650
1 1/4	.5313	8.501
1 3/8	.5844	9.350
1 1/2	.6375	10.20
1 3/4	.7438	11.90
2	.8500	13.60
2 1/4	.956	15.30
2 1/2	1.063	17.01
2 3/4	1.169	18.70
3	1.275	20.40
3 1/4	1.381	22.10
3 1/2	1.488	23.81
4	1.700	27.20
4 1/2	1.913	30.61
5	2.125	34.00
5 1/2	2.338	37.41
6	2.550	40.80
7	2.975	47.60
10 Ga. (.134) x		
1 1/2	.6834	10.93

Gage & Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 16' Bar
3/16 (.1875) x		
5/8	.3984	6.374
3/4	.4781	7.650
1	.6375	10.20
1 1/8	.7172	11.48
1 1/4	.7969	12.75
1 3/8	.8766	14.03
1 1/2	.9563	15.30
1 3/4	1.116	17.86
2	1.275	20.40
2 1/4	1.434	22.94
2 1/2	1.594	25.50
2 3/4	1.753	28.05
3	1.913	30.61
3 1/4	2.072	33.15
3 1/2	2.231	35.70
4	2.550	40.80
4 1/2	2.869	45.90
5	3.188	51.01
5 1/2	3.506	56.10
6	3.825	61.20
7	4.463	71.41
8	5.100	81.60
10	6.375	102.0
12	7.650	122.4

*Also available Pickled Dry or Oiled

STEEL FLATS*
HOT ROLLED



ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Random Lengths 20 Ft.
Identification Color: White

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′ Bar
1/4 x 1/2	.4250	8.500
5/8	.5313	10.63
3/4	.6375	12.75
7/8	.7438	14.88
1	.8500	17.00
1 1/8	.9563	19.13
1 1/4	1.063	21.26
1 1/2	1.275	25.50
1 5/8	1.381	27.62
1 3/4	1.488	29.76
2	1.700	34.00
2 1/4	1.913	38.26
2 1/2	2.125	42.50
2 3/4	2.338	46.76
3	2.550	51.00
3 1/4	2.763	55.26
3 1/2	2.975	59.50
3 3/4	3.188	63.76
4	3.400	68.00
4 1/2	3.825	76.50
5	4.250	85.00
5 1/2	4.675	93.50
6	5.100	102.0
6 1/2	5.525	110.5
7	5.950	119.0
7 1/2	6.375	127.5
8	6.800	136.0
9**	7.660	153.2
10**	8.510	170.2
12**	10.210	204.2

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′ Bar
5/16 x 5/8	.6641	13.28
3/4	.7969	15.94
7/8	.9297	18.59
1	1.063	21.26
1 1/4	1.328	26.56
1 3/8	1.461	29.22
1 1/2	1.594	31.88
1 3/4	1.859	37.18
2	2.125	42.50
2 1/4	2.391	47.82
2 1/2	2.656	53.12
2 3/4	2.922	58.44
3	3.188	63.76
3 1/4	3.453	69.06
3 1/2	3.719	74.38
4	4.250	85.00
4 1/2	4.781	95.62
5	5.313	106.3
5 1/2	5.844	116.9
6	6.375	127.5
7	7.438	148.8
8	8.500	170.0
3/8 x 1/2	.6375	12.75
5/8	.7969	15.94
3/4	.9563	19.13
7/8	1.116	22.32
1	1.275	25.50
1 1/8	1.434	28.68
1 1/4	1.594	31.88
1 3/8	1.753	35.06
1 1/2	1.913	38.26

Continued on following page

***** Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized

****** Universal Mill Plate (Mill Edge) — Ends Plain



STEEL FLATS*
HOT ROLLED

ASTM A 36 ASME SA-36

ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Random Lengths 20 Ft.
Identification Color: White

Continued from preceding page

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 20′ Bar
3/8 x 1 5/8	2.072	41.44
1 3/4	2.231	44.62
2	2.550	51.00
2 1/4	2.869	57.38
2 1/2	3.188	63.76
2 3/4	3.506	70.12
3	3.825	76.50
3 1/4	4.144	82.88
3 1/2	4.463	89.26
4	5.100	102.0
4 1/2	5.738	114.8
5	6.375	127.5
5 1/2	7.013	140.3
6	7.650	153.0
6 1/2	8.288	165.8
7	8.925	178.5
7 1/2	9.563	191.3
8	10.20	204.0
9**	11.49	229.8
10**	12.77	255.4
12**	15.32	306.4
7/16 x 1	1.488	29.76
1 1/4	1.859	37.18
1 1/2	2.231	44.62
2	2.975	59.50
2 1/4	3.347	66.94
2 1/2	3.719	74.38
3	4.463	89.26
4	5.950	119.0
5	7.438	148.8
1/2 x 5/8	1.063	21.26
3/4	1.275	25.50
1	1.700	34.00
1 1/8	1.913	38.26
1 1/4	2.125	42.50
1 3/8	2.338	46.76
1 1/2	2.550	51.00
1 5/8	2.763	55.26
1 3/4	2.975	59.50
2	3.400	68.00
2 1/4	3.825	76.50
2 1/2	4.250	85.00
2 3/4	4.675	93.50
3	5.100	102.0
3 1/4	5.525	110.5
3 1/2	5.950	119.0
4	6.800	136.0
4 1/2	7.650	153.0
5	8.500	170.0
5 1/2	9.350	187.0
6	10.20	204.0
7	11.90	238.0
8	13.60	272.0
9**	15.32	306.4
10**	17.02	340.4
12**	20.42	408.4
5/8 x 7/8	1.859	37.18
1	2.125	42.50
1 1/4	2.656	53.12

Continued on following page

* Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized
** Universal Mill Plate (Mill Edge) — Ends Plain

STEEL FLATS*
HOT ROLLED



ASTM A 36 ASME SA-36

ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Random Lengths 20 Ft.
Identification Color: White

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar
5/8 x 1½	3.188	63.76
1¾	3.719	74.38
2	4.250	85.00
2¼	4.781	95.62
2½	5.313	106.3
2¾	5.844	116.9
3	6.375	127.5
3¼	6.906	138.1
3½	7.438	148.8
3¾	7.968	159.4
4	8.500	170.0
4½	9.563	191.3
5	10.63	212.6
5½	11.69	233.8
6	12.75	255.0
7	14.88	297.6
8	17.00	340.0
3/4 x 1	2.550	51.00
1⅛	2.869	57.38
1¼	3.188	63.76
1½	3.825	76.50
1¾	4.463	89.26
2	5.100	102.0
2¼	5.738	114.8
2½	6.375	127.5
2¾	7.013	140.3
3	7.650	153.0
3¼	8.288	165.8
3½	8.925	178.5
4	10.20	204.0
4½	11.48	229.6

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar
3/4 x 5	12.75	255.0
5½	14.03	280.6
6	15.30	306.0
7	17.85	357.0
8	20.40	408.0
9**	22.97	459.4
10**	25.53	510.6
12**	30.63	612.6
7/8 x 1	2.975	59.50
1½	4.463	89.26
1¾	5.206	104.1
2	5.950	119.0
2½	7.438	148.8
3	8.925	178.5
3½	10.41	208.2
4	11.90	238.0
4½	13.39	267.8
5	14.88	297.6
6	17.85	357.0
7	20.83	416.6
1 x 1¼	4.250	85.00
1½	5.100	102.0
1¾	5.950	119.0
2	6.800	136.0
2¼	7.650	153.0
2½	8.500	170.0
2¾	9.350	187.0
3	10.20	204.0
3¼	11.05	221.0
3½	11.90	238.0

Continued on following page

* Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized
** Universal Mill Plate (Mill Edge) — Ends Plain



STEEL FLATS*
HOT ROLLED

ASTM A 36 ASME SA-36
ASTM A 709 Grade 36

Chemical Composition and Mechanical Properties, *Page 263*

Random Lengths 20 Ft.

Identification Color: White

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 20′ Bar
1 x 4	13.60	272.0
4½	15.30	306.0
5	17.00	340.0
5½	18.70	374.0
6	20.40	408.0
7	23.80	476.0
8	27.20	544.0
9**	30.63	612.6
10**	34.03	680.6
12**	40.84	816.8
1⅛ x 2	7.650	153.0
2½	9.56	191.2
4	15.30	306.0
1¼ x 1½	6.375	127.5
1¾	7.438	148.8
2	8.500	170.0
2¼	9.563	191.3
2½	10.63	212.6
2¾	11.69	233.8
3	12.75	255.0
3¼	13.81	276.2
3½	14.88	297.6
4	17.00	340.0
4½	19.13	382.6
5	21.25	425.0
5½	23.38	467.6
6	25.50	510.0
8	34.00	680.0
1½ x 1¾	8.925	178.5
2	10.20	204.0
2¼	11.48	229.6
2½	12.75	255.0
2¾	14.03	280.6
3	15.30	306.0
3½	17.85	357.0
4	20.40	408.0
4½	22.95	459.0
1½ x 5	25.50	510.0
5½	28.05	561.0
6	30.60	612.0
8	40.80	816.0
10**	51.05	1021.0
12**	61.26	1225.2
1¾ x 2	11.90	238.0
2½	14.88	297.6
3	17.85	357.0
3½	20.83	416.6
4	23.80	476.0
4½	26.78	535.6
5	29.75	595.0
6	35.70	714.0
2 x 2¼	15.30	306.0
2½	17.00	340.0
3	20.40	408.0
3½	23.80	476.0
4	27.20	544.0
4½	30.60	612.0
5	34.00	680.0
6	40.80	816.0
8	54.40	1088.0
2¼ x 4	30.60	612.0
2½ x 3	25.50	510.0
3½	29.75	595.0
4	34.00	680.0
4½	38.25	765.0
5	42.50	850.0
6	51.00	1020.0
3 x 4	40.80	816.0
5	51.00	1020.0
6	61.20	1224.0

***Also available Pickled Dry or Oiled, Mechanically Descaled Dry or Oiled, or Galvanized
****Universal Mill Plate (Mill Edge) — Ends Plain

STEEL FLATS HOT ROLLED



M1044 — Merchant Quality (.40 to .50 Carbon) ASTM A 575

M1044 Not Recommended for Heat Treating
Chemical Composition, *Page 243*
Random Lengths 20 Ft.
Identification Color: Yellow

Size in Inches		Lbs. Per Ft.	Est. Lbs. Per 20′ Bar
1/4 x	**1**	.8500	17.00
	1 1/4	1.063	21.26
	1 1/2	1.275	25.50
	1 3/4	1.488	29.76
	2	1.700	34.00
	2 1/4	1.913	38.25
	2 1/2	2.125	42.50
	3	2.550	51.00
	4	3.400	68.00
	5	4.250	85.00
	6	5.100	102.0
5/16x	**1 1/2**	1.594	31.88
	3 1/2	3.719	74.38
3/8 x	**1**	1.275	25.50
	1 1/4	1.594	31.88
	1 1/2	1.913	38.26
	2	2.550	51.00
	2 1/4	2.869	57.38
	2 1/2	3.188	63.76
	3	3.825	76.50
	3 1/2	4.463	89.26
	4	5.100	102.0
	4 1/2	5.738	114.8
	5	6.375	127.5
	6	7.650	153.0
1/2 x	**1**	1.700	34.00
	1 1/4	2.125	42.50
	1 1/2	2.550	51.00
	2	3.400	68.00
	2 1/4	3.825	76.50
	2 1/2	4.250	85.00
	3	5.100	102.0
	3 1/2	5.950	119.0
	4	6.800	136.0
	5	8.500	170.0
	6	10.20	204.0

Size in Inches		Lbs. Per Ft.	Est. Lbs. Per 20′ Bar
5/8 x	**1 1/2**	3.188	63.76
	2	4.250	85.00
	2 1/2	5.313	106.3
	3	6.375	127.5
	4	8.500	170.0
	4 1/2	9.563	191.3
	6	12.75	255.0
3/4 x	**1 1/2**	3.825	76.5
	2	5.100	102.0
	2 1/2	6.375	127.5
	3	7.650	153.0
	3 1/2	8.925	178.5
	4	10.20	204.0
	6	15.30	306.0
7/8 x	**3**	8.925	178.5
1 x	**1 1/2**	5.100	102.0
	2	6.800	136.0
	2 1/2	8.500	170.0
	3	10.20	204.0
	4	13.60	272.0
	5	17.00	340.0
	6	20.40	408.0
1 1/4 x	**2 1/2**	10.63	212.6
	3	12.75	255.0
	5	21.25	425.0
1 1/2 x	**2**	10.20	204.0
	2 1/2	12.75	255.0
	3	15.30	306.0
	4	20.40	408.0
1 3/4 x	**2 1/2**	14.88	297.6
2 x	**3**	20.40	408.0

THREADED STEEL ROUNDS



Low Carbon
Roll Threaded — Class 1A Fit
Random Lengths 12 Ft.

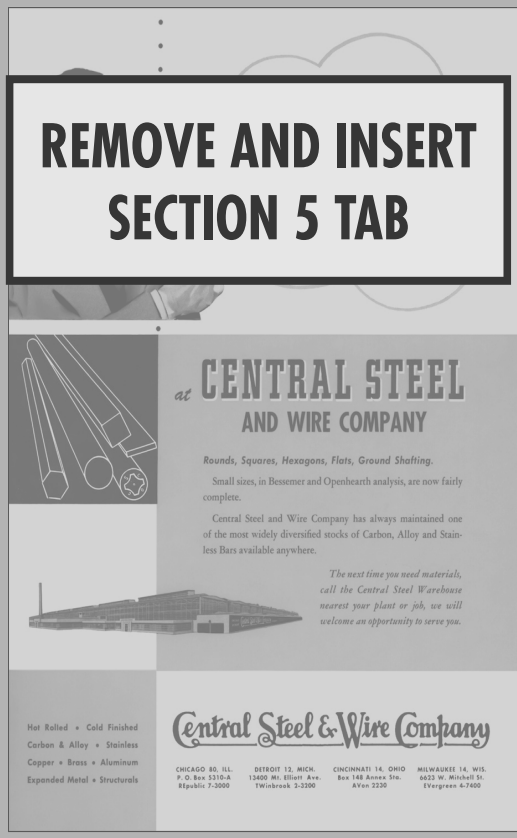
Size in Inches	Threads Per Inch	Lbs. Per Foot	Est. Lbs. Per 12′ Bar
1/4	20	.118	1.416
5/16	18	.197	2.364
3/8	16	.284	3.408
3/8	24	.284	3.408
1/2	13	.515	6.180
5/8	11	.825	9.900
3/4	10	1.215	14.58
7/8	9	1.675	20.10
1	8	2.190	26.28
1	14	2.190	26.28
1 1/8	7	2.750	33.00
1 1/4	7	3.500	42.00
1 1/4	12	3.500	42.00
1 1/2	6	5.050	60.60

SECTION 5

COLD FINISHED BARS

REMOVE AND INSERT SECTION 5 TAB

C.F. BARS



Central Steel & Wire Newspaper Ad from July 1952

REMOVE AND INSERT
SECTION 5 TAB

CARBON STEEL BARS
Cold Finished

Rounds 
1018 63-65
1018 T&P 65
1018 TG&P 71
1045 66-67
1045 T&P 67
1045 TG&P 71
1050 66
1117, 11L17 63-65
1141 66-67
1141 TG&P 71
1141 Special Accuracy 69
11L41 66-67
1144 66-67
12L14 60-62
12L14/Sel 60
12L14/Tel 60-62
1215 60-62
1215 Special Accuracy 69
INcut® 100 60-62
INcut® 200 60-61
ASTM A 311 or STRESSPROOF®
CD 68-69
G&P 70
FATIGUE-PROOF® or Equivalent Mechanical Properties
CD 68-69
G&P 70

Threaded  58

Hexagons 
1018 73
1045 73
1117 73
1137 73
12L14 72
12L14/Sel 72
12L14/Tel 72
1215 72
INcut® 100 72
INcut® 200 72
ASTM A 311 or STRESSPROOF® 73
FATIGUE-PROOF® or Equivalent Mechanical Properties 73

Squares 
1018 74
1045 74
1117, 11L17 74
12L14 74
1215 74

Flats 
Flat Wire 75
1018 76-80
11L17 81

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STEEL ROUNDS COLD FINISHED

1215 12L14 12L14 with Tellurium INcut® 100/1214 SA INcut® 200

ASTM A 108

Chemical Composition, *Page 244* Mechanical Properties, *Page 260*

Identification Colors: 1215 — Gold
12L14 — White
12L14 with Tellurium — Blue
INcut 100 — Purple
INcut 200 — Red

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet				
			1215	**12L14**	**12L14 with Tellurium**	**INcut 100/ 1214SA**	**INcut 200**
3/32	.0235	.2820	12	12	. .	. .	. .
7/64	.0320	.3840	12	12	. .	. .	. .
1/8	.0417	.5004	12	12			
.130	.0451	.5412	. .	12	. .	. .	. .
9/64	.0528	.6336	12	12	. .	. .	. .
5/32	.0652	.7824	12	12	. .	. .	. .
11/64	.0789	.9468	12	12	. .	. .	. .
3/16	.0939	1.127	12	12	. .	. .	. .
13/64	.1102	1.322	12	12			
7/32	.1278	1.534	12	12	12*	. .	. .
15/64	.1467	1.760	12	12	. .	. .	. .
1/4	.1669	2.003	12	12	. .	. .	. .
17/64	.1884	2.261	12	12	. .	. .	. .
9/32	.2113	2.536	12	12			
19/64	.2354	2.825	. .	12	. .	. .	. .
5/16	.2608	3.130	12	12	. .	. .	. .
21/64	.2875	3.450	12	12	. .	. .	. .
11/32	.3156	3.787	12	12	12		
23/64	.3449	4.139	. .	12	. .	. .	. .
3/8	.3755	4.506	12	12	12	12	. .
25/64	.4074	4.889	12	12	. .	. .	. .
13/32	.4408	5.290	12	12	12	12	. .
27/64	.4753	5.704		12			
7/16	.5111	6.133	12	12	12	12	. .
29/64	.5482	6.578	12	12	. .	. .	. .
15/32	.5869	7.043	12	12	12	. .	. .
31/64	.6266	7.519	. .	12	. .	. .	. .
1/2	.6676	8.011	12	12	12	12	. .
33/64	.7099	8.519	12	12	. .	. .	. .
17/32	.7538	9.046	12	12	12	. .	. .
35/64	.7987	9.584	12	12	. .	. .	. .
9/16	.8449	10.14	12	12	12	12	12
37/64	.8924	10.71	12	12			
19/32	.9416	11.30	12	12	12	. .	. .
39/64	.9917	11.90	. .	12	. .	. .	. .
5/8	1.043	12.52	12	12	12	12	. .
41/64	1.096	13.15	12	12	. .	. .	. .

*May be 12L14 with Selenium — Ends Black

Continued on following page

STEEL ROUNDS COLD FINISHED



1215 12L14
12L14 with Tellurium
INcut® 100/1214 SA INcut® 200

ASTM A 108

Chemical Composition, *Page 244* Mechanical Properties, *Page 260*

Identification Colors: 1215 — Gold
12L14 — White
12L14 with Tellurium — Blue
INcut 100 — Purple
INcut 200 — Red

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar	Random Lengths, Feet				
			1215	**12L14**	**12L14 with Tellurium**	**INcut 100/ 1214SA**	**INcut 200**
21/32	1.150	13.80	12	12			
43/64	1.206	14.47	. .	12	. .	. .	. .
11/16	1.262	15.14	12	12	12	12	. .
45/64	1.320	15.84	12	12	. .	. .	. .
23/32	1.380	16.56	12	12	12	. .	. .
47/64	1.440	17.28		12			
3/4	1.502	18.02	12	12	12	12	12
49/64	1.565	18.78	12	12	. .	. .	. .
25/32	1.630	19.56	12	12	12	. .	. .
51/64	1.696	20.35	12	. .	. .	. .	. .
13/16	1.763	21.16	12	12	12		
27/32	1.901	22.81	. .	12	. .	. .	. .
7/8	2.045	24.54	12	12	12	. .	. .
57/64	2.118	25.42	12	12	. .	. .	. .
29/32	2.193	26.32	12	12	. .	. .	. .
15/16	2.347	28.16	12	12	12	12	. .
31/32	2.506	30.07	12	12	. .	. .	. .
63/64	2.588	31.06	12	. .	. .	. .	. .
1	2.670	32.04	12	12	12	12	
1 1/64	2.754	33.05	12	12	. .	. .	. .
1 1/32	2.840	34.08	12	. .	. .	. .	. .
1 1/16	3.015	36.18	12	12	12	. .	. .
1 1/8	3.380	40.56	12	12	12	12	. .
1 3/16	3.766	45.19	12	12	12	12	. .
1 1/4	4.173	50.08	12	12	12	12	
1 5/16	4.600	55.20	12	12	12	. .	. .
1 3/8	5.049	60.59	12	12	12	. .	12
1 7/16	5.518	66.22	12	12	12	. .	. .
1 1/2	6.008	72.10	12	12	12	12	12
1 9/16	6.520	78.24	12	12	12	12	. .
1 5/8	7.052	84.62	12	12	12	12	. .
1 11/16	7.604	91.25	12	12	. .	. .	. .
1 3/4	8.178	98.14	12	12		12	
1 13/16	8.773	105.3	12	12	12	. .	. .
1 7/8	9.388	112.7	12	12	12	. .	. .
1 15/16	10.02	120.2	12	12	12	. .	. .
2	10.68	128.2	12	12	12	12	. .
2 1/16	11.36	136.3	12	12	12	. .	. .

Continued on following page



STEEL ROUNDS COLD FINISHED

1215 12L14 12L14 with Tellurium INcut® 100/1214 SA

ASTM A 108

Chemical Composition, *Page 244* Mechanical Properties, *Page 260*

Identification Colors: 1215 — Gold
12L14 — White
12L14 with Tellurium — Blue
INcut 100 — Purple

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet			
			1215	**12L14**	**12L14 with Tellurium**	**INcut 100/ 1214SA**
2 1/8	12.06	144.7	12	12	12	. .
2 3/16	12.78	153.4	12	12	12	. .
2 1/4	13.52	162.2	12	12	12	. .
2 5/16	14.28	171.4	12	12	. .	. .
2 3/8	15.06	180.7	12	12	. .	. .
2 7/16	15.87	190.4	. .	12	. .	. .
2 1/2	16.69	200.3	12	12	12	. .
2 9/16	17.53	210.4	12	12	. .	. .
2 5/8	18.40	220.8	12	12	. .	. .
2 11/16	19.29	231.5	12	12	. .	. .
2 3/4	20.19	242.3	12	12	. .	. .
2 13/16	21.12	253.4	12	12	. .	. .
2 7/8	22.07	264.8	12	12	. .	. .
2 15/16	23.04	276.5	12	. .	. .	. .
3	24.03	288.4	12	12	. .	12
3 1/16	25.05	300.6	. .	12	. .	. .
3 1/8	26.08	313.0	12	12	. .	. .
3 1/4	28.21	338.5	12	12	. .	. .
3 3/8	30.42	365.0	12	12	. .	. .
3 1/2	32.71	392.5	12	12	. .	. .
3 5/8	35.09	421.1	. .	12	. .	. .
3 3/4	37.55	450.6	12	12	. .	. .
3 7/8	40.10	481.2	. .	12	. .	. .
4	42.73	512.8	12	12	. .	. .
4 1/16	44.07	528.8	. .	12	. .	. .
4 1/8	45.44	545.3	12	12	. .	. .
4 1/4	48.23	578.8	12	12	. .	. .
4 3/8	51.11	613.3	. .	12	. .	. .
4 1/2	54.08	649.0	12	12	. .	. .
4 9/16	55.59	667.1	. .	12	. .	. .
4 5/8	57.12	685.4	12	. .	. .	. .
4 3/4	60.25	723.0	12	12	. .	. .
4 7/8	63.46	761.5	12	. .	. .	. .
5	66.76	801.1	12	12	. .	. .
5 1/4	73.60	883.2	12	12	. .	. .
5 1/2	80.78	969.4	12	12	. .	. .
5 3/4	88.29	1059.5	12	. .	. .	. .
5 7/8	92.17	1106.0	12	. .	. .	. .
6	96.13	1153.6	12	12	. .	. .

STEEL ROUNDS COLD FINISHED



1018
1117 11L17

ASTM A 108
Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*
Identification Colors: 1018 — Green
1117 — Pink
11L17 — Pink and Black

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		1018	**1117**	**11L17**
1/8	.0417	12	12	
5/32	.0652	12	12	
3/16	.0939	12	12	
7/32	.1278	12	12	
1/4	.1669	12	12	12
17/64	.1884	12		
9/32	.2113	12	12	
5/16	.2608	12	12	12
21/64	.2875	12		
11/32	.3156	12	12	
3/8	.3755	12, 20	12	12
25/64	.4074		12	
13/32	.4408	12	12	
7/16	.5111	12	12	12
15/32	.5869	12	12	
1/2	.6676	12, 20	12	12
33/64	.7099	12	12	
17/32	.7538	12	12	
9/16	.8449	12, 20	12	12
19/32	.9416	12		
5/8	1.043	12, 16, 20	12	12
41/64	1.096	12		
11/16	1.262	12	12	12
23/32	1.380	12		
3/4	1.502	12, 20	12	12
49/64	1.565	12		
25/32	1.630	12		
13/16	1.763	12	12	12
27/32	1.901	12	12	
7/8	2.045	12, 20	12	12
57/64	2.118	12		
29/32	2.193	12		
15/16	2.347	12, 20	12	12
1	2.670	12, 20	12	12
1 1/16	3.015	12	12	12
1 1/8	3.380	12, 20	12	12
1 3/16	3.766	12, 20	12	12
1 1/4	4.173	12, 16, 20	12	12
1 5/16	4.600	12, 20	12	12
1 3/8	5.049	12, 20	12	12
1 7/16	5.518	12, 20	12	

Continued on following page



STEEL ROUNDS COLD FINISHED

1018
1117 11L17

ASTM A 108
Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*
Identification Colors: 1018 — Green
1117 — Pink
11L17 — Pink and Black

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		1018	**1117**	**11L17**
1 1/2	6.008	12, 20	12	12
1 9/16	6.520	12, 20	12	12
1 5/8	7.052	12, 20	12	12
1 11/16	7.604	12, 20	12	. .
1 3/4	8.178	12, 20	12	12
1 13/16	8.773	12	12	12
1 7/8	9.388	12, 20	12	12
1 15/16	10.02	12, 20	12	12
2	10.68	12, 20	12	12
2 1/16	11.36	12	12	. .
2 1/8	12.06	12, 20	12	12
2 3/16	12.78	12, 20	12	. .
2 1/4	13.52	12, 20	12	12
2 5/16	14.28	12	. .	. .
2 3/8	15.06	12, 20	12	12
2 7/16	15.87	12, 20	12	. .
2 1/2	16.69	12, 20	12	12
2 9/16	17.53	12	12	. .
2 5/8	18.40	12, 20	12	12
2 11/16	19.29	12	. .	. .
2 3/4	20.19	12, 20	12	12
2 13/16	21.12	12	. .	. .
2 7/8	22.07	12, 20	12	. .
2 15/16	23.04	12	12	. .
3	24.03	12, 20	12	. .
3 1/8	26.08	12, 20	12	. .
3 3/16	27.13	20	. .	. .
3 1/4	28.21	12, 20	12	. .
3 5/16	29.30	20	. .	. .
3 3/8	30.42	12, 20	12	. .
3 7/16	31.55	12, 20	. .	. .
3 1/2	32.71	12, 20	12	12
3 5/8	35.09	12, 20	12	. .
3 3/4	37.55	12, 20	12	. .
3 7/8	40.10	20	12	. .
3 15/16	41.40	12, 20	. .	. .

Continued on following page

STEEL ROUNDS COLD FINISHED



1018
1117 11L17

ASTM A 108

Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*

Identification Colors: 1018 — Green
1117 — Pink
11L17 — Pink and Black

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		1018	**1117**	**11L17**
4	42.73	12, 20	12	12
4 1/8	45.44	20	12	. .
4 1/4	48.23	12, 20	12	. .
4 3/8	51.11	20	. .	. .
4 7/16	52.58	20	. .	. .
4 1/2	54.08	12, 20	12	. .
4 5/8	57.12	20	12	. .
4 3/4	60.25	12, 20	12	. .
4 7/8	63.46	20	. .	. .
4 15/16	65.10	20	. .	. .
5	66.76	12, 20	12	12
5 1/8	70.14	20	. .	. .
5 1/4	73.60	20	12	. .
5 3/8	77.15	20	. .	. .
5 1/2	80.78	12, 20	12	. .
5 3/4	88.29	20	12	. .
6	96.13	12, 20	12	. .
6 1/8*	100.2	20	. .	. .
6 1/4*	104.3	20	. .	. .
6 1/2*	112.8	20	. .	. .
7*	130.8	20		
7 1/4*	140.4	20	. .	. .
7 1/2*	150.2	20	. .	. .
8*	170.9	20		
8 1/2*	192.9	20	. .	. .
9*	216.3	20	. .	. .
10*	267.0	20	. .	. .
12*	384.5	20	. .	. .

***Turned and Polished 1018 — Ends Green



STEEL ROUNDS
COLD FINISHED

1045 1141 11L41 1144
1050 (Hard Drawn and Stress Relieved)

ASTM A 108

Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*

Identification Colors: 1045 — Yellow; 1050SR — Blue and Red
1141 — Aluminum; 11L41 — Aluminum and Blue
1144 — Brown

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet				
		1045	**1050 Stress Relieved**	**1141**	**11L41**	**1144**
1/8	.0417			12		
3/16	.0939	12		12		
.225	.1352		12			
1/4	.1669	12		12	12	12
5/16	.2608	12		12	12	12
3/8	.3755	12		12	12	12
7/16	.5111	12		12	12	12
1/2	.6676	12		12	12	12
9/16	.8449	12		12	12	12
.587	.9201		12			
5/8	1.043	12, 20		12	12	12
11/16	1.262	12		12	12	12
3/4	1.502	12, 20		12	12	12
13/16	1.763	12		12	12	12
.827	1.826		12			
7/8	2.045	12		12	12	12
15/16	2.347	12		12		12
1	2.670	12, 16, 20		12	12	12
1 1/16	3.015	12		12		12
1 1/8	3.380	12, 20		12		12
1 3/16	3.766	12, 20		12		12
1 1/4	4.173	12, 20		12	12	12
1 5/16	4.600	12, 20		12		
1 3/8	5.049	12, 20		12		12
1 7/16	5.518	12, 20		12		12
1 1/2	6.008	12, 20		12	12	12
1 9/16	6.520	12		12		
1 5/8	7.052	12, 20		12		12
1 11/16	7.604	12, 20				
1 3/4	8.178	12, 20		12	12	12
1 13/16	8.773	12		12		12
1 7/8	9.388	12, 20		12		
1 15/16	10.02	12, 20		12		
2	10.68	12, 20		12	12	12
2 1/16	11.36	12		12		
2 1/8	12.06	12, 20		12		12
2 3/16	12.78	12, 20				
2 1/4	13.52	12, 20		12	12	12
2 5/16	14.28	12				
2 3/8	15.06	12, 20		12		12
2 7/16	15.87	12, 20				

Continued on following page

STEEL ROUNDS COLD FINISHED



1045 1141 11L41 1144

ASTM A 108

Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*

Identification Colors: 1045 — Yellow; 1141 — Aluminum
1144 — Brown; 11L41 — Aluminum and Blue

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet			
		1045	**1141**	**11L41**	**1144**
2 1/2	16.69	12, 20	12	12	12
2 5/8	18.40	12, 20	12	. .	. .
2 3/4	20.19	12, 20	12	. .	12
2 13/16	21.12	. .	12	. .	. .
2 7/8	22.07	12, 20	12	. .	12
2 15/16	23.04	20	12	. .	. .
3	24.03	12, 20	12	. .	12
3 1/8	26.08	20	12	. .	. .
3 3/16	27.13	20	. .	. .	. .
3 1/4	28.21	20	12	. .	12
3 3/8	30.42	20	12	. .	. .
3 7/16	31.55	20	. .	. .	. .
3 1/2	32.71	20	12	. .	12
3 5/8	35.09	20	12	. .	. .
3 3/4	37.55	20	12	. .	12
3 7/8	40.10	20	. .	. .	. .
3 15/16	41.40	20	. .	. .	. .
4	42.73	20	12	. .	12
4 1/8	45.44	20	. .	. .	. .
4 1/4	48.23	20	12	. .	. .
4 3/8	51.11	20	. .	. .	. .
4 7/16	52.58	20	. .	. .	. .
4 1/2	54.08	20	12	. .	. .
4 5/8	57.12	20	. .	. .	. .
4 3/4	60.25	20	12	. .	. .
4 15/16	65.10	20	. .	. .	. .
5	66.76	20	12	. .	. .
5 1/4	73.60	20	. .	. .	. .
5 7/16	78.95	20	. .	. .	. .
5 1/2	80.78	20	12	. .	. .
5 3/4	88.29	20	. .	. .	. .
6*	96.13	20	. .	. .	. .
6 1/4*	104.3	20	. .	. .	. .
6 1/2*	112.8	20	. .	. .	. .
7*	130.8	20	. .	. .	. .
7 1/2*	150.2	20	. .	. .	. .
8*	170.9	20	. .	. .	. .
9*	216.3	20	. .	. .	. .
10*	267.0	20	. .	. .	. .

***Turned and Polished 1045 — Ends Yellow

STEEL ROUNDS

C.D. ASTM A 311 Class B, Gr 1144 or STRESSPROOF® FATIGUE-PROOF® or Equivalent Mechanical Properties



ASTM A 108

High strength carbon manganese steels that are readily machinable. Suitable in many applications as a replacement for heat treated alloy.

Chemical Composition, *Page 244* Mechanical Properties, *Page 259*

Identification Colors: ASTM A 311or STRESSPROOF® — Orange
FATIGUE-PROOF®* — Green and Orange

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet	
			ASTM A 311 or STRESSPROOF®	FATIGUE-PROOF®*
1/4	.1669	2.003	12	12
17/64	.1884	2.261	12	. .
5/16	.2608	3.130	12	12
21/64	.2875	3.450	12	. .
3/8	.3755	4.506	12	12
25/64	.4074	4.889	12	12
7/16	.5111	6.133	12	12
29/64	.5482	6.578	12	. .
1/2	.6676	8.011	12	12
33/64	.7099	8.519	12	12
17/32	.7538	9.046	12	. .
9/16	.8449	10.14	12	12
37/64	.8924	10.71	12	. .
5/8	1.043	12.52	12	12
41/64	1.096	13.15	12	12
11/16	1.262	15.14	12	12
3/4	1.502	18.02	12	12
49/64	1.565	18.78	12	. .
13/16	1.763	21.16	12	12
7/8	2.045	24.54	12	12
15/16	2.347	28.16	12	12
1	2.670	32.04	12	12
1 1/64	2.754	33.05	12	. .
1 1/16	3.015	36.18	12	12
1 1/8	3.380	40.56	12	12
1 3/16	3.766	45.19	12	12
1 1/4	4.173	50.08	12	12
1 5/16	4.600	55.20	12	12
1 3/8	5.049	60.59	12	12
1 7/16	5.518	66.22	12	12
1 1/2	6.008	72.10	12	12
1 9/16	6.520	78.24	12	12
1 5/8	7.052	84.62	. .	12
1 11/16	7.604	91.25	12	. .
1 3/4	8.178	98.14	12	12
1 13/16	8.773	105.3	12	12
1 7/8	9.388	112.7	12	12
1 15/16	10.02	120.2	12	12
2	10.68	128.2	12	12
2 1/16	11.36	136.3	12	12
2 1/8	12.06	144.7	12	12
2 3/16	12.78	153.4	12	12
2 1/4	13.52	162.2	12	12
2 5/16	14.28	171.4	12	. .
2 3/8	15.06	180.7	12	. .
2 7/16	15.87	190.4	12	. .
2 1/2	16.69	200.3	12	12
2 9/16	17.53	210.4	12	. .
2 5/8	18.40	220.8	12	. .

***or Equivalent Mechanical Properties**

Continued on following page

STEEL ROUNDS

C.D. ASTM A 311 Class B, Gr 1144 or STRESSPROOF® FATIGUE-PROOF® or Equivalent Mechanical Properties



ASTM A 108

Chemical Composition, *Page 244* Mechanical Properties, *Page 259*

Identification Colors: ASTM A 311 or STRESSPROOF® — Orange
FATIGUE-PROOF®* — Green and Orange

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet	
			ASTM A 311 or STRESSPROOF®	**FATIGUE-PROOF® ***
2 3/4	20.19	242.3	12	12
2 7/8	22.07	264.8	12	. .
2 15/16	23.04	276.5	12	. .
3	24.03	288.4	12	12
3 1/8	26.08	313.0	12	. .
3 1/4	28.21	338.5	12	12
3 3/8	30.42	365.0	12	. .
3 1/2	32.71	392.5	12	12
3 5/8	35.09	421.1	12	. .
3 3/4	37.55	450.6	12	. .
3 7/8	40.10	481.2	12	. .
4	42.73	512.8	12	. .
4 1/8	45.44	545.3	12	. .
4 1/4	48.23	578.8	12	. .
4 1/2	54.08	649.0	12	. .

***or Equivalent Mechanical Properties**

STEEL ROUNDS
DRAWN, GROUND AND POLISHED
Special Accuracy



1215 1141

ASTM A 108

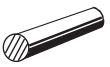
Tolerance +.0005″ to – .0005″

Chemical Composition, *Page 244*

Mechanical Properties, *Pages 259-260*

Identification Colors: 1215 — Gold; 1141 — Aluminum

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet	
			1215	**1141**
5/32	.0652	.7824	12	. .
3/16	.0939	1.127	12	. .
1/4	.1669	2.003	12	. .
5/16	.2608	3.130	12	. .
3/8	.3755	4.506	12	12
7/16	.5111	6.133	12	. .
1/2	.6676	8.011	12	12
9/16	.8449	10.14	12	. .
5/8	1.043	12.52	12	12
3/4	1.502	18.02	12	12
7/8	2.045	24.54	12	. .
1	2.670	32.04	12	12
1 3/16	3.766	45.19	12	. .
1 1/4	4.173	50.08	12	12



STEEL ROUNDS GROUND AND POLISHED

ASTM A 311 Class B, Gr 1144 or STRESSPROOF®

FATIGUE-PROOF® or Equivalent Mechanical Properties

ASTM A 108

TOLERANCES

1 1/2" and Under	+.000 to – .001
1 9/16" to 2 7/16" Incl.	+.000 to – .0015
2 1/2" to 3" Incl.	+.000 to – .002
3 1/16" to 4" Incl.	+.000 to – .003
4 1/16" to 4 1/2" Incl.	+.000 to – .005

Chemical Composition, *Page 244*
Mechanical Properties, *Page 259*

Identification Colors: ASTM A 311 or STRESSPROOF® — Orange
FATIGUE-PROOF®* — Green and Orange

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet: ASTM A 311 or STRESSPROOF®	Random Lengths, Feet: FATIGUE-PROOF®*
3/8	.3755	12	
7/16	.5111	12	
1/2	.6676	12	12
9/16	.8449	12	
5/8	1.043	12	12
3/4	1.502	12	12
7/8	2.045	12	
1	2.670	12, 20-24	12, 21-24
1 1/8	3.380	12, 20-24	
1 1/4	4.173	12, 20-24	21-24
1 3/8	5.049	12	
1 7/16	5.518	20-24	21-24
1 1/2	6.008	12, 20-24	21-24
1 11/16	7.604	20-24	
1 3/4	8.178	12, 24	21-24
1 15/16	10.02	20-24	
2	10.68	12, 20-24	
2 1/8	12.06	20-24	
2 3/16	12.78	20-24	
2 3/8	15.06	20-24	
2 7/16	15.87	20-24	
2 1/2	16.69	20-24	
2 3/4	20.19	20-24	
3	24.03	20-24	
3 1/2	32.71	20-24	

***or Equivalent Mechanical Properties**

STEEL ROUNDS
TURNED, GROUND AND POLISHED



SHAFTING

1018 1045 1141

ASTM A 108

TOLERANCES

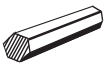
	1018, 1045	1141
5/8" to 1" Incl.	– .001 to + .000	
1 1/8" to 1 1/2" Incl.	– .0005 to – .0015	– .0005 to – .0015
1 9/16" to 2 7/16" Incl.	– .0005 to – .002	– .0005 to – .002
2 1/2" to 3" Incl.	– .0005 to – .0025	– .0005 to – .0025
3 1/16" to 4" Incl.	– .0005 to – .0035	– .0005 to – .0035
4 1/16" to 6" Incl.	– .0005 to – .0055	– .0005 to – .0045
6 1/16" to 8" Incl.	– .0005 to – .0065	

Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*

Identification Colors: 1018 — Green
1045 — Yellow
1141 — Aluminum with Yellow Dot

Size in Inches	Lbs. Per Ft.	1018	1045	1141
5/8*	1.043	. .	X	. .
3/4*	1.502	X	X	. .
1*	2.670	X	X	. .
1 1/8	3.380	X	X	X
1 3/16	3.766	X	X	X
1 1/4	4.173	X	X	X
1 5/16	4.600	. .	X	. .
1 3/8	5.049	X	X	. .
1 7/16	5.518	X	X	X
1 1/2	6.008	X	X	X
1 5/8	7.052	. .	X	X
1 11/16	7.604	. .	X	. .
1 3/4	8.178	X	X	X
1 7/8	9.388	. .	X	. .
1 15/16	10.02	X	X	. .
2	10.68	X	X	X
2 1/8	12.06	. .	X	. .
2 3/16	12.78	. .	X	X
2 1/4	13.52	. .	X	. .
2 3/8	15.06	. .	X	. .
2 7/16	15.87	. .	X	. .
2 1/2	16.69	X	X	X
2 5/8	18.40	. .	X	. .
2 11/16	19.29	. .	X	. .
2 3/4	20.19	. .	X	. .
2 7/8	22.07	. .	X	. .
2 15/16	23.04	X	X	. .
3	24.03	X	X	X
3 3/16	27.13	. .	X	. .
3 1/4	28.21	. .	X	. .
3 7/16	31.55	. .	X	. .
3 1/2	32.71	X	X	. .
3 11/16	36.31	. .	X	. .
3 3/4	37.55	. .	X	. .
3 15/16	41.40	. .	X	. .
4	42.73	. .	X	X
4 1/4	48.23	. .	X	. .
4 7/16	52.58	. .	X	. .
4 1/2	54.08	. .	X	. .
4 3/4	60.25	. .	X	. .
4 15/16	65.10	. .	X	. .
5	66.76	. .	X	. .
5 7/16	78.95	. .	X	. .
5 1/2	80.78	. .	X	. .
5 3/4	88.29	. .	X	. .
5 15/16	94.14	. .	X	. .
6	96.13	. .	X	. .
7	130.8	. .	X	. .
8	170.9	. .	X	. .

*Cold Drawn, Ground & Polished



STEEL HEXAGONS COLD FINISHED

1215 12L14
12L14 with Tellurium
INcut® 100/1214 SA INcut® 200

ASTM A 108

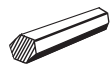
Chemical Composition, *Page 244*
Mechanical Properties, *Page 260*

Identification Colors: 1215 — Gold; 12L14 — White
12L14 with Tellurium — Blue
INcut 100 — Purple
INcut 200 — Red

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet				
			1215	**12L14**	**12L14 with Tellurium**	**INcut 100/ 1214 SA**	**INcut 200**
5/32	.0719	.8628	. .	12	. .	. .	. .
3/16	.1035	1.242	12	12	. .	. .	. .
7/32	.1410	1.692	. .	12	. .	. .	. .
1/4	.1840	2.208	12	12	. .	. .	. .
9/32	.2330	2.796	. .	12	. .	. .	. .
5/16	.2875	3.450	12	12	12*	. .	. .
11/32	.3480	4.176	. .	12	. .	. .	. .
3/8	.4141	4.969	12	12	12	. .	. .
7/16	.5636	6.763	12	12	12	. .	. .
1/2	.7361	8.833	12	12	12	12	12
9/16	.9316	11.18	12	12	12	12	12
5/8	1.150	13.80	12	12	12	12	. .
11/16	1.392	16.70	12	12	12	. .	12
3/4	1.656	19.87	12	12	12	12	12
25/32	1.797	21.56	12	. .	. .	. .	. .
13/16	1.944	23.33	12	12	. .	12	. .
7/8	2.254	27.05	12	12	12	. .	. .
15/16	2.588	31.06	12	12	12	. .	. .
1	2.944	35.33	12	12	12	. .	. .
1 1/16	3.324	39.89	12	12	12	. .	. .
1 1/8	3.727	44.72	12	12	12	12	. .
1 3/16	4.152	49.82	12	12	. .	. .	. .
1 1/4	4.601	55.21	12	12	12	. .	. .
1 5/16	5.072	60.86	. .	12	. .	. .	. .
1 3/8	5.567	66.80	12	12	12	. .	. .
1 7/16	6.084	73.01	. .	12	. .	. .	. .
1 1/2	6.625	79.50	12	12	12	. .	. .
1 5/8	7.775	93.30	12	12	12	. .	. .
1 11/16	8.385	100.6	. .	12	. .	. .	. .
1 3/4	9.017	108.2	12	12	12	. .	. .
1 13/16	9.673	116.1	. .	12	. .	. .	. .
1 7/8	10.35	124.2	12	12	. .	. .	. .
2	11.78	141.4	12	12	. .	. .	. .
2 1/8	13.30	159.6	12	12	. .	. .	. .
2 1/4	14.91	178.9	12	12	. .	. .	. .
2 3/8	16.61	199.3	12	12	. .	. .	. .
2 1/2	18.40	220.8	12	12	. .	. .	. .
2 5/8	20.29	243.5	12	12	. .	. .	. .
2 3/4	22.27	267.2	12	12	. .	. .	. .
2 7/8	24.34	292.1	12	12	. .	. .	. .
3	26.50	318.0	12	12	. .	. .	. .
3 1/2	36.07	432.8	. .	12	. .	. .	. .

*12L14 with Selenium — Ends Black

STEEL HEXAGONS COLD FINISHED



1018 1045
1117 1137

ASTM A 311 Class B, Gr 1144 or STRESSPROOF®

FATIGUE-PROOF® or Equivalent Mechanical Properties

ASTM A 108
Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-259*

Identification Colors: 1018 — Green
1045 — Yellow
1117 — Pink
1137 — Aluminum with Red Dot
ASTM A 311 or STRESSPROOF® — Orange
FATIGUE-PROOF®* — Green and Orange

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar	Random Lengths, Feet					
			1018	**1045**	**1117**	**1137**	**A 311 or Stressproof®**	**Fatigue-Proof®***
1/4	.1840	2.208	12	. .	. .	. .	12	. .
5/16	.2875	3.450	12	. .	. .	. .	12	. .
3/8	.4141	4.969	12	. .	. .	. .	12	. .
7/16	.5636	6.763	12	. .	. .	. .	12	. .
1/2	.7361	8.833	12	12	12	. .	12	12
9/16	.9316	11.18	12	12	12	12	12	12
5/8	1.150	13.80	12	12	12	12	12	12
11/16	1.392	16.70	12	. .	. .	12	12	. .
3/4	1.656	19.87	12	12	12	12	12	12
13/16	1.944	23.33	. .	. .	. .	12	12	. .
7/8	2.254	27.05	12	12	12	12	12	12
15/16	2.588	31.06	. .	12	12	12	12	. .
1	2.944	35.33	12	12	12	12	12	12
1 1/16	3.324	39.89	12	. .	12	12	12	. .
1 1/8	3.727	44.72	12	12	12	12	12	12
1 3/16	4.152	49.82	12	. .	. .	. .	. .	. .
1 1/4	4.601	55.21	12	12	12	12	12	12
1 5/16	5.072	60.86	. .	12	12	. .	12	. .
1 3/8	5.567	66.80	12	12	12	. .	12	12
1 1/2	6.625	79.50	12	12	12	12	12	. .
1 5/8	7.775	93.30	12	12	12	. .	12	. .
1 11/16	8.385	100.6	. .	. .	. .	. .	12	. .
1 3/4	9.017	108.2	12	12	12	. .	12	. .
1 7/8	10.35	124.2	12	12	. .	12	12	. .
2	11.78	141.4	12	12	12	12	12	. .
2 1/16	12.53	150.4	. .	. .	12	. .	. .	. .
2 1/8	13.30	159.6	. .	. .	12	. .	. .	. .
2 1/4	14.91	178.9	12	12	12	12	12	. .
2 3/8	16.61	199.3	12	. .	. .	. .	. .	. .
2 1/2	18.40	220.8	12	12	12	. .	. .	. .
2 5/8	20.29	243.5	. .	. .	12	. .	. .	. .
2 3/4	22.27	267.2	12	12	. .	. .	. .	. .
3	26.50	318.0	12	. .	. .	. .	. .	. .
3 1/4	31.10	373.2	12	. .	. .	. .	. .	. .
3 1/2	36.07	432.8	12	. .	. .	. .	. .	. .
3 3/4	41.41	496.9	12	. .	. .	. .	. .	. .
4	47.11	565.3	12	. .	. .	. .	. .	. .

***or Equivalent Mechanical Properties**



STEEL SQUARES COLD FINISHED

1018 1045 1117 1215 12L14

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Pages 243-244*
Mechanical Properties, *Pages 258-260*

Identification Colors: 1018 — Green; 1045 — Yellow
1117 — Pink; 1215 — Gold
12L14 — White

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar	Random Lengths, Feet				
			1018	**1045**	**1117**	**1215**	**12L14**
1/8	.0531	.6372	12	. .	. .	. .	. .
3/16	.1195	1.434	12	. .	. .	. .	12
1/4	.2125	2.550	12	12	. .	12	12
9/32	.2690	3.228	. .	. .	. .	. .	12
5/16	.3320	3.984	12	12	. .	12	12
23/64	.439	5.27	. .	. .	. .	. .	12
3/8	.4781	5.737	12	12	. .	12	12
7/16	.6508	7.810	12	. .	. .	12	12
1/2	.8500	10.20	12	12	. .	12	12
9/16	1.076	12.91	12	. .	. .	12	12
5/8	1.328	15.94	12	12	. .	12	12
11/16	1.607	19.28	12	. .	. .	. .	12
3/4	1.913	22.96	12	12	. .	12	12
13/16	2.245	26.94	12	. .	. .	. .	12
7/8	2.603	31.24	12	12	. .	12	12
15/16	2.988	35.86	. .	. .	. .	. .	12
1	3.400	40.80	12	12	12*	12	12
1 1/16	3.838	46.06	. .	. .	. .	12	12
1 1/8	4.303	51.64	12	12	. .	12	12
1 3/16	4.795	57.54	12	. .	. .	. .	. .
1 1/4	5.313	63.76	12	12	. .	12	12
1 3/8	6.428	77.14	12	. .	. .	12	12
1 1/2	7.650	91.80	12	12	12*	12	12
1 9/16	8.301	99.61	12	. .	. .	. .	. .
1 5/8	8.978	107.7	12	. .	. .	. .	12
1 3/4	10.41	124.9	12	12	. .	12	12
1 7/8	11.95	143.4	12	. .	. .	. .	. .
2	13.60	163.2	12	12	12*	12	12
2 1/4	17.21	206.5	12	12	12	. .	. .
2 3/8	19.18	230.2	12	. .	. .	. .	. .
2 1/2	21.25	255.0	12	12	12	. .	. .
2 3/4	25.71	308.5	12	. .	12	. .	. .
3	30.60	367.2	12	12	12	. .	. .
3 1/4	35.91	430.9	12	. .	. .	. .	. .
3 1/2	41.65	499.8	12	. .	12	. .	. .
3 3/4	47.81	573.7	12	. .	12	. .	. .
4	54.40	652.8	12	. .	12	. .	. .
4 1/2	68.85	826.2	12	. .	12	. .	. .
5	85.00	1020.0	12	. .	. .	. .	. .
5 1/2	102.9	1234.8	12	. .	12	. .	. .
6	122.4	1468.8	12	. .	. .	. .	. .

*Only available 11L17 — Ends Pink & Black

STEEL FLAT WIRE
COLD ROLLED ROUND EDGE



AISI 1010
No. 4 Edge — No. 2 Bright Finish
Rockwell Hardness B-60-75*
No. 3 Quarter Hard Temper
1/2'' wide and under — ASTM A 805
Over 1/2'' wide — ASTM A 109
Random Lengths 12 Ft.

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 12' Bar
.035 x 5/16	.0372	.4464
1/2	.0595	.7140
5/8	.0744	.8928
1	.1190	1.428
.050 x 7/16	.0744	.8928
1/2	.0850	1.020
5/8	.1063	1.276
7/8	.1488	1.786
1	.1700	2.040
.062 x 1/4	.0527	.6324
5/16	.0659	.7904
3/8	.0791	.9492
7/16	.0922	1.106
1/2	.1054	1.265
5/8	.1318	1.582
3/4	.1581	1.897
7/8	.1845	2.214
1	.2108	2.530
1 1/4	.2635	3.162
1 1/2	.3162	3.794
2	.4216	5.059
.072 x 1/2	.1224	1.469
5/8	.1530	1.836
3/4	.1836	2.203
1	.2448	2.938
.080 x 1/2	.1360	1.632
5/8	.1700	2.040
3/4	.2040	2.448
7/8	.2380	2.856
1	.2720	3.264
.094 x 1/4	.0799	.9588
5/16	.0999	1.199
3/8	.1199	1.439
7/16	.1398	1.678

Size in Inches	Lbs. Per Foot	Est. Lbs. Per 12' Bar
.094 x 1/2	.1598	1.918
5/8	.1998	2.398
3/4	.2397	2.876
7/8	.2797	3.356
1	.3196	3.835
1 1/4	.3995	4.794
1 1/2	.4794	5.753
.109 x 1/2	.1853	2.224
5/8	.2316	2.779
3/4	.2780	3.336
1	.3706	4.447
.125 x 1/4	.1063	1.276
5/16	.1328	1.594
3/8	.1594	1.913
7/16	.1859	2.231
1/2	.2125	2.550
5/8	.2656	3.187
3/4	.3188	3.826
7/8	.3719	4.463
1	.4250	5.100
1 1/8	.4781	5.737
1 1/4	.5313	6.376
1 1/2	.6375	7.650
1 3/4	.7438	8.926
2	.8500	10.20
.156 x 1/2	.2652	3.182
5/8	.3315	3.978
3/4	.3978	4.774
1	.5304	6.365
.187 x 3/8	.2384	2.861
1/2	.3179	3.815
3/4	.4769	5.723
7/8	.5563	6.676
1	.6358	7.630
1 1/4	.7948	9.538
1 1/2	.9537	11.44
2	1.272	15.26

*Approximate hardness away from edge



STEEL FLATS
COLD FINISHED
1018

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*

Random Lengths 12 Ft.
Identification Color: Green

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12′ Bar
1/8 x		
3/16	.0797	.9564
1/4	.1063	1.276
5/16	.1328	1.594
3/8	.1594	1.913
1/2	.2125	2.550
9/16	.2391	2.869
5/8	.2656	3.187
3/4	.3188	3.826
7/8	.3719	4.463
1	.4250	5.100
1 1/8	.4781	5.737
1 1/4	.5313	6.376
1 3/8	.5844	7.013
1 1/2	.6375	7.650
1 3/4	.7438	8.926
2	.8500	10.20
2 1/4	.9563	11.48
2 1/2	1.063	12.76
3	1.275	15.30
3 3/4	1.594	19.13
4	1.700	20.40
4 1/2	1.913	22.96
5	2.125	25.50
6	2.550	30.60
3/16 x		
1/4	.1594	1.913
5/16	.1992	2.390
3/8	.2391	2.869
7/16	.2789	3.347
1/2	.3188	3.826
9/16	.3586	4.303
5/8	.3984	4.781
3/4	.4781	5.737
7/8	.5578	6.694
1	.6375	7.650
1 1/8	.7172	8.606
1 1/4	.7969	9.563
1 3/8	.8766	10.52
1 1/2	.9563	11.48
1 3/4	1.116	13.39
2	1.275	15.30
2 1/4	1.434	17.21
2 1/2	1.594	19.13
2 3/4	1.753	21.04
3	1.913	22.96
3 1/4	2.072	24.86
3 1/2	2.231	26.77
3/16 x		
4	2.550	30.60
4 1/2	2.869	34.43
5	3.188	38.26
6	3.825	45.90
8	5.100	61.20
10	6.375	76.50
1/4 x		
5/16	.2656	3.187
3/8	.3188	3.826
7/16	.3719	4.463
1/2	.4250	5.100
9/16	.4781	5.737
5/8	.5313	6.376
3/4	.6375	7.650
7/8	.7438	8.926
1	.8500	10.20
1 1/8	.9563	11.48
1 1/4	1.063	12.76
1 3/8	1.169	14.03
1 1/2	1.275	15.30
1 5/8	1.381	16.57
1 3/4	1.488	17.86
1 7/8	1.594	19.13
2	1.700	20.40
2 1/4	1.913	22.96
2 1/2	2.125	25.50
2 3/4	2.338	28.06
3	2.550	30.60
3 1/4	2.763	33.16
3 1/2	2.975	35.70
3 3/4	3.188	38.26
4	3.400	40.80
4 1/2	3.825	45.90
4 3/4	4.038	48.46
5	4.250	51.00
5 1/2	4.675	56.10
6	5.100	61.20
6 1/2	5.525	66.30
7	5.950	71.40
8	6.800	81.60
10	8.500	102.0
12	10.20	122.4

Continued on following page

STEEL FLATS COLD FINISHED



1018

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*
Random Lengths 12 Ft.
Identification Color: Green

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
5/16 x		
3/8	.3984	4.781
7/16	.4648	5.578
1/2	.5313	6.376
9/16	.5977	7.172
5/8	.6641	7.969
3/4	.7969	9.563
7/8	.9297	11.16
1	1.063	12.76
1 1/8	1.195	14.34
1 1/4	1.328	15.94
1 3/8	1.461	17.53
1 1/2	1.594	19.13
1 3/4	1.859	22.31
2	2.125	25.50
2 1/4	2.391	28.69
2 1/2	2.656	31.87
2 3/4	2.922	35.06
3	3.188	38.26
3 1/4	3.453	41.44
3 1/2	3.719	44.63
4	4.250	51.00
4 1/2	4.781	57.37
5	5.313	63.76
6	6.375	76.50
7	7.438	89.26
8	8.500	102.0
10	10.63	127.6
12	12.75	153.0
3/8 x		
7/16	.5578	6.694
1/2	.6375	7.650
9/16	.7172	8.606
5/8	.7969	9.563
3/4	.9563	11.48
7/8	1.116	13.39
1	1.275	15.30
1 1/8	1.434	17.21
1 1/4	1.594	19.13
1 3/8	1.753	21.04
1 1/2	1.913	22.96
1 5/8	2.072	24.86
1 3/4	2.231	26.77
1 7/8	2.391	28.69
3/8 x		
2	2.550	30.60
2 1/4	2.869	34.43
2 1/2	3.188	38.26
2 3/4	3.506	42.07
3	3.825	45.90
3 1/4	4.144	49.73
3 1/2	4.463	53.56
3 3/4	4.781	57.37
4	5.100	61.20
4 1/2	5.738	68.86
5	6.375	76.50
5 1/2	7.013	84.16
6	7.650	91.80
7	8.925	107.10
8	10.20	122.4
9	11.48	137.8
10	12.75	153.0
12	15.30	183.6
7/16 x		
1/2	.7438	8.926
9/16	.8367	10.04
5/8	.9297	11.16
3/4	1.116	13.39
7/8	1.302	15.62
1	1.488	17.86
1 1/8	1.673	20.08
1 1/4	1.859	22.31
1 1/2	2.231	26.77
2	2.975	35.70
2 1/2	3.719	44.63
3	4.463	53.56
3 1/2	5.206	62.47
4	5.950	71.40
1/2 x		
9/16	.9563	11.48
5/8	1.063	12.76
11/16	1.169	14.03
3/4	1.275	15.30
7/8	1.488	17.86
1	1.700	20.40
1 1/8	1.913	22.96
1 1/4	2.125	25.50
1 3/8	2.338	28.06
1 1/2	2.550	30.60

Continued on following page



STEEL FLATS
COLD FINISHED
1018

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*

Random Lengths 12 Ft.

Identification Color: Green

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
1/2 x		
1 5/8	2.763	33.16
1 3/4	2.975	35.70
2	3.400	40.80
2 1/4	3.825	45.90
2 1/2	4.250	51.00
2 3/4	4.675	56.10
3	5.100	61.20
3 1/4	5.525	66.30
3 1/2	5.950	71.40
3 3/4	6.375	76.50
4	6.800	81.60
4 1/4	7.225	86.70
4 1/2	7.650	91.80
4 3/4	8.075	96.90
5	8.500	102.0
5 1/2	9.350	112.2
6	10.20	122.4
7	11.90	142.8
8	13.60	163.2
9	15.30	183.6
10	17.00	204.0
11	18.70	224.4
12	20.40	244.8
14 5/8*	24.86	298.3
9/16 x		
3/4	1.434	17.21
1	1.913	22.96
1 1/2	2.869	34.43
2	3.825	45.90
2 1/2	4.781	57.37
5/8 x		
3/4	1.594	19.13
7/8	1.859	22.31
1	2.125	25.50
1 1/8	2.391	28.69
1 1/4	2.656	31.87
1 3/8	2.922	35.06
1 1/2	3.188	38.26
1 5/8	3.453	41.44
1 3/4	3.719	44.63
2	4.250	51.00
2 1/4	4.781	57.37
2 1/2	5.313	63.76
2 3/4	5.844	70.13

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
5/8 x		
3	6.375	76.50
3 1/2	7.438	89.26
4	8.500	102.0
4 1/2	9.563	114.8
5	10.63	127.6
5 1/2	11.69	140.3
6	12.75	153.0
7	14.88	178.6
8	17.00	204.0
9	19.13	229.6
10	21.25	255.0
12	25.50	306.0
14 5/8*	31.08	373.0
3/4 x		
7/8	2.231	26.77
1	2.550	30.60
1 1/8	2.869	34.43
1 1/4	3.188	38.26
1 3/8	3.506	42.07
1 1/2	3.825	45.90
1 5/8	4.144	49.73
1 3/4	4.463	53.56
2	5.100	61.20
2 1/4	5.738	68.86
2 1/2	6.375	76.50
2 3/4	7.013	84.16
3	7.650	91.80
3 1/2	8.925	107.1
3 3/4	9.563	114.8
4	10.20	122.4
4 1/2	11.48	137.8
5	12.75	153.0
5 1/2	14.03	168.4
6	15.30	183.6
6 1/2	16.58	199.0
7	17.85	214.2
8	20.40	244.8
9	22.95	275.4
10	25.50	306.0
11	28.05	336.6
12	30.60	367.2
14 5/8*	37.29	447.5

***ASTM A 108 chemistry only

Continued on following page

STEEL FLATS
COLD FINISHED
1018

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*

Random Lengths 12 Ft.

Identification Color: Green

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
7/8 x		
1	2.975	35.70
1 1/4	3.719	44.63
1 3/8	4.091	49.09
1 1/2	4.463	53.56
1 3/4	5.206	62.47
2	5.950	71.40
2 1/4	6.694	80.33
2 1/2	7.438	89.26
2 3/4	8.181	98.17
3	8.925	107.1
3 1/2	10.41	124.9
4	11.90	142.8
4 1/2	13.39	160.7
5	14.88	178.6
5 1/2	16.36	196.3
8	23.80	285.6
10	29.75	357.0
1 x		
1 1/8	3.825	45.90
1 1/4	4.250	51.00
1 3/8	4.675	56.10
1 1/2	5.100	61.20
1 5/8	5.525	66.30
1 3/4	5.950	71.40
2	6.800	81.60
2 1/4	7.650	91.80
2 1/2	8.500	102.0
2 3/4	9.350	112.2
3	10.20	122.4
3 1/4	11.05	132.6
3 1/2	11.90	142.8
4	13.60	163.2
4 1/2	15.30	183.6
5	17.00	204.0
5 1/2	18.70	224.4
6	20.40	244.8
7	23.80	285.6
8	27.20	326.4
9	30.60	367.2
10	34.00	408.0
11	37.40	448.8
12	40.80	489.6
14 5/8*	49.73	596.8
1 1/8 x		
1 1/2	5.738	68.86
1 3/4	6.694	80.33
2	7.650	91.80
2 1/4	8.606	103.3
2 1/2	9.563	114.8
4	15.30	183.6
1 1/4 x		
1 3/8	5.844	70.13
1 1/2	6.375	76.50
1 5/8	6.906	82.87
1 3/4	7.438	89.26
1 7/8	7.969	95.63
2	8.500	102.0
2 1/4	9.563	114.8
2 1/2	10.63	127.6
2 3/4	11.69	140.3
3	12.75	153.0
3 1/4	13.81	165.7
3 1/2	14.88	178.6
3 3/4	15.94	191.3
4	17.00	204.0
4 1/2	19.13	229.6
5	21.25	255.0
5 1/2	23.38	280.6
6	25.50	306.0
8	34.00	408.0
10	42.50	510.0
12	51.00	612.0
1 3/8 x		
1 1/2	7.013	84.16
2	9.350	112.2
3	14.03	168.4
1 1/2 x		
1 3/4	8.925	107.1
1 7/8	9.563	114.8
2	10.20	122.4
2 1/4	11.48	137.8
2 1/2	12.75	153.0
2 3/4	14.03	168.4
3	15.30	183.6
3 1/4	16.58	199.0
3 1/2	17.85	214.2

***ASTM A 108 chemistry only

Continued on following page



STEEL FLATS
COLD FINISHED
1018

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 243*
Mechanical Properties, *Page 258*

Random Lengths 12 Ft.

Identification Color: Green

Continued from preceding page

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
1 1/2 x		
4	20.40	244.8
4 1/2	22.95	275.4
5	25.50	306.0
5 1/2	28.05	336.6
6	30.60	367.2
6 1/2	33.15	397.8
8	40.80	489.6
8 1/2	43.35	520.2
10	51.00	612.0
12	61.20	734.4
1 5/8 x		
2	11.05	132.6
3	16.58	199.0
4	22.10	265.2
1 3/4 x		
2	11.90	142.8
2 1/4	13.39	160.7
2 1/2	14.88	178.6
2 3/4	16.36	196.3
3	17.85	214.2
3 1/2	20.83	250.0
3 3/4	22.31	267.7
4	23.80	285.6
4 1/2	26.78	321.4
5	29.75	357.0
5 1/2	32.73	392.8
6	35.70	428.4
2 x		
2 1/4	15.30	183.6
2 1/2	17.00	204.0
2 3/4	18.70	224.4

Size in Inches	Lbs. Per Ft.	Est. Lbs. Per 12' Bar
2 x		
3	20.40	244.8
3 1/2	23.80	285.6
4	27.20	326.4
4 1/2	30.60	367.2
5	34.00	408.0
6	40.80	489.6
6 1/2	44.20	530.4
8	54.40	652.8
10	68.00	816.0
12	81.60	979.2
2 1/4 x		
2 1/2	19.13	229.6
3	22.95	275.4
3 1/4	24.86	298.3
3 1/2	26.78	321.4
4	30.60	367.2
4 1/2	34.43	413.2
5	38.25	459.0
2 1/2 x		
2 3/4	23.38	280.6
3	25.50	306.0
3 1/2	29.75	357.0
4	34.00	408.0
4 1/2	38.25	459.0
5	42.50	510.0
6	51.00	612.0
8	68.00	816.0
10	85.00	1020.0
3 x		
3 1/2	35.70	428.4
4	40.80	489.6
5	51.00	612.0
6	61.20	734.4
8	81.60	979.2
10	102.0	1224.0

STEEL FLATS COLD FINISHED



11L17

ASTM A 108

Generally Tolerances are Size to Undersize

Chemical Composition, *Page 244* Mechanical Properties, *Page 259*

Random Lengths 12 Ft.

Identification Color: Pink and Black

Size in Inches			Lbs. Per Ft.	Est. Lbs. 12' Bar
5/16	x	**1**	1.063	12.76
3/8	x	**1 1/4**	1.594	19.13
		1 1/2	1.913	22.96
		2	2.550	30.60
		2 1/2	3.188	38.26
		3	3.825	45.90
1/2	x	**3/4**	1.275	15.30
		7/8	1.488	17.86
		1	1.700	20.40
		1 1/2	2.550	30.60
		1 3/4	2.975	35.70
		2	3.400	40.80
		2 1/2	4.250	51.00
5/8	x	**1**	2.125	25.50
		1 1/2	3.188	38.26
		2	4.250	51.00
		3	6.375	76.50
		3 1/2	7.438	89.26
		5 1/2	11.69	140.3
3/4	x	**1 1/8**	2.869	34.43
		1 1/4	3.188	38.26
		1 1/2	3.825	45.90
		2	5.100	61.20
		2 1/4	5.738	68.86
		2 1/2	6.375	76.50
		3	7.650	91.80
		4 1/2	11.48	137.8
		5	12.75	153.0
7/8	x	**1 1/4**	3.719	44.63
		1 1/2	4.463	53.56
		5	14.88	178.6
		6 1/2	19.34	232.1
1	x	**1 1/4**	4.250	51.00
		1 1/2	5.100	61.20
		1 5/8	5.525	66.30
		1 3/4	5.950	71.40
		2	6.800	81.60
		2 1/4	7.650	91.80
		2 1/2	8.500	102.0
		3	10.20	122.4
		4	13.60	163.2
		7 1/2	25.50	306.0
		8 1/2	28.90	346.8
1 1/8	x	**3**	11.48	137.8
1 1/4	x	**1 3/8**	5.844	70.13
		1 1/2	6.375	76.50
		2	8.500	102.0
		2 1/2	10.63	127.6
		3 3/4	15.94	191.3
		4	17.00	204.0
		4 1/2	19.13	229.6
		5	21.25	255.0
		5 1/2	23.38	280.6
1 3/8	x	**4**	18.70	224.4
1 1/2	x	**1 3/4**	8.925	107.1
		2	10.20	122.4
		2 1/2	12.75	153.0
		3	15.30	183.6
		3 1/2	17.85	214.2
		4	20.40	244.8
1 3/4	x	**2 1/2**	14.88	178.6
		3	17.85	214.2
		3 1/2	20.83	250.0
		4	23.80	285.6
		4 1/2	26.78	321.4
		5	29.75	357.0
		6 1/2	38.68	464.2
2	x	**2 1/2**	17.00	204.0
		3	20.40	244.8
		3 1/2	23.80	285.6
		4	27.20	326.4
		4 1/2	30.60	367.2
		5	34.00	408.0
		6	40.80	489.6
		6 1/2	44.20	530.4
		8	54.40	652.8
		8 1/2	57.80	693.6
2 1/4	x	**3 3/4**	28.69	344.3
		5	38.25	459.0
		5 1/2	42.08	505.0
		7 1/2	57.38	688.6
2 1/2	x	**3**	25.50	306.0
		3 1/2	29.75	357.0
		6 1/2	55.25	663.0
3	x	**4**	40.80	489.6

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SECTION 6

ALLOY BARS

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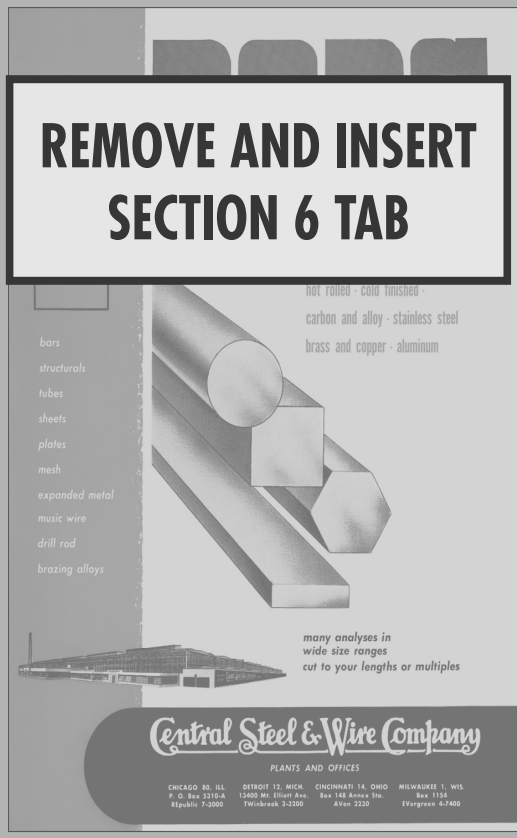

Central Steel & Wire Newspaper Ad from August 1953

ALLOY STEEL BARS

Hot Rolled Rounds 

4140/42 84

41L40/42 84

4140/42 H.T. 87

4150 MRS 84

4150 MRS H.T. 87

41L50 H.T. 87

4340 85

86[illegible] 83

REMOVE AND INSERT SECTION 6 TAB

Cold [illegible]

41[illegible] 89

41[illegible] 86

41L40/42 89

4140/42 H.T. 90

41L40/42 H.T 90

8620 88

86L20 88

8620 Bismuth 88

E 8620 Bearing Quality 88

"e.t.d." 150® 90

E52100 91

Cold Finished Squares 

4140/42 92

Cold Finished Hexagons 

4140/42 92

41L40/42 92

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STEEL ALLOY ROUNDS HOT ROLLED



8620* As Rolled

ASTM A 322

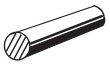
Chemical Composition, *Page 248*
Mechanical Properties, *Page 261*

Identification Color: Pink and Green

Size in Inches	Lbs. Per Ft.	Random Lgths in Ft.
1	2.670	20
1 1/8	3.380	20
1 1/4	4.173	20
1 3/8	5.049	20
1 1/2	6.008	20
1 5/8	7.052	20
1 3/4	8.178	20
1 7/8	9.388	20
2	10.68	20
2 1/8	12.06	20
2 1/4	13.52	20
2 3/8	15.06	20
2 1/2	16.69	20
2 5/8	18.40	20
2 3/4	20.19	20
2 7/8	22.07	20
3	24.03	20
3 1/4	28.21	20
3 3/8	30.42	20
3 1/2	32.71	20
3 5/8	35.09	20
3 3/4	37.55	20
3 7/8	40.10	20
4 1/4	48.23	20
4 1/2	54.08	20
4 5/8	57.12	20
4 3/4	60.25	20
5	66.76	20
5 1/4	73.60	20
5 1/2	80.78	20
5 3/4	88.29	20
6	96.13	20
6 1/4	104.3	20
6 1/2	112.8	20
6 3/4	121.7	20
7	130.8	20
7 1/4	140.4	20
7 1/2	150.2	20
8	170.9	20
8 1/4	181.8	20
9	216.3	20
9 1/2	241.0	20
10	267.0	20
11**	323.0	20

***** Generally Calcium-Aluminum treated for improved machinability 8620H available

****** ASTM A 322 chemistry only



STEEL ALLOY ROUNDS
HOT ROLLED ANNEALED

Machine Straightened

4140/42* 4150 MRS† 41L40/42

ASTM A 322

Chemical Composition, *Page 246*
Mechanical Properties, *Page 260*

Identification Colors: 4140/42 — Green and Black
4150 MRS — Gold and Green
41L40/42 — Yellow and White

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		4140/42	**4150 MRS**	**41L40/42**
3/4	1.502	20	. .	. .
1 1/4	4.173	20	. .	. .
1 3/8	5.049	20	. .	. .
1 3/4	8.178	20	. .	. .
2	10.68	20	. .	20
2 1/8	12.06	20	. .	. .
2 1/4	13.52	20	. .	. .
2 3/8	15.06	20	. .	. .
2 1/2	16.69	20	. .	. .
2 3/4	20.19	20	. .	. .
3	24.03	20	. .	20
3 1/8	26.08	20	. .	. .
3 1/4	28.21	20	. .	. .
3 3/8	30.42	20	. .	. .
3 1/2	32.71	20	. .	. .
3 3/4	37.55	20	. .	. .
4	42.73	20	20	. .
4 1/4	48.23	20	. .	. .
4 1/2	54.08	20	. .	. .
4 3/4	60.25	20	. .	. .
5	66.76	20	. .	. .
5 1/4	73.60	20	. .	. .
5 1/2	80.78	20	. .	. .
5 3/4	88.29	20	. .	. .
6	96.13	20	. .	. .
6 1/4	104.3	20	. .	. .
6 1/2	112.8	20	20	. .
7	130.8	20	. .	. .
7 1/4	140.4	20	. .	. .
7 1/2	150.2	20	. .	. .
8	170.9	20	. .	. .
8 1/2	192.9	20	. .	. .
9	216.3	20	20	. .
9 3/4	253.9	. .	20	. .

"H" Band version available
***** Generally Calcium-Aluminum treated for improved machinability
† 4150 Modified Resulfurized Annealed

STEEL ALLOY ROUNDS HOT ROLLED



Machine Straightened

4340* Annealed

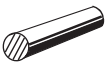
ASTM A 322

Chemical Composition, *Page 246*
Mechanical Properties, *Page 261*

Identification Color: Purple and Aluminum

Size in Inches	Lbs. Per Ft.	Random Lgths in Ft.
1 3/4	8.178	20
2 1/4	13.52	20
2 1/2	16.69	20
3	24.03	20
3 1/4	28.21	20
3 1/2	32.71	20
3 3/4	37.55	20

***Generally Calcium-Aluminum treated for improved machinability
4340H available



STEEL ALLOY ROUNDS
COLD FINISHED
TURNED, GROUND AND POLISHED

SHAFTING

4140

Quench & Tempered Stress Relieved

ASTM A 193 ASME SA-193 Grade B7

ASTM A 434 Class BC

Chemical Composition, *Page 246*

Mechanical Properties, *Page 260*

Identification Color: Black and Silver

TOLERANCES

1" to1 1/2" Incl.	+.000 to – .001
1 3/4" to 2" Incl.	+.000 to – .0015
2 1/2" to 3" Incl.	+.000 to – .002
3 1/2" to 4" Incl.	+.000 to – .003
4 1/2" Incl.	+.000 to – .005

Size in Inches	Lbs. Per Ft.	Random Lgths in Ft.
1	2.670	24
1 1/2	6.008	24
1 3/4	8.178	24
2	10.68	24
2 1/2	16.69	24
2 3/4	20.19	24
3	24.03	24
3 1/2	32.71	24
4	42.73	24
4 1/2	54.08	24

STEEL ALLOY ROUNDS
HOT ROLLED HEAT TREATED



4140/42*† 4150 MRS†† 41L50

Quenched and Tempered Machine Straightened Stress Relieved**

ASTM A 434 Class BC

Chemical Composition, *Page 246* Mechanical Properties, *Page 260*

Identification Colors: 4140/42 H.T. — Black and Red
4150 MRS H.T. — Black and Yellow
41L50 H.T. — Black and White

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		4140/42 H.T.	**4150 MRS H.T.**	**41L50 H.T.**
1	2.670	20	20	
1 1/2	6.008	20	20	
1 5/8	7.052		20	
1 3/4	8.178	20		
2	10.68	20	20	
2 1/8	12.06		20	
2 1/4	13.52		20	
2 3/8	15.06	20	20	
2 1/2	16.69		20	
2 5/8	18.40	20	20	
2 3/4	20.19	20		
2 7/8	22.07	20	20	
3	24.03	20		
3 1/8	26.08	20	20	
3 1/4	28.21	20	20	
3 3/8	30.42	20	20	
3 1/2	32.71	20	20	20
3 5/8	35.09	20	20	
3 3/4	37.55	20	20	
3 7/8	40.10	20	20	
4	42.73	20	20	
4 1/8	45.44	20		
4 1/4	48.23	20		
4 1/2	54.08	20	20	
4 5/8	57.12	20		
4 3/4	60.25	20	20	
5	66.76	20	20	
5 1/4	73.60	20	20	
5 1/2	80.78	20		20
5 3/4	88.29	20	20	
6	96.13	20	20	
6 1/4	104.3	20	20	
6 1/2	112.8	20	20	
6 3/4	121.7	20	20	
7	130.8	20	20	
7 1/4	140.4	20	20	
7 1/2	150.2	20	20	
7 3/4	160.4	20	20	
8	170.9	20	20	20
8 1/4	181.8	20		
8 1/2	192.9	20	20	20
8 3/4	204.5	20		
9	216.3	20	20	
9 1/4	228.5	20		
9 1/2	241.0	20	20	
10	267.0	20	20	

*Generally Calcium-Aluminum treated for improved machinability
**Or Stress Free Practice
†ASTM A193 Grade B7 and MIL-DTL-1222 (B7) chemistry and mechanical properties available
††4150 Modified Resulfurized Heat Treated



STEEL ALLOY ROUNDS COLD FINISHED

8620* 86L20
8620 Bismuth Treated*
ASTM A 108

Turned and Polished E 8620 Bearing Quality
ASTM A 108, ASTM A 534, ASTM A 304

Chemical Composition, *Page 248* Mechanical Properties, *Page 261*
Identification Colors: 8620 — Pink and Green
8620 Bi — Yellow and Black
86L20 — Green and White
E8620 — Plain Ends

Size in Inches	Lbs. Per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet			
			8620	**8620 Bi**	**E 8620**	**86L20**
1/4	.1669	2.003	12			
5/16	.2608	3.130	12			12
3/8	.3755	4.506	12			12
7/16	.5111	6.133	12			12
1/2	.6676	8.011	12			12
9/16	.8449	10.14	12			
5/8	1.043	12.52	12			12
11/16	1.262	15.14	12			12
3/4	1.502	18.02	12			12
13/16	1.763	21.16	12			12
7/8	2.045	24.54	12			12
15/16	2.347	28.16	12			12
1	2.670	32.04	12		12	12
1 1/16	3.015	36.18	12		12	12
1 1/8	3.380	40.56	12	12		12
1 3/16	3.766	45.19	12			
1 1/4	4.173	50.08	12			12
1 5/16	4.600	55.20	12			12
1 3/8	5.049	60.59	12		12	12
1 7/16	5.518	66.22	12		12	12
1 1/2	6.008	72.10	12			12
1 9/16	6.520	78.24	12		12	
1 5/8	7.052	84.62	12			12
1 11/16	7.604	91.25	12			
1 3/4	8.178	98.14	12	12	12	12
1 13/16	8.773	105.3			12	
1 7/8	9.388	112.7	12	12		12
1 15/16	10.02	120.2	12			
2	10.68	128.2	12		12	12
2 1/16	11.36	136.3	12			
2 1/8	12.06	144.7	12			12
2 1/4	13.52	162.2	12		12	12
2 3/8	15.06	180.7	12			12
2 1/2	16.69	200.3	12			12
2 5/8	18.40	220.8	12			
2 3/4	20.19	242.3	12			12
2 7/8	22.07	264.8				12
3	24.03	288.4	12			
3 1/8	26.08	313.0	12			
3 1/4	28.21	338.5	12			
3 3/8	30.42	365.0				12
3 1/2	32.71	392.5	12			
3 3/4	37.55	450.6	12			
4	42.73	512.8	12			
4 1/2	54.08	649.0	12			
4 3/4	60.25	723.0	12			

"H" Band version available
***May be available Calcium-Aluminum treated for improved machinability**

STEEL ALLOY ROUNDS
COLD FINISHED ANNEALED



4140/42* 41L40/42

ASTM A 108

Chemical Composition, *Page 246* Mechanical Properties, *Page 260*

Identification Colors: 4140/42 — Green and Black
41L40/42 — Yellow and White

Size in Inches	Lbs. Per Ft.	Est. Lbs. 12' Bar	Random Lengths, Feet 4140/42	Random Lengths, Feet 41L40/42
3/16	.0940	1.127	12	..
1/4	.1669	2.003	12	12
5/16	.2608	3.130	12	12
3/8	.3755	4.506	12	12
7/16	.5111	6.133	12	12
1/2	.6676	8.011	12	12
9/16	.8449	10.14	12	12
5/8	1.043	12.52	12	12
11/16	1.262	15.14	12	12
3/4	1.502	18.02	12	12
13/16	1.763	21.16	12	12
7/8	2.045	24.54	12	12
15/16	2.347	28.16	12	12
1	2.670	32.04	12	12
1 1/16	3.015	36.18	12	12
1 1/8	3.380	40.56	12	12
1 3/16	3.766	45.19	12	12
1 1/4	4.173	50.08	12	12
1 5/16	4.600	55.20	12	12
1 3/8	5.049	60.59	12	12
1 7/16	5.518	66.22	12	..
1 1/2	6.008	72.10	12	12
1 9/16	6.520	78.24	12	..
1 5/8	7.052	84.62	12	12
1 11/16	7.604	91.25	..	12
1 3/4	8.178	98.14	12	12
1 7/8	9.388	112.7	12	12
2	10.68	128.2	12	12
2 1/8	12.06	144.7	12	12
2 1/4	13.52	162.2	12	12
2 3/8	15.06	180.7	12	12
2 7/16	15.87	190.4	12	..
2 1/2	16.69	200.3	12	12
2 5/8	18.40	220.8	12	12
2 3/4	20.19	242.3	12	12
2 7/8	22.07	264.8	12	..
3	24.03	288.4	12	..
3 1/8	26.08	313.0	12	..
3 1/4	28.21	338.5	12	..
3 1/2	32.71	392.5	12	12
3 3/4	37.55	450.6	12	..
4	42.73	512.8	12	12
4 1/4	48.23	578.8	12	12
4 1/2	54.08	649.0	12	12
4 3/4	60.25	723.0	12	..
5	66.76	801.1	12	..

"H" Band version available

***** May be available Calcium-Aluminum treated for improved machinability



STEEL ALLOY ROUNDS
COLD FINISHED
4140/42* Heat Treated
41L40/42 Heat Treated

Quenched and Tempered Machine Straightened Stress Relieved**
"e.t.d." 150® (Elevated Temperature Drawn)

4140/42 H.T. — ASTM A 193 Gr. B-7
ASME SA-193 Gr. B-7
ASTM A 434 Class BC
41L40/42 H.T. — ASTM A 434 Class BC
"e.t.d." 150® — AMS 6378

Chemical Composition, *Pages 246, 249*
Mechanical Properties, *Pages 260, 261*

Identification Colors: 4140/42 H.T. — Black and Red
41L40/42 H.T. — Black and White
"e.t.d." 150® — Yellow and Brown

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet		
		4140/42 H.T.	**41L40/42 H.T.**	**"e.t.d." 150®**
7/16	.5111	..	..	12
1/2	.6676	12		12
9/16	.8449	..	..	12
5/8	1.043	12	..	12
11/16	1.262	..	..	12
3/4	1.502	12		12
13/16	1.763	..	..	12
7/8	2.045	12	..	12
1	2.670	12	12	12
1 1/16	3.015	..	..	12
1 1/8	3.380	12	12	12
1 3/16	3.766	..	..	12
1 1/4	4.173	12	..	12
1 3/8	5.049	12	12	12
1 1/2	6.008	12	12	12
1 5/8	7.052	12	12	12
1 3/4	8.178	12	12	12
1 7/8	9.388	12	12	12
2	10.68	12	12	12
2 1/8	12.06	..	..	12
2 1/4	13.52	12	12	12
2 3/8	15.06	12	12	12
2 1/2	16.69	12	12	12
2 5/8	18.40	12	..	..
2 3/4	20.19	12	..	12
3	24.03	12	12	12
3 1/4	28.21	12	..	12
3 1/2	32.71	12	12	12
3 3/4	37.55	..	12	..
4 1/2	54.07	12	..	..

*May be available Calcium-Aluminum treated for improved machinability
**Or Stress Free Practice

STEEL ALLOY ROUNDS COLD FINISHED



E52100 Aircraft and Bearing Quality

Under 1/2" - AMS 6440, ASTM A 295 (S2)* & (S3)**, ASTM A 108
1/2" & Over - AMS 2301, AMS 6440, ASTM A 295 (S2)* & (S3)**
ASTM A 108, AMS-S-7420

Chemical Composition, *Page 248*
Mechanical Properties, *Page 261*

Identification Color: Copper

Size in Inches	Est. Lbs Per Ft.	Est. Lbs 12' Bar	Random Lengths in Feet
1/4†	.1669	2.003	12
3/8†	.3755	4.506	12
1/2	.6676	8.011	12
9/16	.8449	10.14	12
3/4	1.502	18.02	12
7/8	2.045	24.54	12
1	2.670	32.04	12
1 1/16	3.015	36.18	12
1 1/8	3.380	40.56	12
1 3/16	3.766	45.19	12
1 1/4	4.173	50.08	12
1 7/16	5.518	66.22	12
1 1/2	6.008	72.10	12
1 9/16	6.520	78.24	12
1 11/16	7.604	91.25	12
1 7/8	9.388	112.7	12
2	10.68	128.2	12

* S2 = "SAM" Rating
** S3 = Not Calcium Treated
† Bearing Quality Only



STEEL ALLOY SQUARES
COLD FINISHED ANNEALED
4140/42*

ASTM A 108

Chemical Composition, *Page 246*

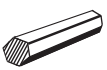
Mechanical Properties, *Page 260*

Identification Color: Green and Black

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet	Size in Inches	Lbs. Per Ft.	Random Lengths, Feet
3/8	.4781	12	1 1/4	5.313	12
1/2	.8500	12	1 3/8	6.428	12
5/8	1.328	12	1 1/2	7.650	12
3/4	1.913	12	1 3/4	10.41	12
1	3.400	12	2	13.60	12
1 1/8	4.303	12	2 1/2	21.25	12

"H" Band version available

*May be available Calcium-Aluminum treated for improved machinability



STEEL ALLOY HEXAGONS
COLD FINISHED ANNEALED
4140/42* 41L40/42

ASTM A 108

Chemical Composition, *Page 246*

Mechanical Properties, *Page 260*

Identification Colors: 4140/42 — Green and Black
41L40/42 — Yellow and White

Size in Inches	Lbs. Per Ft.	Random Lengths, Feet 4140/42	41L40/42	Size in Inches	Lbs. Per Ft.	Random Lengths, Feet 4140/42	41L40/42
3/8	.4141	. .	12	1 1/8	3.727	12	. .
7/16	.5636	. .	12	1 1/4	4.601	12	12
1/2	.7361	. .	12	1 5/16	5.072	. .	12
9/16	.9316	12	12	1 3/8	5.567	12	. .
5/8	1.150	12	12	1 1/2	6.625	12	. .
11/16	1.392	. .	12	1 5/8	7.775	12	12
3/4	1.656	12	12	2	11.78	12	. .
7/8	2.254	12	12	2 1/4	14.91	12	. .
15/16	2.588	12	. .	2 1/2	18.40	. .	12
1	2.944	12	12	2 3/4	22.27	12	. .
				3	26.50	12	. .

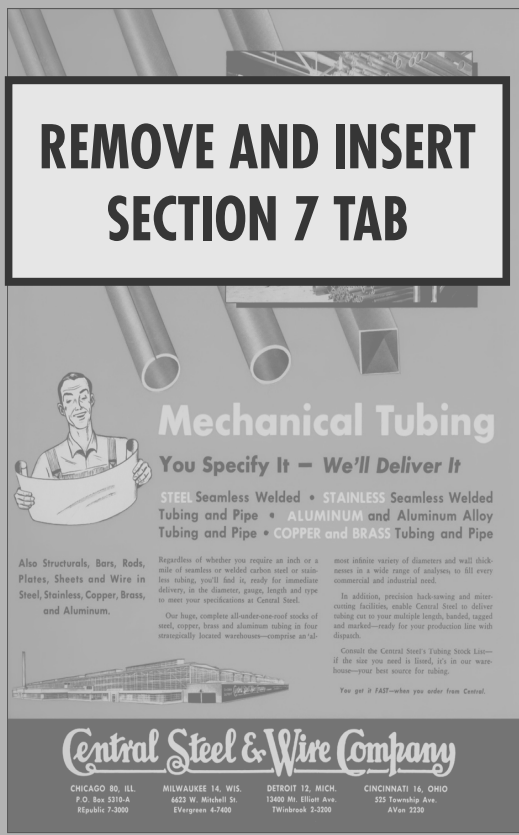
"H" Band version available

*May be available Calcium-Aluminum treated for improved machinability

SECTION 7

TUBING

REMOVE AND INSERT SECTION 7 TAB



Central Steel & Wire Newspaper Ad from May 1950

REMOVE AND INSERT SECTION 7 TAB

STEEL TUBING DESCRIPTIVE INFORMATION ROUND MECHANICAL



Cold Drawn Seamless Pages 94-117

1026 ASTM A 519

Cold Drawn Seamless Tube is normally drawn to O.D. and I.D. dimensions. Certain sizes must be drawn to O.D. and Wall dimensions and are so noted.

Identification Color: Green
Random Lengths 8 to 24 Ft.

Hot Finished Seamless Pages 107-117

1026 ASTM A 519 (except tolerance)

Hot Finished Tube is produced to O.D. and Wall dimensions.

Identification Color: Red
Random Lengths 8 to 24 Ft.

Welded D.O.M. Pages 94-117

Drawn Over Mandrel — Tested

Up to 4" O.D. Inclusive (10 Ga. Wall and Lighter) 1020
All other sizes (O.D.'s and Walls) 1026

ASTM A 513 Type 5

An Electric Welded Tube with all weld flash removed.
Tested for weld soundness, drawn over a mandrel and retested.
This product is superior in finish and wall uniformity to seamless tubing.
Normally drawn to O.D. and I.D. dimensions and exceptions are so noted.

Identification Color: Gold
Random Lengths 17 to 24 Ft.

Electric Welded Pages 94-117

Up to 6" O.D. Inclusive — MT 1010
Cold Rolled and Hot Rolled

Up to $6\frac{1}{2}$" O.D. Inclusive ASTM A 513 CR Type 2, HR Type 1
$6\frac{5}{8}$" O.D. & Over (No ASTM)

An Electric Resistance Welded Tube
Under 1" O.D. — Flash In
1" O.D. & Larger — Flash Controlled

Electric Welded Tubing is produced to O.D. and Wall dimensions.
This is the least expensive mechanical tubing.
It is produced from low carbon steel and possesses relatively good cold working characteristics.

Identification Colors: CR Flash Controlled — Black
HR Flash Controlled — Yellow
Flash In — Purple
Random Lengths 20 Ft.

Cold Drawn Butt Welded Pages 97-104

10 Ga. Wall and Lighter - 1020
All other sizes - 1026
ASTM A 512

The least expensive drawn tube.
Produced from Electric Resistance Welded hollows.
Drawn to O.D. and I.D. dimensions. Not intended for pressure applications.

Identification Color: Pink
Random Lengths 8 to 24 Ft.



Hydraulic-Line Page 118



Square Welded Page 119

Square Structural Page 120

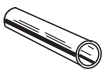


Rectangular Welded Page 120

Rectangular Structural Page 121



Pipe & Pipe Size Tube Page 122-123



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

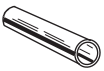
Stock Lengths and Identification Color, *Page 93*

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*
1/8 x						
24	.022	.081	.0242	X†	. .	. .
5/32 x						
22	.028	.100	.0383	X†	. .	. .
21	.032	.092	.0424	X†	. .	. .
3/16 x						
24	.022	.144	.0390	X†	. .	. .
20	.035	.118	.0572	X†	. .	. .
18	.049	.090	.0727	X†	. .	. .
16	.065	.058	.0854	X†	. .	. .
7/32 x						
20	.035	.149	.0688	X†	. .	. .
1/4 x						
24	.022	.206	.0536	. .	X	. .
23	.025	.200	.0601	. .	X	. .
22	.028	.194	.0664	. .	X	. .
20	.035	.180	.0804	. .	X	. .
19	.042	.166	.0933	. .	X	. .
18	.049	.152	.1052	. .	X	. .
16	.065	.120	.1284	. .	X	. .
14	.083	.084	.1480	X†	. .	. .
13	.095	.060	.1573	X†	. .	. .
5/16 x						
24	.022	.269	.0684	. .	X	. .
22	.028	.257	.0852	. .	X	. .
20	.035	.243	.1039	. .	X	. .
18	.049	.215	.1382	. .	X	. .
17	.058	.197	.1580	. .	X	. .
16	.065	.183	.1722	. .	X	. .
14	.083	.147	.2039	. .	X	. .
11/32 x						
21	.032	.280	.1066	. .	X	. .
3/8 x						
24	.022	.331	.0829	. .	X	. .
22	.028	.319	.1038	. .	X	X**
20	.035	.305	.1271	. .	X	X
18	.049	.277	.1706	. .	X	X

***** Produced to O.D. and Wall dimensions
****** 1008/1010 analysis
† DOM Tolerances 1018 — Ends Orange and White

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

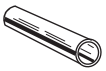
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*
3/8 x						
17	.058	.259	.1964	. .	X	. .
16	.065	.245	.2152	. .	X	X
14	.083	.209	.2588	. .	X	. .
12	.109	.157	.3097	. .	X*	. .
10	.134	.107	.3449	X†	. .	. .
13/32 x						
16	.065	.276	.2367	. .	X	. .
14	.083	.240	.2863	. .	X	. .
13	.095	.216	.3155	. .	X	. .
7/16 x						
22	.028	.382	.1226	. .	X	. .
20	.035	.368	.1506	. .	X	. .
18	.049	.340	.2036	. .	X	X
17	.058	.322	.2354	. .	X	. .
16	.065	.308	.2589	. .	X	X
14	.083	.272	.3147	. .	X	. .
13	.095	.248	.3480	. .	X	. .
1/8	.125	.188	.4179	. .	X	. .
1/2 x						
24	.022	.456	.1123	. .	X	. .
22	.028	.444	.1411	. .	X	. .
21	.032	.436	.1599	. .	X	. .
20	.035	.430	.1738	. .	X	X
19	.042	.416	.2054	. .	X	. .
18	.049	.402	.2360	. .	X	X
17	.058	.384	.2738	. .	X	. .
16	.065	.370	.3020	. .	X	X
15	.072	.356	.3291	. .	X	. .
14	.083	.334	.3696	. .	X	. .
13	.095	.310	.4109	. .	X	. .
12	.109	.282	.4552	. .	X	. .
11	.120	.260	.4870	. .	X	. .
1/8	.125	.250	.5006	. .	X	. .
10	.134	.232	.5238	. .	X*	. .
5/32	.156	.188	.5731	. .	X*	. .
17/32 x						
16	.065	.401	.3235	. .	X	. .
14	.083	.365	.3971	. .	X	. .
1/8	.125	.281	.5420	. .	X	. .

*Produced to O.D. and Wall dimensions

Continued on following page

†DOM Tolerance 1018 — Ends Orange and White



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

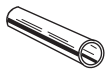
O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*
9/16 x						
22	.028	.507	.1600	. .	X	. .
20	.035	.493	.1974	. .	X	. .
18	.049	.465	.2690	. .	X	X
16	.065	.433	.3457	. .	X	X
14	.083	.397	.4255	. .	X	. .
13	.095	.373	.4748	. .	X	. .
12	.109	.345	.5285	. .	X	. .
1/8	.125	.313	.5847	. .	X	. .
10	.134	.295	.6140	. .	X	. .
5/8 x						
22	.028	.569	.1785	. .	X	X**
20	.035	.555	.2205	. .	X	X
18	.049	.527	.3014	. .	X	X
17	.058	.509	.3512	. .	X	. .
16	.065	.495	.3888	. .	X	X
15	.072	.481	.4252	. .	X	. .
14	.083	.459	.4805	. .	X	X
13	.095	.435	.5377	. .	X	. .
12	.109	.407	.6007	. .	X	. .
11	.120	.385	.6472	. .	X	. .
1/8	.125	.375	.6675	. .	X	. .
10	.134	.357	.7027	. .	X	. .
5/32	.156	.313	.7814	. .	X	. .
3/16	.188	.249	.8774	. .	X	. .
7/32	.219	.187	.9496	. .	X*	. .
21/32 x						
13	.095	.466	.5692	. .	X	. .
11/16 x						
21	.032	.624	.2242	. .	X	. .
18	.049	.590	.3344	. .	X	. .
16	.065	.558	.4325	. .	X	X
14	.083	.522	.5363	. .	X	. .
13	.095	.498	.6017	. .	X	. .
12	.109	.470	.6740	. .	X	. .
11	.120	.448	.7279	. .	X	. .
1/8	.125	.438	.7516	. .	X	. .
10	.134	.420	.7928	. .	X	. .
5/32	.156	.376	.8864	. .	X	. .
7/32	.219	.250	1.097	. .	X*	. .
3/4 x						
22	.028	.694	.2159	. .	X	. .
20	.035	.680	.2673	. .	X	X
18	.049	.652	.3668	. .	X	X

*Produced to O.D. and Wall dimensions

Continued on following page

**1008/1010 24'2"

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

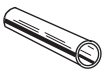
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
3/4 x							
17	.058	.634	.4287	. .	X	. .	. .
16	.065	.620	.4755	. .	X	X**	. .
14	.083	.584	.5913	. .	X	X	. .
13	.095	.560	.6646	. .	X	X	. .
12	.109	.532	.7462	. .	X	X	. .
11	.120	.510	.8074	. .	X	X	. .
1/8	.125	.500	.8344	. .	X	. .	. .
10	.134	.482	.8816	. .	X	. .	X
5/32	.156	.438	.9897	. .	X	. .	. .
11/64	.172	.406	1.062	. .	X	. .	. .
3/16	.188	.374	1.128	. .	X	. .	. .
7/32	.219	.312	1.242	. .	X*	. .	. .
1/4	.250	.250	1.335	. .	X*	. .	. .
13/16 x							
22	.028	.757	.2347	. .	X	. .	. .
20	.035	.743	.2908	. .	X	. .	. .
18	.049	.715	.3998	. .	X	. .	. .
16	.065	.683	.5193	. .	X	X	. .
14	.083	.647	.6471	. .	X	. .	. .
13	.095	.623	.7285	. .	X	. .	. .
12	.109	.595	.8195	. .	X	. .	. .
11	.120	.573	.8881	. .	X	. .	. .
1/8	.125	.563	.9185	. .	X	. .	. .
10	.134	.545	.9717	. .	X	. .	. .
5/32	.156	.501	1.095	. .	X	. .	. .
3/16	.188	.437	1.255	. .	X	. .	. .
7/32	.219	.375	1.389	. .	X	. .	. .
1/4	.250	.313	1.503	. .	X*	. .	. .
27/32 x							
12	.109	.626	.8556	. .	X	. .	. .
5/32	.156	.532	1.146	. .	X	. .	. .
7/8 x							
21	.032	.811	.2881	. .	X	. .	. .
20	.035	.805	.3140	. .	X	X	. .
18	.049	.777	.4323	. .	X	X	. .
17	.058	.759	.5061	. .	X	. .	. .
16	.065	.745	.5623	. .	X	X	. .
14	.083	.709	.7021	. .	X	X	. .
13	.095	.685	.7914	. .	X	X	. .
12	.109	.657	.8917	. .	X	. .	. .
11	.120	.635	.9676	. .	X	X	. .
1/8	.125	.625	1.001	. .	X	. .	. .
10	.134	.607	1.061	. .	X	. .	. .
5/32	.156	.563	1.198	. .	X	. .	X
3/16	.188	.499	1.379	. .	X	. .	. .
7/32	.219	.437	1.534	. .	X	. .	. .
1/4	.250	.375	1.669	. .	X*	. .	. .
9/32	.281	.313	1.783	. .	X*	. .	. .

***Produced to O.D. and Wall dimensions**
****Also available Cold Rolled**

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
15/16 x							
20	.035	.868	.3375	. .	X	. .	. .
18	.049	.840	.4652	. .	X	. .	. .
16	.065	.808	.6060	. .	X	. .	. .
14	.083	.772	.7579	. .	X	. .	. .
13	.095	.748	.8553	. .	X	. .	. .
1/8	.125	.688	1.085	. .	X	. .	. .
10	.134	.670	1.151	. .	X	. .	. .
5/32	.156	.626	1.303	. .	X	. .	. .
3/16	.188	.562	1.506	. .	X	. .	. .
1/4	.250	.438	1.837	. .	X	. .	. .
1 x							
22	.028	.944	.2907	. .	X	. .	. .
20	.035	.930	.3607	. .	X	X†	. .
18	.049	.902	.4977	. .	X	X†	. .
17	.058	.884	.5835	. .	X	. .	. .
16	.065	.870	.6491	. .	X	X**	. .
15	.072	.856	.7136	. .	X	. .	. .
14	.083	.834	.8129	. .	X	X	. .
13	.095	.810	.9182	. .	X	X	. .
12	.109	.782	1.037	. .	X	X	. .
11	.120	.760	1.128	. .	X	X	. .
1/8	.125	.750	1.168	. .	X	. .	. .
10	.134	.732	1.239	. .	X	. .	. .
5/32	.156	.688	1.406	. .	X	. .	. .
11/64	.172	.656	1.521	. .	X	. .	. .
7	.180	.640	1.576	. .	X	. .	. .
3/16	.188	.624	1.630	. .	X	. .	. .
7/32	.219	.562	1.827	. .	X	. .	. .
1/4	.250	.500	2.003	. .	X	. .	. .
9/32	.281	.438	2.158	. .	X	. .	. .
5/16	.313	.374	2.297	. .	X*	. .	. .
11/32	.344	.312	2.410	. .	X	. .	. .
3/8	.375	.250	2.503	. .	X*	. .	. .
1 1/16 x							
20	.035	.993	.3843	. .	X	. .	. .
18	.049	.965	.5306	. .	X	. .	. .
16	.065	.933	.6928	. .	X	X	. .
14	.083	.897	.8687	. .	X	. .	. .
13	.095	.873	.9821	. .	X	. .	. .
12	.109	.845	1.111	. .	X	. .	. .
11	.120	.823	1.209	. .	X	. .	. .
1/8	.125	.813	1.252	. .	X	. .	. .
10	.134	.795	1.330	. .	X	. .	. .
5/32	.156	.751	1.511	. .	X	. .	. .
3/16	.188	.687	1.757	. .	X	. .	. .
7/32	.219	.625	1.974	. .	X	. .	. .
1/4	.250	.563	2.171	. .	X	. .	. .
5/16	.313	.437	2.507	X*	. .	. .	. .

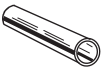
***** Produced to O.D. and Wall dimensions

****** Also available Cold Rolled

† Only available Cold Rolled

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

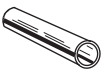
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
1 1/8 x							
20	.035	1.055	.4074	. .	X	X†	. .
18	.049	1.027	.5631	. .	X	X†	. .
17	.058	1.009	.6609	. .	X	. .	. .
16	.065	.995	.7359	. .	X	X	. .
14	.083	.959	.9237	. .	X	X	. .
13	.095	.935	1.045	. .	X	. .	. .
12	.109	.907	1.183	. .	X	. .	. .
11	.120	.885	1.288	. .	X	X	. .
1/8	.125	.875	1.335	. .	X	. .	. .
10	.134	.857	1.418	. .	X	. .	X
5/32	.156	.813	1.614	. .	X	. .	. .
11/64	.172	.781	1.751	. .	X	. .	. .
3/16	.188	.749	1.881	. .	X	. .	X
7/32	.219	.687	2.119	. .	X	. .	. .
1/4	.250	.625	2.336	. .	X	. .	X
9/32	.281	.563	2.533	. .	X	. .	. .
5/16	.313	.499	2.714	. .	X	. .	. .
3/8	.375	.375	3.004	X*	X	. .	. .
1 3/16 x							
21	.032	1.124	.3951	. .	X	. .	. .
18	.049	1.090	.5961	. .	X	. .	. .
16	.065	1.058	.7796	. .	X	X	. .
14	.083	1.022	.9795	. .	X	. .	. .
13	.095	.998	1.109	. .	X	. .	. .
1/8	.125	.938	1.419	. .	X	. .	. .
5/32	.156	.876	1.719	. .	X	. .	. .
3/16	.188	.812	2.008	. .	X	. .	. .
7/32	.219	.750	2.266	. .	X	. .	. .
1/4	.250	.688	2.505	. .	X	. .	. .
5/16	.313	.562	2.925	. .	X	. .	. .
1 1/4 x							
22	.028	1.194	.3654	. .	X	. .	. .
20	.035	1.180	.4542	. .	X	X†	. .
18	.049	1.152	.6285	. .	X	X†	. .
16	.065	1.120	.8226	. .	X	X**	. .
14	.083	1.084	1.035	. .	X	X	. .
13	.095	1.060	1.172	. .	X	X	. .
12	.109	1.032	1.328	. .	X	X	. .
11	.120	1.010	1.448	. .	X	X	. .
1/8	.125	1.000	1.502	. .	X	. .	. .
10	.134	.982	1.597	. .	X	. .	. .
5/32	.156	.938	1.823	. .	X	. .	X
3/16	.188	.874	2.132	. .	X	. .	. .
7/32	.219	.812	2.411	. .	X	. .	. .
1/4	.250	.750	2.670	. .	X	. .	. .
9/32	.281	.688	2.908	. .	X	. .	. .
5/16	.313	.624	3.132	. .	X	. .	. .
11/32	.344	.562	3.329	. .	X	. .	. .
3/8	.375	.500	3.504	. .	X	. .	. .
7/16	.438	.374	3.798	X*	. .	. .	. .

***** Produced to O.D. and Wall dimensions
****** Also available Cold Rolled
† Only available Cold Rolled

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

Stock Lengths and Identification Color, *Page 93*

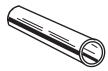
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
1 5/16 x							
20	.035	1.243	.4777	. .	X	. .	. .
17	.058	1.197	.7774	. .	X	. .	. .
16	.065	1.183	.8664	. .	X	. .	. .
14	.083	1.147	1.090	. .	X	. .	. .
13	.095	1.123	1.236	. .	X	. .	. .
12	.109	1.095	1.402	. .	X	. .	. .
11	.120	1.073	1.529	. .	X	. .	. .
1/8	.125	1.063	1.586	. .	X	. .	. .
10	.134	1.045	1.687	. .	X	. .	. .
9	.148	1.017	1.841	. .	X	. .	. .
5/32	.156	1.001	1.928	. .	X	. .	X
3/16	.188	.937	2.259	. .	X	. .	. .
7/32	.219	.875	2.559	. .	X	. .	. .
1/4	.250	.813	2.838	. .	X	. .	. .
5/16	.313	.687	3.343	. .	X	. .	. .
3/8	.375	.563	3.757	. .	X*	. .	. .
1 3/8 x							
22	.028	1.319	.4028	. .	X	. .	. .
20	.035	1.305	.5009	. .	. .	X†	. .
18	.049	1.277	.6939	. .	X	X†	. .
17	.058	1.259	.8158	. .	X	. .	. .
16	.065	1.245	.9094	. .	X	X	. .
14	.083	1.209	1.145	. .	X	X	. .
13	.095	1.185	1.299	. .	X	. .	. .
12	.109	1.157	1.474	. .	X	. .	. .
11	.120	1.135	1.608	. .	X	X	. .
1/8	.125	1.125	1.669	. .	X	. .	. .
10	.134	1.107	1.776	. .	X	. .	. .
5/32	.156	1.063	2.031	. .	X	. .	. .
11/64	.172	1.031	2.210	. .	X	. .	. .
3/16	.188	.999	2.383	. .	X	. .	. .
7/32	.219	.937	2.704	. .	X	. .	. .
1/4	.250	.875	3.004	. .	X	. .	. .
9/32	.281	.813	3.283	. .	X	. .	. .
5/16	.313	.749	3.550	. .	X	. .	. .
3/8	.375	.625	4.005	. .	X	. .	. .
1 7/16 x							
16	.065	1.308	.9531	. .	X	. .	. .
14	.083	1.272	1.201	. .	X	. .	. .
13	.095	1.248	1.363	. .	X	. .	. .
1/8	.125	1.188	1.753	. .	X	. .	. .
5/32	.156	1.126	2.136	. .	X	. .	. .
3/16	.188	1.062	2.510	. .	X	. .	. .
7/32	.219	1.000	2.851	. .	X	. .	. .
1/4	.250	.938	3.172	. .	X	. .	. .

*Produced to O.D. and Wall dimensions
†Only available Cold Rolled

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

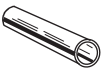
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
1½ x							
20	.035	1.430	.5476	. .	X	X†	. .
18	.049	1.402	.7593	. .	X	X†	. .
17	.058	1.384	.8932	. .	X	. .	. .
16	.065	1.370	.9962	. .	X	X**	. .
14	.083	1.334	1.256	. .	X	X	. .
13	.095	1.310	1.426	. .	X	X	. .
12	.109	1.282	1.619	. .	X	X	. .
11	.120	1.260	1.769	. .	X	X	. .
1/8	.125	1.250	1.836	. .	X	. .	. .
10	.134	1.232	1.955	. .	X	X	. .
5/32	.156	1.188	2.239	. .	X	. .	. .
3/16	.188	1.124	2.634	. .	X	. .	. .
7/32	.219	1.062	2.996	. .	X	. .	. .
1/4	.250	1.000	3.338	. .	X	. .	. .
9/32	.281	.938	3.658	. .	X	. .	. .
5/16	.313	.874	3.968	. .	X	. .	. .
11/32	.344	.812	4.247	. .	X	. .	. .
3/8	.375	.750	4.506	. .	X	. .	. .
7/16	.438	.624	4.968	X*	. .	. .	. .
1/2	.500	.500	5.340	X*	. .	. .	. .
1 9/16 x							
20	.035	1.493	.5712	. .	X	. .	. .
16	.065	1.433	1.040	. .	X	. .	. .
13	.095	1.373	1.489	. .	X	. .	. .
12	.109	1.345	1.693	. .	X	. .	. .
1/8	.125	1.313	1.920	. .	X	. .	. .
10	.134	1.295	2.045	. .	X	. .	. .
5/32	.156	1.251	2.344	. .	X	. .	. .
3/16	.188	1.187	2.761	. .	X	. .	. .
1/4	.250	1.063	3.506	. .	X	. .	. .
5/16	.313	.937	4.179	. .	X	. .	. .
3/8	.375	.813	4.758	. .	X	. .	. .
1 5/8 x							
18	.049	1.527	.8248	. .	X	X†	. .
17	.058	1.509	.9707	. .	X	. .	. .
16	.065	1.495	1.083	. .	X	X	. .
14	.083	1.459	1.367	. .	X	X	. .
13	.095	1.435	1.552	. .	X	. .	. .
12	.109	1.407	1.765	. .	X	. .	. .
11	.120	1.385	1.929	. .	X	X	. .
1/8	.125	1.375	2.003	. .	X	. .	. .
10	.134	1.357	2.134	. .	X	. .	X
5/32	.156	1.313	2.448	. .	X	. .	. .
11/64	.172	1.281	2.669	. .	X	. .	. .
3/16	.188	1.249	2.885	. .	X	. .	. .
7/32	.219	1.187	3.289	. .	X	. .	X
1/4	.250	1.125	3.671	. .	X	. .	. .
9/32	.281	1.063	4.034	. .	X	. .	. .
5/16	.313	.999	4.386	. .	X	. .	. .
3/8	.375	.875	5.006	. .	X	. .	. .
7/16	.438	.749	5.553	X*	. .	. .	. .

***** Produced to O.D. and Wall dimensions
****** Also available Cold Rolled
† Only available Cold Rolled

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

Stock Lengths and Identification Color, *Page 93*

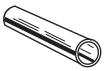
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
1 11/16 x							
16	.065	1.558	1.127	. .	X	. .	. .
1/8	.125	1.438	2.087	. .	X	. .	. .
5/32	.156	1.376	2.552	. .	X	. .	. .
3/16	.188	1.312	3.012	. .	X	. .	. .
1/4	.250	1.188	3.840	. .	X	. .	. .
1 3/4 x							
20	.035	1.680	.6411	. .	X	. .	. .
18	.049	1.652	.8902	. .	X	X†	. .
16	.065	1.620	1.170	. .	X	X	. .
14	.083	1.584	1.478	. .	X	X	. .
13	.095	1.560	1.679	. .	X	X	. .
12	.109	1.532	1.910	. .	X	. .	. .
11	.120	1.510	2.089	. .	. .	X	. .
1/8	.125	1.500	2.169	. .	X	. .	. .
10	.134	1.482	2.313	. .	X	. .	. .
5/32	.156	1.438	2.656	. .	X	. .	. .
3/16	.188	1.374	3.136	. .	X	. .	. .
7/32	.219	1.312	3.581	. .	X	. .	. .
1/4	.250	1.250	4.005	. .	X	. .	. .
9/32	.281	1.188	4.409	. .	X	. .	. .
5/16	.313	1.124	4.804	. .	X	. .	. .
3/8	.375	1.000	5.507	. .	X	. .	. .
7/16	.438	.874	6.137	X	. .	. .	. .
1/2	.500	.750	6.675	X*	. .	. .	. .
9/16	.563	.624	7.137	X*	. .	. .	. .
5/8	.625	.500	7.509	X*	. .	. .	. .
1 13/16 x							
1/8	.125	1.563	2.254	. .	X	. .	. .
5/32	.156	1.501	2.761	. .	X	. .	. .
3/16	.188	1.437	3.263	. .	X	. .	. .
1/4	.250	1.313	4.173	. .	X	. .	. .
1 7/8 x							
18	.049	1.777	.9556	. .	X	. .	. .
16	.065	1.745	1.257	. .	X	X	. .
14	.083	1.709	1.589	. .	X	. .	. .
13	.095	1.685	1.806	. .	X	X	. .
12	.109	1.657	2.056	. .	X	. .	. .
11	.120	1.635	2.249	. .	. .	X	. .
1/8	.125	1.625	2.336	. .	X	. .	. .
10	.134	1.607	2.492	. .	X	. .	. .
5/32	.156	1.563	2.864	. .	X	. .	. .
3/16	.188	1.499	3.387	. .	X	. .	. .
7/32	.219	1.437	3.873	. .	X	. .	. .
1/4	.250	1.375	4.339	. .	X	. .	. .
9/32	.281	1.313	4.784	. .	X	. .	. .
5/16	.313	1.249	5.222	. .	X	. .	. .
3/8	.375	1.125	6.008	. .	X	. .	. .
7/16	.438	.999	6.722	X	. .	. .	. .
1/2	.500	.875	7.343	X*	. .	. .	. .

*Produced to O.D. and Wall dimensions
†Only available Cold Rolled

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

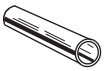
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
1 15/16 x							
1/8	.125	1.688	2.420	. .	X	. .	. .
5/32	.156	1.626	2.969	. .	X	. .	. .
7/32	.219	1.500	4.021	. .	X	. .	. .
1/4	.250	1.438	4.507	. .	X	. .	. .
3/8	.375	1.188	6.260	. .	X	. .	. .
2 x							
20	.035	1.930	.7345	. .	. .	X†	. .
18	.049	1.902	1.021	. .	X	X†	. .
16	.065	1.870	1.343	. .	X	X	. .
14	.083	1.834	1.699	. .	X	X	. .
13	.095	1.810	1.933	. .	X	X	. .
12	.109	1.782	2.201	. .	X	X	. .
11	.120	1.760	2.409	. .	X	X	. .
1/8	.125	1.750	2.503	. .	X	. .	. .
10	.134	1.732	2.671	. .	X	X	. .
5/32	.156	1.688	3.072	. .	X	. .	. .
7	.180	1.640	3.499	. .	. .	X	. .
3/16	.188	1.624	3.638	. .	X	. .	. .
7/32	.219	1.562	4.166	. .	X	. .	. .
1/4	.250	1.500	4.673	. .	X	. .	. .
9/32	.281	1.438	5.159	. .	X	. .	. .
5/16	.313	1.374	5.639	. .	X	. .	. .
11/32	.344	1.312	6.084	. .	X	. .	X
3/8	.375	1.250	6.508	. .	X	. .	. .
7/16	.438	1.124	7.307	. .	X	. .	. .
1/2	.500	1.000	8.010	. .	X	. .	. .
9/16	.563	.874	8.641	X*	. .	. .	. .
5/8	.625	.750	9.178	. .	X	. .	. .
3/4	.750	.500	10.01	X*	. .	. .	. .
2 1/16 x							
5/32	.156	1.751	3.177	. .	X	. .	. .
3/16	.188	1.687	3.765	. .	X	. .	. .
1/4	.250	1.563	4.841	. .	X	. .	. .
5/16	.313	1.437	5.850	. .	X	. .	. .
2 1/8 x							
18	.049	2.027	1.086	. .	. .	X†	. .
16	.065	1.995	1.430	. .	X	X	. .
13	.095	1.935	2.060	. .	X	. .	. .
11	.120	1.885	2.570	. .	X	. .	. .
1/8	.125	1.875	2.670	. .	X	. .	. .
5/32	.156	1.813	3.281	. .	X	. .	. .
3/16	.188	1.749	3.889	. .	X	. .	. .
7/32	.219	1.687	4.458	. .	X	. .	. .
1/4	.250	1.625	5.006	. .	X	. .	. .
9/32	.281	1.563	5.534	. .	X	. .	. .
5/16	.313	1.499	6.057	. .	X	. .	. .
3/8	.375	1.375	7.009	. .	X	. .	. .
7/16	.438	1.249	7.892	. .	X	. .	. .

*Produced to O.D. and Wall dimensions
†Only available Cold Rolled

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED C.D. BUTT WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

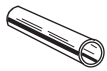
O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*	C.D. Butt Welded
2 3/16 x							
1/8	.125	1.938	2.754	. .	X	. .	. .
1/4	.250	1.688	5.175	. .	X	. .	. .
2 1/4 x							
20	.035	2.180	.828	. .	. .	X†	. .
18	.049	2.152	1.152	. .	X	X†	. .
16	.065	2.120	1.517	. .	X	X	. .
14	.083	2.084	1.921	. .	X	X	. .
13	.095	2.060	2.187	. .	X	. .	. .
12	.109	2.032	2.492	. .	X	X	. .
11	.120	2.010	2.730	. .	. .	X	. .
1/8	.125	2.000	2.837	. .	X	. .	. .
10	.134	1.982	3.028	. .	X	. .	. .
5/32	.156	1.938	3.489	. .	X	. .	X
3/16	.188	1.874	4.140	. .	X	. .	. .
7/32	.219	1.812	4.750	. .	X	. .	. .
1/4	.250	1.750	5.340	. .	X	. .	. .
9/32	.281	1.688	5.909	. .	X	. .	. .
5/16	.313	1.624	6.475	. .	X	. .	. .
11/32	.344	1.562	7.003	. .	X	. .	. .
3/8	.375	1.500	7.509	. .	X	. .	. .
13/32	.406	1.438	7.996	. .	X	. .	. .
7/16	.438	1.374	8.476	. .	X	. .	. .
1/2	.500	1.250	9.345	. .	X	. .	. .
9/16	.563	1.124	10.14	. .	X	. .	. .
5/8	.625	1.000	10.85	X*	. .	. .	. .
3/4	.750	.750	12.02	X*	. .	. .	. .
2 5/16 x							
3/16	.188	1.937	4.267	. .	X	. .	. .
2 3/8 x							
16	.065	2.245	1.604	. .	X	X	. .
14	.083	2.209	2.032	. .	X	. .	. .
13	.095	2.185	2.313	. .	X	. .	. .
1/8	.125	2.125	3.004	. .	X	. .	. .
5/32	.156	2.063	3.697	. .	X	. .	. .
3/16	.188	1.999	4.391	. .	X	. .	. .
7/32	.219	1.937	5.043	. .	X	. .	. .
1/4	.250	1.875	5.674	. .	X	. .	. .
9/32	.281	1.813	6.284	. .	X	. .	. .
5/16	.313	1.749	6.893	. .	X	. .	. .
3/8	.375	1.625	8.010	. .	X	. .	. .
7/16	.438	1.499	9.061	. .	X	. .	. .
1/2	.500	1.375	10.01	. .	X	. .	. .
9/16	.563	1.249	10.90	. .	X	. .	. .
5/8	.625	1.125	11.68	X*	. .	. .	. .

*Produced to O.D. and Wall dimensions

†Only available Cold Rolled

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

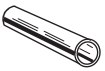
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*
2 7/16 x						
1/4	.250	1.938	5.842	. .	X	. .
2 1/2 x						
18	.049	2.402	1.283	. .	. .	X†
16	.065	2.370	1.690	. .	X	X
14	.083	2.334	2.143	. .	X	X
13	.095	2.310	2.440	. .	X	X
12	.109	2.282	2.783	. .	X	. .
11	.120	2.260	3.050	. .	X	X
1/8	.125	2.250	3.171	. .	X	. .
5/32	.156	2.188	3.905	. .	X	. .
7	.180	2.140	4.460	. .	. .	X
3/16	.188	2.124	4.642	. .	X	. .
7/32	.219	2.062	5.335	. .	X	. .
1/4	.250	2.000	6.008	. .	X	. .
9/32	.281	1.938	6.659	. .	X	. .
5/16	.313	1.874	7.311	. .	X	. .
11/32	.344	1.812	7.921	. .	X	. .
3/8	.375	1.750	8.511	. .	X	. .
7/16	.438	1.624	9.646	. .	X	. .
1/2	.500	1.500	10.68	. .	X	. .
9/16	.563	1.374	11.65	. .	X	. .
5/8	.625	1.250	12.52	X	. .	. .
3/4	.750	1.000	14.02	X*	. .	. .
2 9/16 x						
1/4	.250	2.063	6.176	. .	X	. .
2 5/8 x						
16	.065	2.495	1.777	. .	X	X
13	.095	2.435	2.567	. .	X	. .
12	.109	2.407	2.929	. .	X	. .
1/8	.125	2.375	3.338	. .	X	. .
5/32	.156	2.313	4.114	. .	X	. .
7	.180	2.265	4.700	. .	. .	X
3/16	.188	2.249	4.893	. .	X	. .
7/32	.219	2.187	5.627	. .	X	. .
1/4	.250	2.125	6.341	. .	X	. .
9/32	.281	2.063	7.035	. .	X	. .
5/16	.313	1.999	7.729	. .	X	. .
3/8	.375	1.875	9.011	. .	X	. .
7/16	.438	1.749	10.23	. .	X	. .
1/2	.500	1.625	11.35	. .	X	. .
9/16	.563	1.499	12.40	. .	X	. .
5/8	.625	1.375	13.35	. .	X	. .
2 3/4 x						
16	.065	2.620	1.864	. .	X	X
13	.095	2.560	2.694	. .	X	. .

*Produced to O.D. and Wall dimensions

†Only available Cold Rolled

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

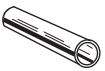
O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	DOM Welded	Electric Welded*
2 3/4 x						
11	.120	2.510	3.371	. .	. .	X
1/8	.125	2.500	3.504	. .	X	. .
5/32	.156	2.438	4.322	. .	X	. .
3/16	.188	2.374	5.144	. .	X	. .
7/32	.219	2.312	5.920	. .	X	. .
1/4	.250	2.250	6.675	. .	X	. .
9/32	.281	2.188	7.41	. .	X	. .
5/16	.313	2.124	8.147	. .	X	. .
11/32	.344	2.062	8.840	. .	X	. .
3/8	.375	2.000	9.512	. .	X	. .
7/16	.438	1.874	10.82	. .	X	. .
1/2	.500	1.750	12.02	. .	X	. .
9/16	.563	1.624	13.15	. .	X	. .
5/8	.625	1.500	14.18	. .	X	. .
11/16	.688	1.374	15.15	X	. .	. .
3/4	.750	1.250	16.02	X*	. .	. .
7/8	.875	1.000	17.52	X*	. .	. .
2 7/8 x						
16	.065	2.745	1.951	. .	X	X
11	.120	2.635	3.531	. .	. .	X
1/8	.125	2.625	3.671	. .	X	. .
3/16	.188	2.499	5.395	. .	X	. .
7/32	.219	2.437	6.212	. .	X	. .
1/4	.250	2.375	7.009	. .	X	. .
9/32	.281	2.313	7.785	. .	X	. .
5/16	.313	2.249	8.564	. .	X	. .
3/8	.375	2.125	10.01	. .	X	. .
7/16	.438	1.999	11.40	. .	X	. .
1/2	.500	1.875	12.68	. .	X	. .
9/16	.563	1.749	13.90	. .	X	. .
5/8	.625	1.625	15.02	. .	X	. .
3/4	.750	1.375	17.02	X*	. .	. .
3 x						
18	.049	2.902	1.544	. .	. .	X†
16	.065	2.870	2.038	. .	X	X
14	.083	2.834	2.586	. .	X	X
13	.095	2.810	2.947	. .	X	X
12	.109	2.782	3.366	. .	X	X
11	.120	2.760	3.691	. .	. .	X
1/8	.125	2.750	3.838	. .	X	. .
10	.134	2.732	4.102	. .	X	. .
5/32	.156	2.688	4.738	. .	X	. .
7	.180	2.640	5.421	. .	. .	X
3/16	.188	2.624	5.646	. .	X	. .
7/32	.219	2.562	6.505	. .	X	. .
1/4	.250	2.500	7.343	. .	X	X
9/32	.281	2.438	8.160	. .	X*	. .
5/16	.313	2.374	8.982	. .	X	. .

*Produced to O.D. and Wall dimensions

†Only available Cold Rolled

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

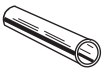
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	HF Seamless*	DOM Welded	Electric Welded*
3 x							
11/32	.344	2.312	9.758	. .	. .	X	. .
3/8	.375	2.250	10.51	. .	. .	X	. .
7/16	.438	2.124	11.98	. .	. .	X	. .
1/2	.500	2.000	13.35	. .	. .	X	. .
9/16	.563	1.874	14.65	. .	. .	X	. .
5/8	.625	1.750	15.85	. .	. .	X	. .
11/16	.688	1.624	16.99	X	. .	. .	. .
3/4	.750	1.500	18.02	X	X	. .	. .
7/8	.875	1.250	19.86	X	. .	. .	. .
1	1.000	1.000	21.36	X*	. .	. .	. .
3 1/8 x							
16	.065	2.995	2.124	. .	. .	X	X
11	.120	2.885	3.851	. .	. .	X	. .
1/8	.125	2.875	4.005	. .	. .	X	. .
3/16	.188	2.749	5.897	. .	. .	X	. .
7/32	.219	2.687	6.797	. .	. .	X	. .
1/4	.250	2.625	7.676	. .	. .	X	. .
5/16	.313	2.499	9.400	. .	. .	X	. .
3/8	.375	2.375	11.01	. .	. .	X	. .
7/16	.438	2.249	12.57	. .	. .	X	. .
1/2	.500	2.125	14.02	. .	. .	X	. .
9/16	.563	1.999	15.40	. .	. .	X	. .
3/4	.750	1.625	19.02	X	. .	. .	. .
3 1/4 x							
16	.065	3.120	2.221	. .	. .	. .	X
13	.095	3.060	3.201	. .	. .	X	. .
11	.120	3.010	4.011	. .	. .	X	X
5/32	.156	2.938	5.155	. .	. .	X	. .
3/16	.188	2.874	6.148	. .	. .	X*	. .
7/32	.219	2.812	7.089	. .	. .	X	. .
1/4	.250	2.750	8.010	. .	. .	X	. .
5/16	.313	2.624	9.818	. .	. .	X	. .
11/32	.344	2.562	10.68	. .	. .	X	. .
3/8	.375	2.500	11.51	. .	. .	X	. .
7/16	.438	2.374	13.15	. .	. .	X	. .
1/2	.500	2.250	14.69	. .	. .	X	. .
9/16	.563	2.124	16.16	. .	. .	X	. .
5/8	.625	2.000	17.52	. .	. .	X	. .
3/4	.750	1.750	20.03	X	. .	. .	. .
7/8	.875	1.500	22.19	X*	. .	. .	. .
1	1.000	1.250	24.03	X*	. .	. .	. .

***Produced to O.D. and Wall dimensions

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
3 3/8 x							
1/8	.125	3.125	4.339	. .	. .	X	. .
3/16	.188	2.999	6.399	. .	. .	X	. .
1/4	.250	2.875	8.344	. .	. .	X	. .
5/16	.313	2.749	10.24	. .	. .	X	. .
3/8	.375	2.625	12.02	. .	. .	X	. .
7/16	.438	2.499	13.74	. .	. .	X	. .
1/2	.500	2.375	15.35	. .	. .	X	. .
5/8	.625	2.125	18.36	. .	. .	X	. .
3 1/2 x							
18	.049	3.402	1.806	. .	. .	. .	X†
16	.065	3.370	2.385	. .	. .	X	X
14	.083	3.334	3.029	. .	. .	X	X
11	.120	3.260	4.332	. .	. .	X	X
1/8	.125	3.250	4.506	. .	. .	X	. .
10	.134	3.232	4.817	. .	. .	X	. .
5/32	.156	3.188	5.571	. .	. .	X	. .
7	.180	3.140	6.382	. .	. .	. .	X
3/16	.188	3.124	6.650	. .	. .	X	. .
7/32	.219	3.062	7.674	. .	. .	X	. .
1/4	.250	3.000	8.678	. .	. .	X	X
9/32	.281	2.938	9.661	. .	. .	X	. .
5/16	.313	2.874	10.65	. .	. .	X	. .
11/32	.344	2.812	11.59	. .	. .	X	. .
3/8	.375	2.750	12.52	. .	. .	X	. .
7/16	.438	2.624	14.32	. .	. .	X	. .
1/2	.500	2.500	16.02	. .	X	X	. .
9/16	.563	2.374	17.66	. .	. .	X	. .
5/8	.625	2.250	19.19	. .	. .	X	. .
3/4	.750	2.000	22.03	X	. .	. .	. .
7/8	.875	1.750	24.53	X	. .	. .	. .
1	1.000	1.500	26.70	X*	. .	. .	. .
3 5/8 x							
16	.065	3.495	2.471	. .	. .	X†† *	. .
1/8	.125	3.375	4.673	. .	. .	X	. .
3/16	.188	3.249	6.901	. .	. .	X	. .
1/4	.250	3.125	9.011	. .	. .	X	. .
5/16	.313	2.999	11.07	. .	. .	X	. .
3/8	.375	2.875	13.02	. .	. .	X	. .
1/2	.500	2.625	16.69	. .	. .	X	. .
9/16	.563	2.499	18.41	. .	. .	X	. .
3/4	.750	2.125	23.03	X	. .	. .	. .
3 3/4 x							
13	.095	3.560	3.708	. .	. .	X	. .
1/8	.125	3.500	4.839	. .	. .	X	. .
10	.134	3.482	5.175	. .	. .	X	. .

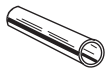
***** Produced to O.D. and Wall dimensions

† Only available Cold Rolled

†† MT 1010 chemistry

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

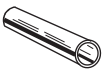
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
3 3/4 x							
3/16	.188	3.374	7.152	. .	. .	X	. .
1/4	.250	3.250	9.345	. .	. .	X	. .
5/16	.313	3.124	11.49	. .	. .	X	. .
11/32	.344	3.062	12.51	. .	. .	X	. .
3/8	.375	3.000	13.52	. .	. .	X	. .
7/16	.438	2.874	15.49	. .	. .	X	. .
1/2	.500	2.750	17.36	. .	X	X	. .
9/16	.563	2.624	19.16	. .	. .	X	. .
5/8	.625	2.500	20.86	. .	. .	X	. .
11/16	.688	2.374	22.50	X	. .	. .	. .
3/4	.750	2.250	24.03	X	. .	. .	. .
7/8	.875	2.000	26.87	X	. .	. .	. .
1	1.000	1.750	29.37	X*	X	. .	. .
3 7/8 x							
1/8	.125	3.625	5.006	. .	. .	X	. .
3/16	.188	3.499	7.403	. .	. .	X	. .
1/4	.250	3.375	9.679	. .	. .	X	. .
5/16	.313	3.249	11.91	. .	. .	X	. .
3/8	.375	3.125	14.02	. .	. .	X	. .
7/16	.438	2.999	16.08	. .	. .	X	. .
1/2	.500	2.875	18.02	. .	. .	X	. .
3/4	.750	2.375	25.03	X	. .	. .	. .
4 x							
16	.065	3.870	2.732	. .	. .	. .	X
14	.083	3.834	3.472	. .	. .	. .	X
13	.095	3.810	3.962	. .	. .	X	X
11	.120	3.760	4.973	. .	. .	X	X**
1/8	.125	3.750	5.173	. .	. .	X	. .
10	.134	3.732	5.533	. .	. .	. .	X
7	.180	3.640	7.344	. .	. .	. .	X
3/16	.188	3.624	7.654	. .	. .	X	. .
7/32	.219	3.562	8.844	. .	. .	X	. .
1/4	.250	3.500	10.01	. .	. .	X	X
9/32	.281	3.438	11.16	. .	. .	X	. .
5/16	.313	3.374	12.33	. .	. .	X	. .
3/8	.375	3.250	14.52	. .	. .	X	. .
7/16	.438	3.124	16.66	. .	. .	X	. .
1/2	.500	3.000	18.69	. .	X	X	. .
9/16	.563	2.874	20.67	. .	. .	X	. .
5/8	.625	2.750	22.53	. .	. .	X	. .
11/16	.688	2.624	24.34	X	. .	. .	. .
3/4	.750	2.500	26.03	X	X	. .	. .
7/8	.875	2.250	29.20	X	. .	. .	. .
1	1.000	2.000	32.04	X	X	. .	. .
1 1/8	1.125	1.750	34.54	X*	. .	. .	. .
1 1/4	1.250	1.500	36.71	X*	. .	. .	. .

*Produced to O.D. and Wall dimensions

**24 ft.

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
4 1/8 x							
1/4	.250	3.625	10.35	. .	. .	X	. .
5/16	.313	3.499	12.74	. .	. .	X	. .
3/8	.375	3.375	15.02	. .	. .	X	. .
1/2	.500	3.125	19.36	. .	. .	X	. .
4 1/4 x							
16	.065	4.120	2.905	. .	. .	. .	X
1/8	.125	4.000	5.507	. .	. .	X	. .
5/32	.156	3.938	6.821	. .	. .	X	. .
1/4	.250	3.750	10.68	. .	. .	X	. .
5/16	.313	3.624	13.16	. .	. .	X	. .
11/32	.344	3.562	14.35	. .	. .	X	. .
3/8	.375	3.500	15.52	. .	. .	X	. .
7/16	.438	3.374	17.83	. .	. .	X	. .
1/2	.500	3.250	20.03	. .	. .	X	. .
5/8	.625	3.000	24.20	. .	. .	X	. .
11/16	.688	2.874	26.17	X	. .	. .	. .
3/4	.750	2.750	28.04	X	. .	. .	. .
7/8	.875	2.500	31.54	X	. .	. .	. .
1	1.000	2.250	34.71	X	X	. .	. .
1 1/8	1.125	2.000	37.55	X*	. .	. .	. .
1 1/4	1.250	1.750	40.05	X*	. .	. .	. .
4 3/8 x							
3/16	.188	3.999	8.407	. .	. .	X	. .
1/4	.250	3.875	11.01	. .	. .	X	. .
5/16	.313	3.749	13.58	. .	. .	X	. .
3/8	.375	3.625	16.02	. .	. .	X	. .
1/2	.500	3.375	20.69	. .	. .	X	. .
5/8	.625	3.125	25.03	. .	. .	X	. .
3/4	.750	2.875	29.04	X	. .	. .	. .
4 1/2 x							
16	.065	4.370	3.079	. .	. .	. .	X
14	.083	4.334	3.915	. .	. .	. .	X
13	.095	4.310	4.469	. .	. .	X†	X
11	.120	4.260	5.613	. .	. .	. .	X
1/8	.125	4.250	5.841	. .	. .	X	. .
3/16	.188	4.124	8.658	. .	. .	X	. .
7/32	.219	4.062	10.01	. .	. .	X	. .
1/4	.250	4.000	11.35	. .	. .	X	X
5/16	.313	3.874	14.00	. .	. .	X	. .

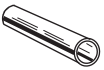
* Produced to O.D. and Wall dimensions

Continued on following page

** 24 ft. only

† Grade 1020

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

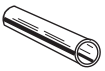
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
4 1/2 x							
3/8	.375	3.750	16.52	. .	. .	X	. .
7/16	.438	3.624	19.00	. .	. .	X	. .
1/2	.500	3.500	21.36	. .	. .	X	. .
9/16	.563	3.374	23.67	. .	. .	X	. .
5/8	.625	3.250	25.87	. .	. .	X	. .
3/4	.750	3.000	30.04	X	X	. .	. .
7/8	.875	2.750	33.88	X	. .	. .	. .
1	1.000	2.500	37.38	X	X	. .	. .
1 1/8	1.125	2.250	40.55	X	. .	. .	. .
1 1/4	1.250	2.000	43.39	. .	X	. .	. .
1 1/2	1.500	1.500	48.06	. .	X	. .	. .
4 5/8 x							
3/16	.188	4.249	8.909	. .	. .	X	. .
1/4	.250	4.125	11.68	. .	. .	X	. .
5/16	.313	3.999	14.41	. .	. .	X	. .
3/8	.375	3.875	17.02	. .	. .	X	. .
1/2	.500	3.625	22.03	. .	. .	X	. .
3/4	.750	3.125	31.04	X	. .	. .	. .
4 3/4 x							
11	.120	4.510	5.934	. .	. .	. .	X
3/16	.188	4.374	9.160	. .	. .	X	. .
1/4	.250	4.250	12.02	. .	. .	X	. .
5/16	.313	4.124	14.83	. .	. .	X	. .
3/8	.375	4.000	17.52	. .	. .	X	. .
1/2	.500	3.750	22.70	. .	. .	X	. .
5/8	.625	3.500	27.53	. .	. .	X	. .
3/4	.750	3.250	32.04	X	X	. .	. .
7/8	.875	3.000	36.21	X	. .	. .	. .
1	1.000	2.750	40.05	X	. .	. .	. .
4 7/8 x							
3/16	.188	4.499	9.411	. .	. .	X	. .
7/16	.438	3.999	20.76	. .	. .	X	. .
1/2	.500	3.875	23.36	. .	. .	X	. .
3/4	.750	3.375	33.04	X	. .	. .	. .
5 x							
16	.065	4.870	3.426	. .	. .	. .	X
14	.083	4.834	4.359	. .	. .	. .	X
11	.120	4.760	6.254	. .	. .	X	X
1/8	.125	4.750	6.508	. .	. .	X	. .
3/16	.188	4.624	9.662	. .	. .	X	. .
1/4	.250	4.500	12.68	. .	. .	X	X
5/16	.313	4.374	15.67	. .	. .	X	. .

*Produced to O.D. and Wall dimensions

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

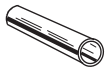
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
5 x							
3/8	.375	4.250	18.52	. .	. .	X	. .
7/16	.438	4.124	21.34	. .	. .	X	. .
1/2	.500	4.000	24.03	. .	. .	X	. .
5/8	.625	3.750	29.20	. .	. .	X	. .
3/4	.750	3.500	34.04	X	X	. .	. .
7/8	.875	3.250	38.55	X	X	. .	. .
1	1.000	3.000	42.72	X	X	. .	. .
1 1/8	1.125	2.750	46.56	X	. .	. .	. .
1 1/4	1.250	2.500	50.06	X	. .	. .	. .
1 1/2	1.500	2.000	56.07	. .	X	. .	. .
5 1/8 x							
5/16	.313	4.499	16.09	. .	. .	X	. .
5/8	.625	3.875	30.04	. .	. .	X	. .
5 1/4 x							
1/8	.125	5.000	6.842	. .	. .	X	. .
3/16	.188	4.874	10.16	. .	. .	X	. .
1/4	.250	4.750	13.35	. .	. .	X	. .
5/16	.313	4.624	16.50	. .	. .	X	. .
3/8	.375	4.500	19.52	. .	. .	X	. .
1/2	.500	4.250	25.37	. .	. .	X	. .
5/8	.625	4.000	30.87	. .	. .	X	. .
3/4	.750	3.750	36.05	X	. .	. .	. .
7/8	.875	3.500	40.88	X	X	. .	. .
1	1.000	3.250	45.39	X	X	. .	. .
1 1/4	1.250	2.750	53.40	X	X	. .	. .
5 3/8 x							
3/16	.188	4.999	10.41	. .	. .	X	. .
5 1/2 x							
16	.065	5.370	3.773	. .	. .	. .	X
11	.120	5.260	6.895	. .	. .	. .	X
3/16	.188	5.124	10.67	. .	. .	X	. .
1/4	.250	5.000	14.02	. .	. .	X	X
5/16	.313	4.874	17.34	. .	. .	X	. .
3/8	.375	4.750	20.53	. .	. .	X	. .
7/16	.438	4.624	23.68	. .	. .	X	. .
1/2	.500	4.500	26.70	. .	. .	X	. .
5/8	.625	4.250	32.54	. .	. .	X	. .
3/4	.750	4.000	38.05	X	. .	. .	. .
7/8	.875	3.750	43.22	X	. .	. .	. .
1	1.000	3.500	48.06	X	X	. .	. .
1 1/4	1.250	3.000	56.74	X	. .	. .	. .
1 1/2	1.500	2.500	64.08	. .	X	. .	. .
5 5/8 x							
5/16	.313	4.999	17.76	. .	. .	X	. .
5/8	.625	4.375	33.38	. .	. .	X	. .

***Produced to O.D. and Wall dimensions

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

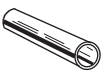
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
5 3/4 x							
1/8	.125	5.500	7.509	. .	. .	X	. .
1/4	.250	5.250	14.69	. .	. .	X	. .
5/16	.313	5.124	18.18	. .	. .	X	. .
3/8	.375	5.000	21.53	. .	. .	X	. .
1/2	.500	4.750	28.04	. .	. .	X	. .
3/4	.750	4.250	40.05	X	. .	. .	. .
7/8	.875	4.000	45.56	X	. .	. .	. .
1	1.000	3.750	50.73	X	X	. .	. .
6 x							
16	.065	5.870	4.120	. .	. .	. .	X
14	.083	5.834	5.245	. .	. .	. .	X
11	.120	5.760	7.536	. .	. .	. .	X
1/8	.125	5.750	7.843	. .	. .	X	. .
10	.134	5.732	8.395	. .	. .	. .	X
7	.180	5.640	11.19	. .	. .	. .	X**
3/16	.188	5.624	11.67	. .	. .	X	. .
1/4	.250	5.500	15.35	. .	. .	X	X
5/16	.313	5.374	19.01	. .	. .	X	. .
3/8	.375	5.250	22.53	. .	. .	X	. .
1/2	.500	5.000	29.37	. .	X	X	. .
5/8	.625	4.750	35.88	. .	. .	X	. .
3/4	.750	4.500	42.05	X	. .	. .	. .
7/8	.875	4.250	47.89	X	. .	. .	. .
1	1.000	4.000	53.40	X	X	. .	. .
1 1/4	1.250	3.500	63.41	X	X	. .	. .
1 1/2	1.500	3.000	72.09	. .	X	. .	. .
6 1/4 x							
1/8	.125	6.000	8.177	. .	. .	X	. .
3/16	.188	5.874	12.17	. .	. .	X	. .
1/4	.250	5.750	16.02	. .	. .	X	. .
5/16	.313	5.624	19.85	. .	. .	X	. .
3/8	.375	5.500	23.53	. .	. .	X	. .
1/2	.500	5.250	30.71	. .	. .	X	. .
5/8	.625	5.000	37.55	. .	. .	X	. .
3/4	.750	4.750	44.06	X	. .	. .	. .
7/8	.875	4.500	50.23	X	. .	. .	. .
1	1.000	4.250	56.07	X	X	. .	. .
6 1/2 x							
10	.134	6.232	9.111	. .	. .	X	. .
3/16	.188	6.124	12.67	. .	. .	X	. .
1/4	.250	6.000	16.69	. .	. .	X	. .
3/8	.375	5.750	24.53	. .	. .	X	. .
1/2	.500	5.500	32.04	. .	. .	X	. .
5/8	.625	5.250	39.22	. .	. .	X	. .
3/4	.750	5.000	46.06	X	. .	. .	. .
7/8	.875	4.750	52.57	X	. .	. .	. .

*Produced to O.D. and Wall dimensions

Continued on following page

**1008 — Ends Plain



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

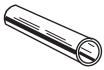
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
6 1/2 x							
1	1.000	4.500	58.74	X	X	. .	. .
1 1/4	1.250	4.000	70.09	X	X	. .	. .
1 1/2	1.500	3.500	80.10	. .	X	. .	. .
6 5/8 x							
1/8	.125	6.375	8.678	. .	. .	. .	X
3/16	.188	6.249	12.92	. .	. .	X	. .
6 3/4 x							
1/4	.250	6.250	17.36	. .	. .	X	. .
3/8	.375	6.000	25.53	. .	. .	X	. .
1/2	.500	5.750	33.38	. .	. .	X	. .
7/8	.875	5.000	54.90	X	. .	. .	. .
1	1.000	4.750	61.41	X	X	. .	. .
7 x							
15	.072	6.856	5.327	. .	. .	. .	X
1/8	.125	6.750	9.178	. .	. .	. .	X
3/16	.188	6.624	13.68	. .	. .	X	. .
1/4	.250	6.500	18.02	. .	. .	X	. .
3/8	.375	6.250	26.53	. .	. .	X	. .
1/2	.500	6.000	34.71	. .	. .	X	. .
5/8	.625	5.750	42.55	. .	. .	X	. .
3/4	.750	5.500	50.06	X	X	. .	. .
1	1.000	5.000	64.08	X	X	. .	. .
1 1/4	1.250	4.500	76.76	X	X	. .	. .
1 1/2	1.500	4.000	88.11	. .	X	. .	. .
2	2.000	3.000	106.8	. .	X	. .	. .
7 1/4 x							
3/16	.188	6.874	14.18	. .	. .	X	. .
1/4	.250	6.750	18.69	. .	. .	X	. .
3/8	.375	6.500	27.53	. .	. .	X	. .
1/2	.500	6.250	36.05	. .	. .	X	. .
1	1.000	5.250	66.75	X	X	. .	. .
7 1/2 x							
1/4	.250	7.000	19.36	. .	. .	X	. .
3/8	.375	6.750	28.54	. .	. .	X	. .
1/2	.500	6.500	37.38	. .	. .	X	. .
5/8	.625	6.250	45.89	. .	. .	X	. .
3/4	.750	6.000	54.07	X	. .	. .	. .
1	1.000	5.500	69.42	X	X	. .	. .
1 1/4	1.250	5.000	83.44	X	. .	. .	. .
1 1/2	1.500	4.500	96.12	. .	X	. .	. .

***Produced to O.D. and Wall dimensions

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

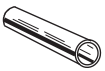
Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
7 3/4 x							
1/4	.250	7.250	20.03	. .	. .	X	. .
3/8	.375	7.000	29.54	. .	. .	X	. .
1/2	.500	6.750	38.72	. .	. .	X	. .
5/8	.625	6.500	47.56	. .	. .	X	. .
1	1.000	5.750	72.09	X	X	. .	. .
8 x							
12	.109	7.782	9.186	. .	. .	. .	X
1/8	.125	7.750	10.51	. .	. .	. .	X
10	.134	7.732	11.26	. .	. .	. .	X
3/16	.188	7.624	15.69	. .	. .	. .	X
1/4	.250	7.500	20.69	. .	. .	X	X
3/8	.375	7.250	30.54	. .	. .	X	. .
1/2	.500	7.000	40.05	. .	X	X	. .
5/8	.625	6.750	49.23	. .	. .	X	. .
3/4	.750	6.500	58.07	X	X	. .	. .
1	1.000	6.000	74.76	X	X	. .	. .
1 1/8	1.125	5.750	82.60	X	. .	. .	. .
1 1/2	1.500	5.000	104.1	. .	X	. .	. .
2	2.000	4.000	128.2	. .	X	. .	. .
8 1/4 x							
1/4	.250	7.750	21.36	. .	. .	X	. .
5/8	.625	7.000	50.90	. .	. .	X	. .
1	1.000	6.250	77.43	X	X	. .	. .
8 1/2 x							
1/4	.250	8.000	22.03	. .	. .	X	. .
3/8	.375	7.750	32.54	. .	. .	X	. .
1/2	.500	7.500	42.72	. .	. .	X	. .
3/4	.750	7.000	62.08	X	. .	. .	. .
1	1.000	6.500	80.10	. .	X	. .	. .
1 1/4	1.250	6.000	96.79	X	X	. .	. .
1 1/2	1.500	5.500	112.1	. .	X	. .	. .
8 3/4 x							
3/8	.375	8.000	33.54	. .	. .	X	. .
1	1.000	6.750	82.77	X	X	. .	. .
1 1/2	1.500	5.750	116.1	. .	X	. .	. .

***Produced to O.D. and Wall dimensions

Continued on following page



STEEL TUBING
ROUND MECHANICAL

SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

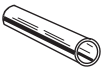
Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
9 x							
1/4	.250	8.500	23.36	. .	. .	X	. .
3/4	.750	7.500	66.08	. .	X	. .	. .
1	1.000	7.000	85.44	. .	X	. .	. .
1 1/4	1.250	6.500	103.5	. .	X	. .	. .
1 1/2	1.500	6.000	120.2	. .	X	. .	. .
2	2.000	5.000	149.5	. .	X	. .	. .
9 1/4 x							
1/2	.500	8.250	46.73	. .	. .	X	. .
1	1.000	7.250	88.11	. .	X	. .	. .
9 1/2 x							
1/4	.250	9.000	24.70	. .	. .	X	. .
1/2	.500	8.500	48.06	. .	. .	X	. .
3/4	.750	8.000	70.09	X	. .	. .	. .
1	1.000	7.500	90.78	X	X	. .	. .
1 1/2	1.500	6.500	128.2	. .	X	. .	. .
2	2.000	5.500	160.2	. .	X	. .	. .
9 3/4 x							
1/4	.250	9.250	25.37	. .	. .	X	. .
1/2	.500	8.750	49.40	. .	. .	X	. .
1	1.000	7.750	93.45	. .	X	. .	. .
10 x							
15	.072	9.856	7.634	. .	. .	. .	X
12	.109	9.782	11.51	. .	. .	. .	X
10	.134	9.732	14.12	. .	. .	. .	X
1/4	.250	9.500	26.03	. .	. .	X	. .
3/8	.375	9.250	38.55	. .	. .	X	. .
1/2	.500	9.000	50.73	. .	. .	X	. .
3/4	.750	8.500	74.09	X	. .	. .	. .
1	1.000	8.000	96.12	. .	X	. .	. .
1 1/4	1.250	7.500	116.8	X	X	. .	. .
2	2.000	6.000	170.9	. .	X	. .	.
10 1/4 x							
1 1/2	1.500	7.250	140.2	. .	X	. .	. .

***Produced to O.D. and Wall dimensions

Continued on following page

STEEL TUBING
ROUND MECHANICAL



SEAMLESS DOM WELDED
ELECTRIC WELDED

Stock Lengths and Identification Color, *Page 93*

Continued from preceding page

O.D. & Ga.	Wall	I.D.	Lbs. Per Ft.	C.D. Seamless	H.F. Seamless*	DOM Welded	Electric Welded*
10 1/2 x							
1/4	.250	10.000	27.37	. .	. .	X	. .
1/2	.500	9.500	53.40	. .	. .	X	. .
1	1.000	8.500	101.5	. .	X	. .	. .
1 1/4	1.250	8.000	123.5	. .	X	. .	. .
1 1/2	1.500	7.500	144.2	. .	X	. .	. .
10 3/4 x							
1/4	.250	10.250	28.03	. .	. .	X	. .
1	1.000	8.750	104.1	. .	X	. .	. .
1 1/4	1.250	8.250	126.8	. .	X	. .	. .
11 x							
1/2	.500	10.000	56.07	. .	. .	X	. .
1	1.000	9.000	106.8	. .	X	. .	. .
1 1/2	1.500	8.000	152.2	. .	X	. .	. .
2	2.000	7.000	192.2	. .	X	. .	. .
11 1/2 x							
1	1.000	9.500	112.1	. .	X	. .	. .
11 3/4 x							
3/4	.750	10.250	88.11	X	X	. .	. .
12 x							
3/16	.188	11.624	23.72	. .	. .	. .	X
1/4	.250	11.500	31.37	. .	. .	X	. .
3/8	.375	11.250	46.56	. .	. .	X	. .
1/2	.500	11.000	61.41	. .	. .	X	. .
3/4	.750	10.500	90.11	. .	X	. .	. .
1	1.000	10.000	117.5	. .	X	. .	. .
1 1/2	1.500	9.000	168.2	. .	X	. .	. .
2	2.000	8.000	213.6	. .	X	. .	. .
12 1/4 x							
3/4	.750	10.750	92.12	. .	X	. .	. .
13 x							
1	1.000	11.000	128.2	. .	X	. .	. .

*Produced to O.D. and Wall dimensions



STEEL HYDRAULIC-LINE TUBING

Cold Drawn Welded

Produced To O.D. and I.D. Dimensions

Soft Annealed—Oiled

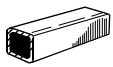
SAE J525—Electronically tested

Stock Lengths: 20 Ft. Random

Identification Color: Brown

O.D. & Ga.	Wall	I.D.	Lbs. per Ft.
1/4 x			
22	.028	.194	.0664
20	.035	.180	.0804
18	.049	.152	.1052
5/16 x			
20	.035	.243	.1039
18	.049	.215	.1382
3/8 x			
20	.035	.305	.1271
18	.049	.277	.1706
16	.065	.245	.2152
1/2 x			
20	.035	.430	.1738
18	.049	.402	.2360
16	.065	.370	.3020
14	.083	.334	.3696
5/8 x			
20	.035	.555	.2205
18	.049	.527	.3014
16	.065	.495	.3888
14	.083	.459	.4805
13	.095	.435	.5377
3/4 x			
20	.035	.680	.2673
18	.049	.652	.3668
16	.065	.620	.4755
14	.083	.584	.5913
13	.095	.560	.6646
11	.120	.510	.8074
7/8 x			
16	.065	.745	.5623
14	.083	.709	.7021
13	.095	.685	.7914
12	.109	.657	.8917
1 x			
16	.065	.870	.6491
14	.083	.834	.8129
13	.095	.810	.9182
12	.109	.782	1.037
11	.120	.760	1.128
1¼ x			
16	.065	1.120	.8226
13	.095	1.060	1.172
12	.109	1.032	1.328
11	.120	1.010	1.448
1½ x			
16	.065	1.370	.9962
13	.095	1.310	1.426
11	.120	1.260	1.769
2 x			
16	.065	1.870	1.343
11	.120	1.760	2.409

STEEL TUBING
SQUARE WELDED*



Produced to O.D. and Wall Dimensions

Low Carbon Mechanical

ASTM A 513 Flash In

Stock Lengths: 20 Ft. Random

Identification Color: Purple

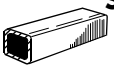
Size & Ga.	Wall	I.D.	Lbs. per Ft.
3/8 x 3/8			
20†	.035	.305	.1618
16†	.065	.245	.2740
1/2 x 1/2			
20	.035	.430	.2213
18	.049	.402	.3005
16	.065	.370	.3845
5/8 x 5/8			
20	.035	.555	.2808
18	.049	.527	.3838
16	.065	.495	.4950
3/4 x 3/4			
20	.035	.680	.3403
18	.049	.652	.4671
16	.065	.620	.6055
14	.083	.584	.7529
11	.120	.510	1.028
7/8 x 7/8			
18	.049	.777	.5504
16	.065	.745	.7160
14	.083	.709	.8940
1 x 1			
20	.035	.930	.4593
18**	.049	.902	.6337
16	.065	.870	.8265
15	.072	.854	.9100
14	.083	.834	1.035
12	.109	.782	1.321
11	.120	.760	1.436
1 1/8 x 1 1/8			
18	.049	1.027	.7170
16	.065	.995	.9370
1 1/4 x 1 1/4			
18	.049	1.152	.8003
16	.065	1.120	1.048
14	.083	1.084	1.317
13	.095	1.060	1.492
12	.109	1.032	1.691
11	.120	1.010	1.844
1 1/2 x 1 1/2			
18	.049	1.402	.9669
16	.065	1.370	1.269
14	.083	1.334	1.600
13	.095	1.310	1.815
12	.109	1.282	2.062
11	.120	1.260	2.252
1 3/4 x 1 3/4			
16	.065	1.620	1.490
14	.083	1.584	1.882
11	.120	1.510	2.660
2 x 2			
18	.049	1.902	1.300
16	.065	1.870	1.711
14	.083	1.834	2.164
13	.095	1.810	2.461
12	.109	1.782	2.800
11	.120	1.760	3.068
2 1/4 x 2 1/4			
16	.065	2.120	1.932
2 1/2 x 2 1/2			
16	.065	2.370	2.153
14	.083	2.334	2.728
12	.109	2.282	3.544
3 x 3			
14	.083	2.834	3.293

***** For larger sizes, see Square Structural Tube *page 120*

****** Flash Controlled — Ends Black

† Produced from 1008/1010 Steel

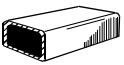
STEEL TUBING
SQUARE STRUCTURAL WELDED*



ASTM A 500 Grade B/C
Stock Lengths 20, 24, and 40 Ft. Random
Identification Color: Green

Size in Inches	Wall	Lbs. per Ft.
3/4 x 3/4	**x .125†**	1.03
1 x 1	**x .125**	1.44
1¼ x 1¼	**x .135**	2.03
	.188	2.84
1½ x 1½	**x .154**	2.65
	.188	3.23
	.250††	4.00
2 x 2	**x .125**	3.05
	.154	3.71
	.188	4.32
	.250	5.41
2½ x 2½	**x .125**	3.90
	.188	5.59
	.250	7.11
3 x 3	**x .125**	4.75
	.188	6.87
	.250	8.81
	.313	10.58
3½ x 3½	**x .125**	5.61
	.188	8.15
	.250	10.51
	.313	12.70
4 x 4	**x .125**	6.46
	.188	9.42
	.250	12.21
	.313	14.83
	.375	17.27
	.500	21.63
4½ x 4½	**x .188**	10.70
5 x 5	**x .188**	11.97
	.250	15.62
	.313	19.08
	.375	22.37
	.500	28.43
6 x 6	**x .188**	14.53
	.250	19.02
	.313	23.34
	.375	27.48
	.500	35.24
7 x 7	**x .188**	17.08
	.250	22.42
	.313	27.59
	.375	32.58
	.500	42.05
8 x 8	**x .188**	19.63
	.250	25.82
	.313	31.84
	.375	37.69
	.500	48.85
10 x 10	**x .250**	32.63
	.313	40.35
	.375	47.90
	.500	62.46
12 x 12	**x .250**	39.43
	.375	58.10
	.500	76.07
14 x 14	**x .500**	89.68

*Epox Z Kote® also available — Ends Plain
†20 and 40 ft. lgths available - Grade B only
††Grade C



STEEL TUBING
RECTANGULAR WELDED

Low Carbon Mechanical
ASTM A 513 Flash In
Stock Lengths 20 Ft. Random
Identification Color: Purple

Size in Inches	Wall Ga.	Wall Dec.	Lbs. per Ft.
1 x ½ x	**16**	.065	0.606
1½ x ½ x	**16**	.065	0.826
1½ x ¾ x	**14**	.083	1.176
1½ x 1 x	**16**	.065	1.048
	14	.083	1.317
	11	.120	1.844
2 x ¾ x	**16**	.065	1.158
2 x 1 x	**16**	.065	1.269
	14	.083	1.600
	11	.120	2.252
2 x 1¼ x	**14**	.083	1.741
2 x 1½ x	**14**	.083	1.882
	11	.120	2.660
2½ x 1 x	**14**	.083	1.882
2½ x 1¼ x	**14**	.083	2.023
2½ x 1½ x	**14**	.083	2.164
	11	.120	3.068
3 x 1 x	**14**	.083	2.164
	11	.120	3.068
3 x 1½ x	**14**	.083	2.446
	12	.109	3.174
	11	.120	3.476
3 x 2 x	**16**	.065	2.126
	14	.083	2.728
	11	.120	3.884
4 x 2 x	**14**	.083	3.293
	11	.120	4.700

For larger sizes and heavier walls, see *page 121*

STEEL TUBING
RECTANGULAR STRUCTURAL WELDED*

ASTM A 500 Grade B/C
Stock Lengths 20, 24 and 40 Ft. Random
Identification Color: Green



Size in Inches	Wall	Lbs. per Ft.
2 x 1	**x .125†**	2.34
2½ x 1½	**x .188**	4.32
	.250	5.41
3 x 1½	**x .125**	3.48
	.188	4.97
3 x 2	**x .125**	3.90
	.188	5.59
	.250	7.11
	.313	8.44
3½ x 2½	**x .188**	6.87
4 x 2	**x .125**	4.75
	.188	6.87
	.250	8.81
	.313	10.58
4 x 2½	**x .125**	5.11
4 x 3	**x .125**	5.61
	.188	8.15
	.250	10.51
	.313	12.70
5 x 2	**x .188**	8.15
	.250	10.51
	.313	12.70
5 x 2½	**x .125**	5.92
	.188	8.88
5 x 3	**x .188**	9.42
	.250	12.21
	.313	14.83
	.375	17.27
	.500	21.63
6 x 2	**x .188**	9.42
	.250	12.21
6 x 3	**x .188**	10.70
	.250	13.91
	.313	16.96
	.375	19.82
6 x 4	**x .188**	11.97
	.250	15.62
	.313	19.08
	.375	22.37
	.500	28.43
7 x 5	**x .188**	14.53
	.250	19.02
7 x 5	**x .313**	23.34
	.375	27.48
	.500	35.24
8 x 2	**x .188**	11.97
	.250	15.62
8 x 3	**x .188**	13.25
	.250	17.32
	.375	24.93
8 x 4	**x .188**	14.53
	.250	19.02
	.313	23.34
	.375	27.48
	.500	35.24
8 x 6	**x .188**	17.08
	.250	22.42
	.313	27.59
	.375	32.58
	.500	42.05
10 x 2	**x .188**	14.53
	.250	19.31
10 x 3	**x .250**	20.72
10 x 4	**x .188**	17.08
	.250	22.42
	.375	32.58
	.500	42.05
10 x 6	**x .250**	25.82
	.313	36.12
	.375	37.69
	.500	48.85
10 x 8	**x .250**	29.23
	.375	42.79
	.500	55.66
12 x 2	**x .188**	17.08
12 x 4	**x .250**	25.82
	.375	37.69
12 x 6	**x .250**	29.23
	.375	42.79
	.500	55.66
12 x 8	**x .375**	47.90
	.500	62.46

*Epox Z Kote® also available — Ends Plain
†24 ft.



STEEL ROUND BLACK PIPE

Uncoated

Plain Ends*

Also available Galvanized

Identification Colors: A 53 Type F — Schedule 40 — No Paint; Schedule 80 — White
A 53 Gr. B, Type E — Schedule 40 & Std — Green; Schedule 80 & XS — Grey

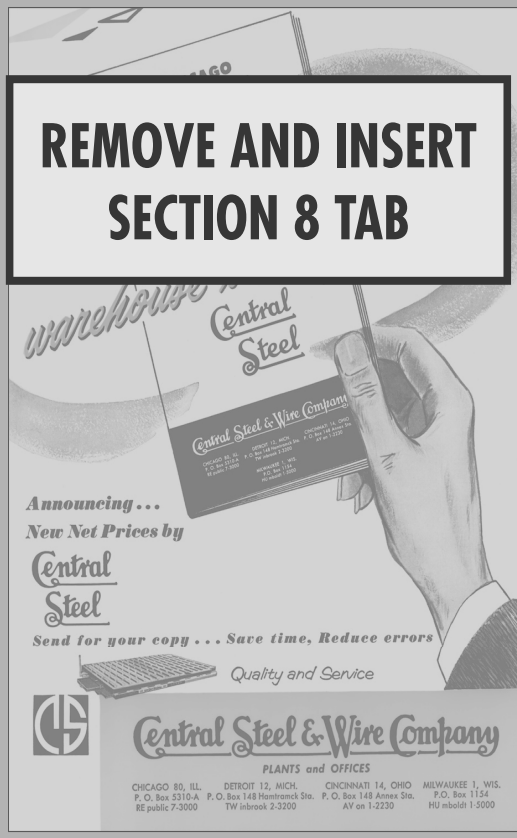
Nominal Size in Inches	Schedule	Wall	O.D.	Lbs. per Ft.	ASTM A 53 Type F	ASTM A 53 Type E Gr. B
1/8	40	.068	.405	.24	. .	21′**
1/4	40	.088	.540	.42	. .	21′**
1/4	80	.119	.540	.54	. .	21′**
3/8	40	.091	.675	.57	. .	21′**
3/8	80	.126	.675	.74	. .	21′**
1/2	40	.109	.840	.85	21′	. .
1/2	80	.147	.840	1.09	21′	. .
3/4	40	.113	1.050	1.13	21′	. .
3/4	80	.154	1.050	1.47	21′	. .
1	40	.133	1.315	1.68	21′	. .
1	80	.179	1.315	2.17	21′	. .
1 1/4	40	.140	1.660	2.27	21′	. .
1 1/4	80	.191	1.660	3.00	21′	. .
1 1/2	40	.145	1.900	2.72	21′	. .
1 1/2	80	.200	1.900	3.63	21′	. .
2	40	.154	2.375	3.65	. .	21′††
2	80	.218	2.375	5.02	21′	. .
2 1/2	40	.203	2.875	5.79	. .	21′
2 1/2	80	.276	2.875	7.66	21′	. .
3	40	.216	3.500	7.58	. .	21′††
3	80	.300	3.500	10.25	21′	. .
3 1/2	40	.226	4.000	9.11	21′	. .
3 1/2	80	.318	4.000	12.51	21′	. .
4	40	.237	4.500	10.79	. .	21′
4	80	.337	4.500	14.98	21′	. .
5	40	.258	5.563	14.62	. .	21′
5	80	.375	5.563	20.78	. .	21′
6	40	.280	6.625	18.97	. .	21′
6	80	.432	6.625	28.57	. .	21′†
8	40	.322	8.625	28.55	. .	21′
8	80	.500	8.625	43.39	. .	21′†
10	40	.365	10.750	40.48	. .	21′†
12	XS	.500	12.750	65.42	. .	21′†
14	Std.	.375	14.000	54.57	. .	21′†
14	XS	.500	14.000	72.09	. .	21′†
16	XS	.500	16.000	82.77	. .	21′†

* Can be furnished threaded or threaded and coupled
** ASTM A 53 Type E Grade A
† Coated
†† May be ASTM A 53 Type F

SECTION 8

WIRE AND DRILL ROD

REMOVE AND INSERT SECTION 8 TAB



Central Steel & Wire Newspaper Ad from June 1957

PIPE SIZE STEEL TUBING

Round Structural 123

WIRE

Round Basic

Black Annealed 123

Bright Drawn 123

Soft Galvinized 123

Roun ..... -125

Squa 126

Flat

Co 126

Precision 126

Ground Flat 127-129

Ground Square 129

REMOVE AND INSERT SECTION 8 TAB



PIPE SIZE STEEL TUBING ROUND STRUCTURAL

46 ksi Minimum Yield ASTM A 500 Grade C

Produced by the Electric Resistance Welded Process. Uncoated. Not Pressure Tested. This product is less expensive than regular pipe and has higher mechanical properties and better finish.

Random Lengths 21 Ft. Identification Color: Pink

Nom. Size in Inches	Wall	O.D.	Lbs. per Ft.	Nom. Size in Inches	Wall	O.D.	Lbs. per Ft.
1/2	.083	.840	.6710	**2**	.109	2.375	2.638
1/2*	.109	.840	.8510	**2***	.154	2.375	3.653
3/4*	.113	1.050	1.130	**2 1/2***	.203	2.875	5.790
1	.109	1.315	1.404	**3***	.216	3.500	7.58
1*	.133	1.315	1.679	**3 1/2***	.226	4.000	9.11
1 1/4	.109	1.660	1.806	**4***	.237	4.500	10.79
1 1/4*	.140	1.660	2.273	**5***	.258	5.563	14.62
1 1/2	.109	1.900	2.085	**6***	.280	6.625	18.97
1 1/2*	.145	1.900	2.718	**8***	.322	8.625	28.55

***Schedule 40 — Ends Orange



STEEL WIRE ROUND BASIC



1008 Industrial Quality

BRIGHT DRAWN **SOFT GALVANIZED** **BLACK ANNEALED**

Standard Coils — 14" to 24" I.D. Stems generally available
Can be furnished in straightened and cut lengths

Gage	Diameter Dec.	Lbs. per 100 Ft.	Bright Drawn	Soft Galvanized	Black Annealed
18	.0475	.60	. .	X	X
17	.0540	.78	. .	. .	X
16	.0625	1.04	X	X	X
15	.0720	1.38	X	. .	X
14	.0800	1.71	X	X	X
13	.0915	2.24	X	X	X
12	.1055	2.97	X	X	X
11	.1205	3.88	X	X	X
1/8	.125	4.17	X	X**	X
10	.1350	4.87	X	X**	X
9	.1483	5.87	X	X	X
5/32	.1563	6.52	X	. .	. .
8	.1620	7.01	X	X	. .
7	.1770	8.37	X	X**	. .
3/16	.1875	9.39	X	X	X
6	.1920	9.84	X	. .	X
5	.2070	11.44	X	. .	X
7/32	.2188	12.78	X	. .	. .
4	.2253	13.55	X	. .	. .
3	.2437	15.86	X	X**	. .
1/4	.250	16.69	X	X**	X
9/32	.2813	21.13	X	. .	. .
5/16	.3125	26.08	X	X**	. .
3/8	.375	37.55	X	X**	X
1/2	.500	66.76	X*	. .	X*

*12 ft. lengths
**Stems only



TOOL STEEL DRILL ROD ROUND

WATER HARDENING
Carbon Tool Steel
AISI-W1
Spheroidize Annealed

OIL HARDENING
Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 TYPE O1

Stock Lengths 3 Ft.*

Mechanical Properties, *Page 261*

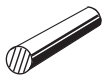
Identification Colors: Water Hardening—Red
Oil Hardening—Orange

Size	Decimal Equivalent	Lbs. per Ft.
1/16	.0625	.0104
52	.063	.0106
51	.066	.0116
50	.069	.0127
49	.072	.0138
48	.075	.0150
47	.077	.0158
5/64	.0781	.0163
46	.079	.0167
45	.081	.0175
44	.085	.0193
43	.088	.0207
42	.092	.0226
3/32	.0938	.0235
41	.095	.0241
40	.097	.0251
39	.099	.0262
38	.101	.0272
37	.103	.0283
36	.106	.0300
35	.108	.0311
7/64	.1094	.0320
34	.110	.0323
33	.112	.0335
32	.115	.0353
31	.120	.0385
1/8	.125	.0417
30	.127	.0431
29	.134	.0479
	.136	.0494
28	.139	.0516
9/64	.1406	.0528
27	.143	.0546
26	.146	.0569
25	.148	.0585
24	.151	.0609
23	.153	.0625
22	.155	.0642
5/32	.1563	.0652
21	.157	.0658
20	.161	.0692
19	.164	.0718
18	.168	.0754
11/64	.1719	.0789
17	.172	.0790
16	.175	.0818
15	.178	.0846
14	.180	.0865
13	.182	.0885
12	.185	.0914
3/16	.1875	.0939
11	.188	.0944
10	.191	.0974
9	.194	.1005
8	.197	.1036
7	.199	.1058
6	.201	.1079
13/64	.2031	.1102
5	.204	.1111
4	.207	.1144
3	.212	.1200
7/32	.2188	.1278
2	.219	.1281
1	.227	.1376
A	.234	.1462
15/64	.2344	.1467
B	.238	.1513
C	.242	.1564
D	.246	.1616
1/4	.250	.1669
E	.250	.1669
F	.257	.1764
G	.261	.1819
17/64	.2656	.1884
H	.266	.1889
I	.272	.1976
J	.277	.2049
K	.281	.2109

*Generally available 12 ft.

Continued on following page

TOOL STEEL DRILL ROD ROUND



WATER HARDENING
Carbon Tool Steel
AISI-W1
Spheroidize Annealed

OIL HARDENING
Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 TYPE O1

Stock Lengths 3 Ft.*

Mechanical Properties, *Page 261*

Identification Colors: Water Hardening—Red
Oil Hardening—Orange

Continued from preceding page

Size	Decimal Equivalent	Lbs. per Ft.
9/32	.2813	.2113
L	.290	.2246
M	.295	.2324
19/64	.2969	.2354
N	.302	.2436
5/16	.3125	.2608
O	.316	.2667
P	.323	.2786
21/64	.3281	.2875
Q	.332	.2943
R	.339	.3069
11/32	.3438	.3156
S	.348	.3234
T	.358	.3422
23/64	.3594	.3449
U	.368	.3616
3/8	.375	.3755
V	.377	.3795
W	.386	.3979
25/64	.3906	.4074
X	.397	.4209
Y	.404	.4359
13/32	.4063	.4408
Z	.413	.4555
27/64	.4219	.4753
7/16	.4375	.5111
29/64	.4531	.5482
15/32	.4688	.5869
31/64	.4844	.6266
1/2	.500	.6676
33/64	.5156	.7099
17/32	.5313	.7538
35/64	.5469	.7987
9/16	.5625	.8449
37/64	.5781	.8924
19/32	.5938	.9416
39/64	.6094	.9917
5/8	.625	1.043
41/64	.6406	1.096
21/32	.6563	1.150
43/64	.6719	1.206
11/16	.6875	1.262
45/64	.7031	1.320
23/32	.7188	1.380
47/64	.7344	1.440
3/4	.750	1.502
49/64	.7656	1.565
25/32	.7813	1.630
51/64	.7969	1.696
13/16	.8125	1.763
53/64	.8281	1.831
27/32	.8438	1.901
55/64	.8594	1.972
7/8	.875	2.045
57/64	.8906	2.118
29/32	.9063	2.193
59/64	.9219	2.270
15/16	.9375	2.347
61/64	.9531	2.426
31/32	.9688	2.506
63/64	.9844	2.588
1	1.000	2.670
1 1/64	1.0156	2.754
1 1/16	1.0625	3.015
1 1/8	1.125	3.380
1 9/64	1.1406	3.474
1 3/16	1.1875	3.766
1 1/4	1.250	4.173
1 17/64	1.2656	4.277
1 5/16	1.3125	4.600
1 3/8	1.375	5.049
1 25/64	1.3906	5.164
1 7/16	1.4375	5.518
1 1/2	1.500	6.008
1 5/8	1.625	7.052
1 3/4	1.750	8.178
1 7/8	1.875	9.388
2	2.000	10.68

*Generally available 12 ft.



TOOL STEEL DRILL ROD SQUARE

Cold Finished

WATER HARDENING AISI-W1

Carbon Tool Steel
Spheroidize Annealed
Stock Lengths 3 Ft.*
Mechanical Properties, *Page 261*
Identification Color: Red

Size in Inches	Decimal Equivalent	Lbs. per Ft.	Size in Inches	Decimal Equivalent	Lbs. per Ft.
1/16	.0625	.0133	3/8	.375	.4781
3/32	.0938	.0299	7/16	.4375	.6508
1/8	.125	.0531	1/2	.500	.8500
5/32	.1563	.0831	5/8	.625	1.328
3/16	.1875	.1195	3/4	.750	1.913
1/4	.250	.2125	7/8	.875	2.603
5/16	.3125	.3320	1	1.000	3.400

*Generally available 12 ft.



TOOL STEEL DRILL ROD FLAT

Cold Finished

WATER HARDENING AISI-W1

Carbon Tool Steel
Spheroidize Annealed
Stock Lengths 3 Ft.
Mechanical Properties, *Page 261*
Identification Color: Red

Size in Inches	Lbs. per Ft.	Size in Inches	Lbs. per Ft.	Size in Inches	Lbs. per Ft.
1/16 x 1/8	.0266	1/8 x 3/8	.1594	1/4 x 5/16	.2656
3/16	.0398	7/16	.1859	3/8	.3188
1/4	.0531	1/2	.2125	1/2	.4250
5/16	.0664	5/8	.2656	5/8	.5313
3/8	.0797	3/4	.3188	3/4	.6375
7/16	.0930	7/8	.3719	1	.8500
1/2	.1063	1	.4250	5/16 x 3/8	.3984
5/8	.1328	3/16 x 1/4	.1594	1/2	.5313
3/32 x 1/4	.0797	5/16	.1992	1	1.063
5/16	.0997	3/8	.2391	3/8 x 7/16	.5578
3/8	.1196	7/16	.2789	1/2	.6375
1/2	.1595	1/2	.3188	3/4	.9563
1/8 x 3/16	.0797	5/8	.3984	7/8	1.116
1/4	.1063	3/4	.4781	1/2 x 3/4	1.275
5/16	.1328	7/8	.5578		
		1	.6375		

TOOL STEEL
PRECISION GROUND FLAT



OIL HARDENING

Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 Type O1
Mechanical Properties, *Page 261*
Stock Lengths 18 inches
Individually Paper Wrapped

Size in Inches		Lbs. per Piece
1/64 x	**1/2**	.0398
	3/4	.0597
	1	.0796
	1 1/4	.0995
	1 1/2	.1193
	2	.1591
	2 1/2	.1989
	3	.2387
	4	.3182
1/32 x	**1/2**	.0798
	3/4	.1197
	1	.1596
	1 1/4	.1995
	1 1/2	.2394
	2	.3193
	2 1/2	.3991
	3	.4789
	4	.6385
	6	.9578
3/64 x	**1/2**	.1196
	3/4	.1794
	1	.2392
	1 1/4	.2990
	1 1/2	.3588
	2	.4784
	2 1/2	.5980
	3	.7176
	3 1/2	.8372
	4	.9568
	6	1.435
1/16 x	**1/2**	.1594
	3/4	.2391
	1	.3188
	1 1/4	.3984
	1 1/2	.4781
	2	.6375
	2 1/2	.7969
	3	.9563
	3 1/2	1.116
	4	1.275
	5	1.594

Size in Inches		Lbs. per Piece
1/16 x	**6**	1.913
	8	2.550
	10	3.188
5/64 x	**1/2**	.1922
	3/4	.2987
	1	.3983
	1 1/4	.4979
	1 1/2	.5975
	2	.7966
	2 1/2	.9958
	3	1.195
	4	1.593
	6	2.390
3/32 x	**1/2**	.2392
	3/4	.3588
	1	.4784
	1 1/4	.5980
	1 1/2	.7176
	2	.9568
	2 1/2	1.196
	3	1.435
	4	1.914
	5	2.392
	6	2.870
	8	3.827
7/64 x	**1/2**	.2790
	3/4	.4185
	1	.5579
	1 1/4	.6974
	1 1/2	.8369
	2	1.116
	2 1/2	1.395
	3	1.674
	4	2.232
1/8 x	**1/2**	.3188
	5/8	.3984
	3/4	.4781
	1	.6375
	1 1/4	.7969
	1 1/2	.9563
	2	1.275
	2 1/2	1.594
	3	1.913

Size in Inches		Lbs. per Piece
1/8 x	**3 1/2**	2.231
	4	2.550
	4 1/2	2.869
	5	3.188
	6	3.825
	7	4.463
	8	5.100
	10	6.375
	12	7.650
	14	8.925
9/64 x	**1/2**	.3585
	3/4	.5378
	1	.7171
	1 1/4	.8963
	1 1/2	1.076
	2	1.434
	3	2.151
	4	2.868
5/32 x	**1/2**	.3986
	3/4	.5978
	1	.7971
	1 1/4	.9964
	1 1/2	1.196
	2	1.594
	2 1/2	1.993
	3	2.391
	3 1/2	2.790
	4	3.189
	5	3.986
	6	4.783
	8	6.377
3/16 x	**1/2**	.4781
	3/4	.7172
	1	.9563
	1 1/4	1.195
	1 1/2	1.434
	2	1.913
	2 1/2	2.391
	3	2.869
	3 1/2	3.347
	4	3.825
	5	4.781
	6	5.738
	8	7.650
	10	9.563

Continued on following page



TOOL STEEL
PRECISION GROUND FLAT
OIL HARDENING

Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 Type O1
Mechanical Properties, *Page 261*
Stock Lengths 18 inches
Individually Paper Wrapped

Continued from preceding page

Size in Inches	Lbs. per Piece
7/32 x ½	.5579
¾	.8369
1	1.116
1¼	1.395
1½	1.674
2	2.232
2½	2.790
3	3.348
4	4.464
6	6.695
1/4 x ½	.6375
¾	.9563
1	1.275
1¼	1.594
1½	1.913
2	2.550
2½	3.188
3	3.825
3½	4.463
4	5.100
4½	5.738
5	6.375
5½	7.013
6	7.650
7	8.925
8	10.20
10	12.75
12	15.30
14	17.85
9/32 x ½	.7173
¾	1.076
1	1.435
1¼	1.793
1½	2.152
2	2.869
2½	3.587
3	4.304
4	5.739
6	8.608
5/16 x ½	.7969
¾	1.195
1	1.594
5/16 x 1¼	1.992
1½	2.391
2	3.188
2½	3.984
3	4.781
3½	5.578
4	6.375
4½	7.172
5	7.969
6	9.563
8	12.75
3/8 x ½	.9563
¾	1.434
1	1.913
1¼	2.391
1½	2.869
2	3.825
2½	4.781
3	5.738
3½	6.694
4	7.650
4½	8.606
5	9.563
5½	10.52
6	11.48
7	13.39
8	15.30
10	19.13
12	22.95
7/16 x ½	1.116
¾	1.673
1	2.231
1¼	2.789
1½	3.347
2	4.463
2½	5.578
3	6.694
4	8.925
6	13.39
1/2 x ¾	1.913
1	2.550
1¼	3.188
1½	3.825
2	5.100
2½	6.375
3	7.650
3½	8.925
4	10.20
4½	11.48
5	12.75
6	15.30
7	17.85
8	20.40
10	25.50
12	30.60
14	35.70
9/16 x ¾	2.152
1	2.869
1¼	3.586
1½	4.303
2	5.738
5/8 x ¾	2.391
1	3.188
1¼	3.984
1½	4.781
2	6.375
2½	7.969
3	9.563
3½	11.16
4	12.75
5	15.94
6	19.13
7	22.31
8	25.50
10	31.88
3/4 x 1	3.825
1¼	4.781
1½	5.738
2	7.650
2½	9.563
3	11.48
3½	13.39
4	15.30
4½	17.21

Continued on following page

TOOL STEEL
PRECISION GROUND FLAT



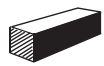
OIL HARDENING

Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 Type O1
Mechanical Properties, *Page 261*
Stock Lengths 18 inches
Individually Paper Wrapped

Continued from preceding page

Size in Inches	Lbs. per Piece	Size in Inches	Lbs. per Piece	Size in Inches	Lbs. per Piece
3/4 x 5	19.13	**1 x 2½**	12.75	**1¼ x 3**	19.13
6	22.95	**3**	15.30	**4**	25.50
8	30.60	**3½**	17.85	**5**	31.88
10	38.25	**4**	20.40	**6**	38.25
12	45.90	**4½**	22.95	**8**	51.00
7/8 x 1	4.463	**5**	25.50	**10**	63.75
1¼	5.578	**6**	30.60	**1½ x 2**	15.30
1½	6.694	**8**	40.80	**2½**	19.13
2	8.925	**10**	51.00	**3**	22.95
2½	11.16	**12**	61.20	**3½**	26.78
3	13.39	**1⅛ x 1½**	8.606	**4**	30.60
4	17.85	**2**	11.48	**5**	38.25
6	26.78	**3**	17.21	**6**	45.90
1 x 1¼	6.375	**4**	22.95	**8**	61.20
1½	7.650	**6**	34.43	**10**	76.50
2	10.20	**1¼ x 1½**	9.563	**2 x 3**	30.60
		2	12.75	**4**	40.80
		2½	15.94	**6**	61.20

TOOL STEEL
PRECISION GROUND SQUARE



OIL HARDENING

Alloy Tool Steel
AISI-SAE O1
Spheroidize Annealed
ASTM A 681 Type O1
Mechanical Properties, *Page 261*
Stock Lengths 18 inches
Individually Paper Wrapped

Size in Inches	Lbs. per Piece	Size in Inches	Lbs. per Piece	Size in Inches	Lbs. per Piece
1/8	.0797	**1/2**	1.275	**1¼**	7.969
3/16	.1793	**5/8**	1.992	**1½**	11.48
1/4	.3188	**3/4**	2.869	**2**	20.40
5/16	.4980	**7/8**	3.905	**2½**	31.88
3/8	.7172	**1**	5.100	**3**	45.90

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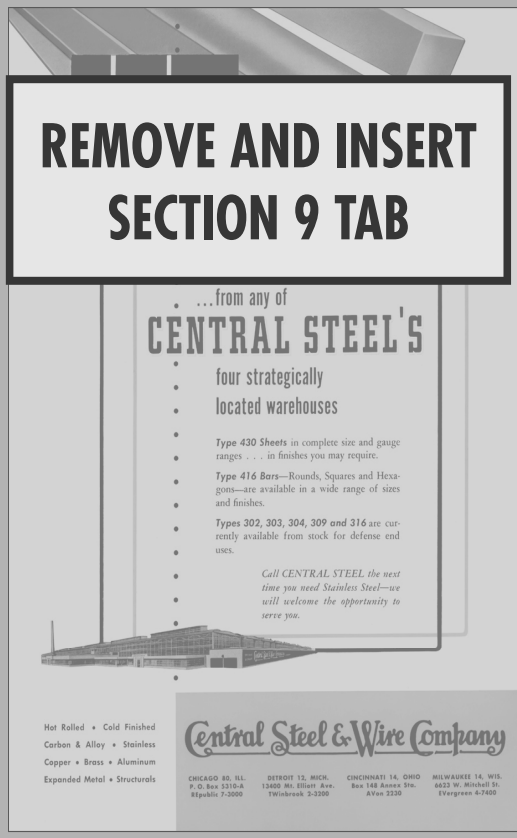
SECTION 9

STAINLESS



Central Steel & Wire Newspaper Ad
from August 1952

STAINLESS STEEL

ANGLES 

Type Page

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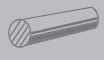
316/316L 148

BARS

Rounds 

Half Rounds 

304 145

Squares 

303 145

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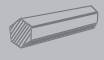
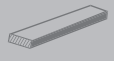
416 145

Hexagons 

303 146

316/316L 146

416 146

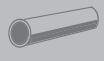
Flats 

304 147

304/304L 147

316/316L 147

PIPE

Welded 

304/304L 150

304 180 Grit 150

PLATES 

Type Page

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304L 137

304/304L 137

316/316L 138

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304 131-132

304L 133

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SAFETY PRODUCTS . . . 28, 30

TUBING

Round 

304/304L 149

304 180 Grit 150

Square and Rectangular 

304 150

304 180 Grit Sq . . . 150

SHAPE CUTTING  264

REMOVE AND INSERT SECTION 9 TAB

STAINLESS STEEL SHEET TYPE 304



Cold Rolled, Annealed No. 2B Finish

Can also be furnished
No. 3 Finish — Polished One Side
No. 4 Finish — Polished One Side
Non-Pattern Lengths Also Available

Non-Magnetic*

Paper Interleaved

ASTM A 240** ASME SA-240** ASTM A 666 Anld.

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Gage and Size in Inches	Lbs. per Square Foot	Est. Lbs. per Sheet
28 Ga. (.015)		
36 x 96	.6300	15.12
36 x 120	.6300	18.90
26 Ga. (.018)		
36 x 96	.7560	18.14
36 x 120	.7560	22.68
48 x 96	.7560	24.19
48 x 120	.7560	30.24
24 Ga. (.024)		
36 x 96	1.008	24.19
36 x 120	1.008	30.24
48 x 96	1.008	32.26
48 x 120	1.008	40.32
22 Ga. (.030)		
36 x 96	1.260	30.24
36 x 120	1.260	37.80
48 x 96	1.260	40.32
48 x 120	1.260	50.40
48 x 144	1.260	60.48
60 x 120	1.260	63.00
20 Ga. (.036)		
36 x 96	1.512	36.29
36 x 120	1.512	45.36
48 x 96	1.512	48.38
48 x 120	1.512	60.48
48 x 144	1.512	72.58
60 x 120	1.512	75.60
60 x 144	1.512	90.72
19 Ga. (.042)		
48 x 96	1.764	56.45
48 x 120	1.764	70.56
18 Ga. (.048)		
36 x 96	2.016	48.38
36 x 120	2.016	60.48
36 x 144	2.016	72.58
48 x 96	2.016	64.51
48 x 120	2.016	80.64
48 x 144	2.016	96.77
60 x 96	2.016	80.64
60 x 120	2.016	100.8
60 x 144	2.016	121.0
16 Ga. (.060)		
36 x 96	2.520	60.48
36 x 120	2.520	75.60
36 x 144	2.520	90.72
48 x 96	2.520	80.64
48 x 120	2.520	100.8
48 x 144	2.520	121.0
60 x 96	2.520	100.8
60 x 120	2.520	126.0
60 x 144	2.520	151.2
72 x 120	2.520	151.2
14 Ga. (.075)		
36 x 96	3.150	75.60
36 x 120	3.150	94.50
36 x 144	3.150	113.4
48 x 96	3.150	100.8
48 x 120	3.150	126.0
48 x 144	3.150	151.2

*May be slightly magnetic when cold worked
**Except continuous line mark for polished sheets

Continued on following page



STAINLESS STEEL SHEET
TYPE 304

Cold Rolled, Annealed No. 2B Finish

Can also be furnished

No. 3 Finish — Polished One Side
No. 4 Finish — Polished One Side
Non-Pattern Lengths Also Available

Non-Magnetic*

Paper Interleaved

ASTM A 240** ASME SA-240** ASTM A 666 Anld.

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Continued from preceding page

Gage and Size in Inches	Lbs. per Square Foot	Est. Lbs. per Sheet
14 Ga. (.075)		
60 x 96	3.150	126.0
60 x 120	3.150	157.5
60 x 144	3.150	189.0
72 x 96	3.150	151.2
72 x 120	3.150	189.0
72 x 144	3.150	226.8
13 Ga. (.090)		
36 x 96	3.780	90.72
36 x 120	3.780	113.4
48 x 96	3.780	121.0
48 x 120	3.780	151.2
60 x 120	3.780	189.0
12 Ga. (.105)		
36 x 96	4.410	105.8
36 x 120	4.410	132.3
48 x 96	4.410	141.1
48 x 120	4.410	176.4
48 x 144	4.410	211.7
60 x 96	4.410	176.4
60 x 120	4.410	220.5
60 x 144	4.410	264.6
72 x 96	4.410	176.4
72 x 120	4.410	264.6
72 x 144	4.410	317.5
11 Ga. (.120)		
36 x 96	5.040	121.0
36 x 120	5.040	151.2
36 x 144	5.040	181.4
48 x 96	5.040	161.3
48 x 120	5.040	201.6
48 x 144	5.040	241.9
60 x 96	5.040	201.6
60 x 120	5.040	252.0
11 Ga. (.120)		
60 x 144	5.040	302.4
72 x 96	5.040	241.9
72 x 120	5.040	302.4
72 x 144	5.040	362.9
10 Ga. (.135)		
36 x 120	5.670	170.1
36 x 144	5.670	204.1
48 x 96	5.670	181.4
48 x 120	5.670	226.8
48 x 144	5.670	272.2
60 x 96	5.670	226.8
60 x 120	5.670	283.5
60 x 144	5.670	340.2
72 x 96	5.670	272.1
72 x 120	5.670	340.2
72 x 144	5.670	408.2
8 Ga. (.165)		
48 x 96	6.930	221.8
48 x 120	6.930	277.2
48 x 144	6.930	332.6
60 x 120	6.930	346.5
7 Ga. (.1874)		
48 x 96	7.871	251.9
48 x 120	7.871	314.8
48 x 144	7.871	377.8
60 x 96	7.871	314.8
60 x 120†	7.871	393.6
60 x 144	7.871	472.3
72 x 96	7.871	377.8
72 x 120	7.871	472.3
72 x 144	7.871	566.7

*May be slightly magnetic when cold worked
**Except continuous line mark for polished sheets
†Also available Laser (Guaranteed to remain flat after laser cutting)

STAINLESS STEEL SHEET
TYPE 304L



Extra Low Carbon
Cold Rolled, Annealed No. 2B Finish
Can also be furnished
No. 3 Finish — Polished One Side
No. 4 Finish — Polished One Side

Non-Magnetic*

Paper Interleaved

ASTM A 240 ** ASME SA-240** ASTM A 666 Anld.

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Gage and Size in Inches	Lbs. per Square Foot	Est. Lbs. per Sheet
20 Ga. (.036)		
48 x 120	1.512	60.48
18 Ga. (.048)		
48 x 120	2.016	80.64
60 x 96	2.016	80.64
60 x 120	2.016	100.8
16 Ga. (.060)		
48 x 96	2.520	80.64
48 x 120	2.520	100.8
60 x 120	2.520	126.0
14 Ga. (.075)		
48 x 96	3.150	100.8
48 x 120	3.150	126.0
60 x 120	3.150	157.5
13 Ga. (.090)		
48 x 120	3.780	151.2
12 Ga. (.105)		
48 x 96	4.410	141.1
48 x 120	4.410	176.4
60 x 120	4.410	220.5
11 Ga. (.120)		
48 x 96	5.040	161.3
48 x 120	5.040	201.6
60 x 120	5.040	252.0
60 x 144	5.040	302.4
10 Ga. (.135)		
48 x 96	5.670	181.4
48 x 120	5.670	226.8
60 x 120	5.670	283.5
60 x 144	5.670	340.2
8 Ga. (.165)		
48 x 120	6.930	277.2
60 x 120	6.930	346.5
7 Ga. (.1874)		
48 x 120	7.871	314.8
60 x 120	7.871	393.6
60 x 144	7.871	472.3
72 x 96	7.871	377.8
72 x 120	7.871	472.3
72 x 144	7.871	566.7

*May be slightly magnetic when cold worked
**Except continuous line mark for polished sheets



STAINLESS STEEL SHEETS
TYPE 316/316L

Cold Rolled, Annealed No. 2B Finish
Can also be furnished No. 3 and No. 4 P.O.S.
Non-Magnetic*

Paper Interleaved

ASTM A 240** ASME SA-240** ASTM A 666 Anld.

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Gage and Size in Inches	Lbs. per Square Foot	Est. Lbs. per Sheet
24 Ga. (.024)		
48 x 120	1.008	40.32
22 Ga. (.030)		
48 x 120	1.260	50.40
20 Ga. (.036)		
36 x 96	1.512	36.29
36 x 120	1.512	45.36
48 x 96	1.512	48.38
48 x 120	1.512	60.48
60 x 120	1.512	75.60
18 Ga. (.048)		
36 x 96	2.016	48.38
36 x 120	2.016	60.48
48 x 96	2.016	64.51
48 x 120	2.016	80.64
60 x 120	2.016	100.8
16 Ga. (.060)		
36 x 96	2.520	60.48
36 x 120	2.520	75.60
48 x 96	2.520	80.64
48 x 120	2.520	100.8
60 x 120	2.520	126.0
60 x 144	2.520	151.2
14 Ga. (.075)		
36 x 120	3.150	94.50
48 x 96	3.150	100.8
48 x 120	3.150	126.0
48 x 144	3.150	151.2
60 x 120	3.150	157.5
12 Ga. (.105)		
36 x 96	4.410	105.8
36 x 120	4.410	132.3
48 x 96	4.410	141.1
48 x 120	4.410	176.4
48 x 144	4.410	211.7
60 x 120	4.410	220.5
60 x 144	4.410	264.6
11 Ga. (.120)		
36 x 96	5.040	121.0
48 x 96	5.040	161.3
48 x 120	5.040	201.6
60 x 120	5.040	252.0
60 x 144	5.040	302.4
10 Ga. (.135)		
48 x 96	5.670	181.4
48 x 120	5.670	226.8
48 x 144	5.670	272.2
60 x 120	5.670	283.5
60 x 144	5.670	340.2
8 Ga. (.165)		
48 x 120	6.930	277.2
60 x 120	6.930	346.5
7 Ga. (.1874)		
48 x 96	7.871	251.9
48 x 120	7.871	314.8
60 x 120	7.871	393.5
60 x 144	7.871	472.2

*May be slightly magnetic when cold worked
**Except continuous line mark for polished sheets

STAINLESS STEEL SHEETS TYPE 430



ASTM A 240*

Bright Annealed No. 2BA Finish (16 Ga. and Lighter)
Cold Rolled, Annealed No. 2B Finish (14 Ga. and Heavier)

Can also be furnished
No. 3 Finish — Polished One Side
No. 4 Finish — Polished One Side

Magnetic

Paper Interleaved

Chemical Composition and Mechanical Properties, *Pages 251, 262*

Gage and Size in Inches	Lbs. per Square Foot	Est. Lbs. per Sheet
26 Ga. (.018)		
36 x 96	.7416	17.80
24 Ga. (.024)		
36 x 96	.9888	23.73
36 x 120	.9888	29.66
48 x 96	.9888	31.64
48 x 120	.9888	39.55
22 Ga. (.030)		
36 x 120	1.236	37.08
48 x 120†	1.236	49.44
20 Ga. (.036)		
36 x 96	1.483	35.59
36 x 120	1.483	44.49
36 x 144	1.483	53.39
48 x 120†	1.483	59.32
18 Ga. (.048)		
36 x 96	1.978	47.47
36 x 120	1.978	59.34
48 x 120†	1.978	79.12
16 Ga. (.060)		
48 x 96	2.472	79.10
48 x 120†	2.472	98.88
14 Ga. (.075)		
48 x 120	3.090	123.6
12 Ga. (.105)		
48 x 120	4.326	173.0
11 Ga. (.120)		
36 x 120	4.944	148.3
48 x 120	4.944	197.8

*Except continuous line mark for polished sheets
†Also stocked as #4 POS

STAINLESS STEEL FLOOR PLATE
TYPE 304

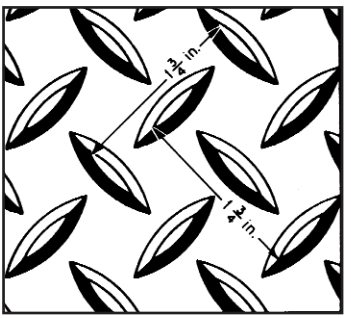
Hot Rolled Annealed and Pickled

Non-Magnetic*

MIL-F-20138 Pattern B ASTM A 793 Pattern B

Chemical Composition, *Page 250*

Identification Color: Plain Ends



Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
1/8 (.125)		
48 x 120	6.15	246.0
3/16 (.1875)		
48 x 96	8.70	278.4
48 x 120	8.70	348.0
1/4 (.250)		
48 x 120	11.25	450.0

Other sizes also available

*May be slightly magnetic when cold worked



STAINLESS STEEL PLATES
TYPE 304

Cold Rolled, Annealed No. 2B Finish

SUITABLE FOR POLISHING

Non-Magnetic*

Paper Interleaved

ASTM A 240 ASME SA-240 ASTM A 666 Anld

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Size in Inches		Lbs. Per Sq. Ft.	Est. Lbs. per Ft.
3/16 x	**72****	8.579	51.47
1/4 x	**48**	11.16	44.64
	60		55.80
	72		66.96

*May be slightly magnetic when cold worked

**Also available T304L



STAINLESS STEEL PLATES
TYPES 304, 304L, 304/304L
Hot Rolled, Annealed and Pickled
Non-Magnetic*

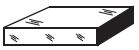
ASTM A 240 ASME SA-240 ASTM A 666 Anld

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Identification Colors: 304—Red
304L—Red and Gold
304/304L—Orange and Black

Size in Inches			Lbs. Per Sq. Ft.	Est. Lbs. per Ft.	304	304L	304/304L
3/16	x	**48**	8.579	34.32	X	X	
		60		42.90	X	X	
		72		51.47	X**	X**	
		96		68.63	X	X	
1/4	x	**48**	11.16	44.64	X**	X	
		60		55.80	X**/†	X	
		72		66.96	X**		
		96		89.28	X	X	
5/16	x	**48**	13.75	55.00	X	X	
		60		68.75	X	X	
		72		82.50	X	X	
		96		110.0	X	X	
3/8	x	**48**	16.50	66.00	X	X	
		60		82.50	X	X	
		72		99.00	X		
		96		132.0	X	X	
1/2	x	**48**	21.66	86.64	X	X	
		60		108.3	X	X	
		96		173.3	X	X	
5/8	x	**48**	26.83	107.3			X
		60		134.1			X
		96		214.6			X
3/4	x	**48**	32.12	128.5			X
		60		160.6			X
		96		257.0			X
7/8	x	**60**	37.29	186.4			X
		96		298.3			X
1	x	**48**	42.67	170.7			X
		60		213.3			X
		96		341.4			X
1 1/8	x	**60**	47.83	239.1			X
1 1/4	x	**48**	53.00	212.0			X
		60		265.0			X
		96		424.0			X
1 1/2	x	**48**	63.34	253.4			X
		60		316.7			X
		96		506.7			X
1 3/4	x	**48**	73.67	294.7			X
		60		368.3			X
		96		589.4			X
2	x	**60**	84.01	420.0			X

*May be slightly magnetic when cold worked
**Also available Cold Rolled 2B Finish. Suitable for Polishing. See page 136.
†Also available Laser – Purple (Guaranteed to remain flat after laser cutting)



STAINLESS STEEL PLATES
TYPES 316/316L

Hot Rolled, Annealed and Pickled

Non-Magnetic*

ASTM A 240 ASME SA-240

ASTM A 666 Anld

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Identification Color: Blue and Brown

Size in Inches	Lbs. Per Sq. Ft.	Est. Lbs. per Ft.	Size in Inches	Lbs. Per Sq. Ft.	Est. Lbs. per Ft.
3/16 x 48	8.579	34.32	**5/8 x 48**	26.83	107.3
60		42.90	**60**		134.1
72		51.47	**96**		214.6
96		68.63	**3/4 x 48**	32.12	128.5
1/4 x 48	11.16	44.64	**60**		160.6
60		55.80	**96**		257.0
72		66.96	**7/8 x 60**	37.29	186.4
96		89.28	**96**		298.3
5/16 x 72	13.75	82.50	**1 x 48**	42.67	170.7
96		110.0	**60**		213.3
3/8 x 48	16.50	66.00	**96**		341.4
60		82.50	**1¼ x 48**	53.00	212.0
72		99.00	**60**		265.0
96		132.0	**96**		424.0
1/2 x 48	21.66	86.64	**1½ x 48**	63.34	253.4
60		108.3	**60**		316.7
96		173.3	**96**		506.7
			1¾ x 48	73.67	294.7
			60		368.3

***May be slightly magnetic when cold worked



STAINLESS STEEL ROUNDS
TYPE 303
Bearing Shaft Quality

Annealed and Centerless Ground

Non-Magnetic* Optimum Machining

ASTM A 582 Cond. A AMS 5640 Type 1 QQ-S-764 Cond. A

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Stock Lengths 12 Ft. Random

Identification Color: Copper

Size in Inches	Est. Lbs. per Ft.	Size in Inches	Est. Lbs. per Ft.
.2495/ .2485	.1655	**1.1870/1.1860**	3.759
.3745/ .3735	.3735	**1.2495/1.2485**	4.165
.4995/ .4985	.6648	**1.3745/1.3735**	5.041
.6245/ .6235	1.040	**1.4370/1.4360**	5.510
.7495/ .7485	1.498	**1.4995/1.4985**	6.000
.8745/ .8735	2.040	**1.7495/1.7480**	8.165
.9995/ .9985	2.665	**1.9995/1.9980**	10.67
1.1245/1.1235	3.373		

***May be slightly magnetic when cold worked

STAINLESS STEEL ROUNDS
TYPE 303 Annealed



Non-Magnetic* Optimum Machining

ASTM A 582 Cond. A

AMS 5640 Type 1 QQ-S-764 Cond. A

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Random Lengths, Feet: Cold Finished Ident. Yellow	Smooth Turned† Ident. Gold	Grd. & Pol. Accuracy Ident. Brown
1/16	.0104	.1248	12	..	..
5/64	.0163	.1956	12	..	..
3/32	.0235	.2820	12	..	..
7/64	.0320	.3840	12		
1/8	.0417	.5004	12	..	12
.130 min.**	.0465	.5580	12	..	..
9/64	.0528	.6336	12	..	..
5/32	.0652	.7824	12	..	12
.162 min.**	.0718	.8616	12	..	..
3/16	.0939	1.127	12		12
.193 min.**	.1015	1.218	12	..	..
13/64	.1102	1.322	12	..	..
7/32	.1278	1.534	12	..	..
1/4	.1669	2.003	12	..	12
17/64	.1884	2.261	12	..	..
.259 min.**	.2005	2.406	12		
9/32	.2113	2.536	12	..	..
5/16	.2608	3.130	12	..	12
.318 min.**	.2750	3.300	12	..	..
21/64	.2875	3.450	12	..	..
11/32	.3156	3.787	12		
3/8	.3755	4.506	12	12	12
.385 min.**	.3958	4.749	12	..	..
25/64	.4074	4.889	12	..	..
13/32	.4408	5.290	12	..	..
7/16	.5111	6.133	12	12	12
.447 min.**	.5335	6.402	12	..	..
15/32	.5869	7.043	12	..	..
1/2	.6676	8.011	12	12	12
.507 min.**	.6863	8.236	12	..	..
17/32	.7538	9.046	12	..	..
9/16	.8449	10.14	12		12
.570 min.**	.8675	10.41	12	..	..
19/32	.9416	11.30	12	..	..
5/8	1.043	12.52	12	12	12
.640 min.**	1.094	13.12	12	..	..
41/64	1.096	13.15	12	..	..
21/32	1.150	13.80	12		
11/16	1.262	15.14	12	..	..
3/4	1.502	18.02	12	12	12
.765 min.**	1.563	18.75	12	..	..
13/16	1.763	21.16	12	..	..
7/8	2.045	24.54	12		12
.890 min.**	2.115	25.38	12	..	..
15/16	2.347	28.16	..	12	..
.998 max. §	2.659	31.91	..	12	..
1	2.670	32.04		12	12

Continued on following page

* May be slightly magnetic when cold worked

** Oversize Grinding Stock - standard diameter tolerances do not apply

† Or Ground § +.000 –.003



STAINLESS STEEL ROUNDS
TYPE 303 Annealed

Non-Magnetic* Optimum Machining

ASTM A 582 Cond. A

AMS 5640 Type 1 QQ-S-764 Cond. A

Chemical Composition and Mechanical Properties, *Pages 250, 262*

Continued from preceding page

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Random Lengths, Feet: Cold Finished Ident. Yellow	Random Lengths, Feet: Smooth Turned† Ident. Gold
1 1/64	2.754	33.05	. .	12
1.022 min.**	2.789	33.47	12	. .
1 1/16	3.015	36.18	. .	12
1 1/8	3.380	40.56	. .	12
1 3/16	3.766	45.19	. .	12
1.248 max.	4.159	49.91	. .	12
1 1/4	4.173	50.08	. .	12
1.263 min.**	4.259	51.11	. .	12
1 5/16	4.600	55.20	. .	12
1 3/8	5.049	60.59	. .	12
1 7/16	5.518	66.22	. .	12
1.447 min.**	5.632	67.59	. .	12
1 1/2	6.008	72.10	. .	12
1.505 min.**	6.088	73.05	. .	12
1 9/16	6.520	78.24	. .	12
1 5/8	7.052	84.62	. .	12
1 11/16	7.604	91.25	. .	12
1 3/4	8.178	98.14	. .	12
1.755 min.**	8.271	99.25	. .	12
1 13/16	8.771	105.3	. .	12
1 7/8	9.388	112.7	. .	12
1 15/16	10.02	120.2	. .	12
2	10.68	128.2	. .	12
2.010 min.**	10.86	130.4	. .	12
2 1/16	11.36	136.3	. .	12
2 1/8	12.06	144.7	. .	12
2 1/4	13.52	162.2	. .	12
2 3/8	15.06	180.7	. .	12
2 7/16	15.87	190.4	. .	12
2 1/2	16.69	200.3	. .	12
2 9/16	17.53	210.4	. .	12
2 5/8	18.40	220.8	. .	12
2 3/4	20.19	242.3	. .	12
2 7/8	22.07	264.8	. .	12
3	24.03	288.4	. .	12
3 1/8	26.07	312.9	. .	12
3 1/4	28.21	338.5	. .	12
3 1/2	32.71	392.5	. .	12
3 3/4	37.55	450.6	. .	12
4	42.73	512.8	. .	12
4 1/4	48.23	578.8	. .	12
4 1/2	54.08	649.0	. .	12
5	66.76	801.1	12††	. .

***** May be slightly magnetic when cold worked

****** Oversize Grinding Stock - standard diameter tolerances do not apply

† Or Ground

†† Annealed and Rough Turned. Produced oversize to finish to sizes shown.

STAINLESS STEEL ROUNDS
TYPE 304/304L Annealed



Non-Magnetic*

ASTM A 276 Cond. A ASME SA-479 Cond. A
ASTM A 479 Cond. A QQ-S-763 Cond. A

Chemical Composition and Mechanical Properties, *Pages 250-251, 262*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet: **Cold Finished** Ident. Red	Random Lengths, Feet: **Smooth Turned†** Ident. Grey
1/8	.0417	.5004	12	. .
3/16	.0939	1.127	12	. .
1/4	.1669	2.003	12	. .
5/16	.2608	3.130	12	. .
3/8	.3755	4.506	12	12
7/16	.5111	6.133	12	. .
1/2	.6676	8.011	12	. .
9/16	.8449	10.14	12	. .
5/8	1.043	12.52	12	. .
11/16	1.262	15.14	12	. .
3/4	1.502	18.02	12	12
7/8	2.045	24.54	12	. .
1	2.670	32.04	12	. .
1 1/8	3.380	40.56	12	. .
1 1/4	4.173	50.08	. .	12
1 5/16	4.600	55.20	. .	12
1 3/8	5.049	60.59	. .	12
1 7/16	5.518	66.22	. .	12
1 1/2	6.008	72.10	. .	12
1 5/8	7.052	84.62	. .	12
1 3/4	8.178	98.14	. .	12
1 7/8	9.388	112.7	. .	12
2	10.68	128.2	. .	12
2 1/8	12.06	144.7	. .	12
2 1/4	13.52	162.2	. .	12
2 1/2	16.69	200.3	. .	12
2 5/8	18.40	220.8	. .	12
2 3/4	20.19	242.3	. .	12
3	24.03	288.4	. .	12
3 1/8	26.08	313.0	. .	12
3 1/4	28.21	338.5	. .	12
3 3/4	37.55	450.6	. .	12
4	42.73	512.8	. .	12
4 1/4	48.23	578.8	12††	. .

***** May be slightly magnetic when cold worked
† Or Ground
†† Annealed and Rough Turned. Produced oversize to finish to sizes shown.



STAINLESS STEEL ROUNDS
TYPE 316/316L Annealed

Non-Magnetic*

ASTM A 276 Cond. A ASME SA-479 Cond. A
ASTM A 479 Cond. A QQ-S-763 Cond. A

Chemical Composition and Mechanical Properties, *Pages 250-251, 262*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Random Lengths, Feet	
			Cold Finished Ident. Green	**Smooth Turned†** Ident. Green
3/16	.0939	1.127	12	. .
1/4	.1669	2.003	12	. .
5/16	.2608	3.130	12	. .
3/8	.3755	4.506	12	. .
7/16	.5111	6.133	12	. .
1/2	.6676	8.011	12	. .
9/16	.8449	10.14	12	. .
5/8	1.043	12.52	12	. .
11/16	1.262	15.14	12	. .
3/4	1.502	18.02	12	. .
7/8	2.045	24.54	12	. .
1	2.670	32.04	12	. .
1 1/16	3.015	36.18	12	. .
1 1/8	3.380	40.56	12	. .
1 1/4	4.173	50.08	. .	12
1 1/2	6.008	72.10	. .	12
1 5/8	7.052	84.62	. .	12
1 3/4	8.178	98.14	. .	12
1 7/8	9.388	112.7	. .	12
2	10.68	128.2	12	. .
2 1/8	12.06	144.7	. .	12
2 1/4	13.52	162.2	. .	12
2 1/2	16.69	200.3	. .	12
2 3/4	20.19	242.3	. .	12
3	24.03	288.4	12	. .
3 1/2	32.71	392.5	. .	12

***** May be slightly magnetic when cold worked
† Or Ground

STAINLESS STEEL ROUNDS
TYPE 416 Annealed



Magnetic

Optimum Machining

ASTM A 582 Cond. A

AMS 5610 Type 2 QQ-S-764 Cond. A

Chemical Composition and Mechanical Properties, *Pages 251, 262*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet: Cold Finished Ident. Purple	Smooth Turned† Ident. Orange	Grd. & Pol. Accuracy Ident. Aluminum
3/32	.0235	.2820	12	..	..
1/8	.0417	.5004	12	..	..
5/32	.0652	.7824	12	..	..
1/4	.1669	2.003	12	..	..
5/16	.2608	3.130	12	..	..
3/8	.3755	4.506	12	..	..
7/16	.5111	6.133	12	..	..
1/2	.6676	8.011	12	12	12
.505 min.**	.6918	8.302	12	..	..
9/16	.8449	10.14	12	..	..
5/8	1.043	12.52	..	12	..
11/16	1.262	15.14	12	..	..
3/4	1.502	18.02	12	12	..
49/64	1.565	18.78	..	12	..
13/16	1.763	21.16	12	..	..
7/8	2.045	24.54	12	..	..
1	2.670	32.04	..	12	..
1 1/8	3.380	40.56	..	12	..
1 1/4	4.173	50.08	..	12	..
1 3/8	5.049	60.59	..	12	..
1 1/2	6.008	72.10	..	12	..
1 3/4	8.178	98.14	..	12	..
2	10.68	128.2	..	12	..
2 1/2	16.69	200.3	..	12	..
4 1/4	48.23	578.8	12††	..	..

** Oversize Grinding Stock - standard diameter tolerances do not apply

† Or Ground

†† Annealed and Rough Turned. Produced oversize to finish to sizes shown.



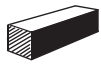
STAINLESS STEEL ROUNDS
17-4 Cond. A (Type 630)
Magnetic
Smooth Turned†

ASTM A 564 Type 630 ASME SA-564 Type 630
AMS 5643
Chemical Composition and Mechanical Properties, *Pages 250-251, 262*
Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet
3/16	.0939	1.127	12
1/4	.1669	2.003	12
5/16	.2608	3.130	12
3/8	.3755	4.506	12
7/16	.5111	6.133	12
1/2	.6676	8.011	12
9/16	.8449	10.14	12
5/8	1.043	12.52	12
11/16	1.262	15.14	12
3/4	1.502	18.02	12
7/8	2.045	24.54	12
1	2.670	32.04	12
1 1/8	3.380	40.56	12
1 1/4	4.173	50.08	12
1 3/8	5.049	60.59	12
1 1/2	6.008	72.10	12
1 9/16	6.519	78.22	12
1 5/8	7.052	84.62	12
1 3/4	8.178	98.14	12
1 7/8	9.388	112.7	12
2	10.68	128.2	12
2 1/8	12.06	144.7	12
2 1/4	13.52	162.2	12
2 1/2	16.69	200.3	12
2 5/8	18.40	220.8	12
2 3/4	20.19	242.3	12
3 ††	24.03	288.4	12
3 1/4 ††	28.21	338.5	12
3 1/2 ††	32.71	392.5	12
3 3/4 ††	37.55	450.6	12
4 ††	42.73	512.8	12
4 1/4 ††	48.23	578.7	12
4 1/2 ††	54.07	648.8	12
4 3/4 ††	60.24	722.9	12
5 ††	66.76	801.1	12
5 1/4 ††	73.59	883.1	12
5 1/2 ††	80.77	969.2	12
5 3/4 ††	88.28	1059	12
6 ††	96.12	1153	12

† Or Ground
†† Annealed and Rough Turned. Produced oversize to finish to sizes shown.

STAINLESS STEEL SQUARES TYPES 303, 304/304L, 416 Annealed and Cold Finished



Type 303
AMS 5640 Type 1, QQ-S-764 Cond. A
ASTM A 582 Cond. A

Type 304/304L
ASTM A 276 Cond. A, ASTM A 479 Cond. A,
QQ-S-763 Cond. A, ASME SA-479 Cond. A

Type 416
ASTM A 582 Cond. A, AMS 5610 Type 2,
QQ-S-764 Cond. A

Chemical Composition, *Pages 250-251*
Mechanical Properties, *Page 262*
Identification Colors: 303 — Yellow; 304/304L — Red; 416 — Purple

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet 303 (Non-Magnetic*)	304/304L (Non-Magnetic*)	416 (Magnetic)
1/8	.1063	1.275	12	. .	. .
3/16	.1195	1.434	12	. .	12
1/4	.2125	2.550	12	. .	. .
5/16	.3320	3.984	12	. .	. .
3/8	.4781	5.737	12	. .	. .
7/16	.6508	7.810	12	. .	. .
1/2	.8500	10.20	12	12	. .
5/8	1.328	15.94	12	. .	. .
3/4	1.913	22.96	12	12	. .
7/8	2.603	31.24	12	. .	. .
1	3.400	40.80	12	12	. .
1 1/8	4.303	51.64	12	. .	. .
1 1/4	5.313	63.76	12	12	. .
1 1/2	7.650	91.80	12	12	. .
2	13.60	163.2	12	12	. .
2 1/2	21.25	255.0	12	. .	. .

*May be slightly magnetic when cold worked

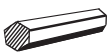
STAINLESS STEEL HALF ROUNDS TYPE 304



Annealed and Cold Finished
Non-Magnetic*
ASTM A 479 Cond. A, QQ-S-763 Cond. A
Chemical Composition, *Page 250*
Mechanical Properties, *Page 262*
Identification Color: Red

Size in Inches	Lbs. per Ft.	Est. Lbs. 20′ Bar	Random Lengths, Feet
5/8	.5216	10.43	20
3/4	.7511	15.02	20

*May be slightly magnetic when cold worked



STAINLESS STEEL HEXAGONS
TYPES 303, 316/316L, 416
Annealed and Cold Finished

OPTIMUM MACHINING

Type 303

ASTM A 582 Cond. A, AMS 5640 Type 1,
QQ-S-764 Cond. A

Type 316/316L

ASTM A 276 Cond. A, ASTM A 479 Cond. A
QQ-S-763 Cond. A, ASME SA-479 Cond. A

Type 416

ASTM A 582 Cond. A, AMS 5610 Type 2,
QQ-S-764 Cond. A

Chemical Composition, *Pages 250-251*
Mechanical Properties, *Page 262*

Identification Colors: 303 — Yellow; 316/316L — Green; 416 — Purple

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Random Lengths, Feet		
			303 (Non-Magnetic*)	**316/316L (Non-Magnetic*)**	**416 (Magnetic)**
1/8	.0460	.5520	12	. .	. .
3/16	.1035	1.242	12	. .	12
1/4	.1840	2.208	12	. .	12
5/16	.2875	3.450	12		12
3/8	.4141	4.969	12	. .	12
7/16	.5636	6.763	12	. .	. .
1/2	.7361	8.833	12	12	. .
9/16	.9316	11.18	12		
5/8	1.150	13.80	12	12	12
11/16	1.392	16.70	12	. .	12
3/4	1.656	19.87	12	12	12
13/16	1.944	23.33	12		
7/8	2.254	27.05	12	12	12
15/16	2.588	31.06	12	. .	. .
1	2.944	35.33	12	. .	12
1 1/16	3.324	39.89	12		
1 1/8	3.727	44.72	12	12	12
1 1/4	4.601	55.21	12	12	. .
1 5/16	5.072	60.86	12	. .	. .
1 3/8	5.567	66.80	12	12	
1 1/2	6.625	79.50	12	12	. .
1 3/4	9.017	108.2	12	. .	. .
1 7/8	10.35	124.2	12		
2	11.78	141.4	12	. .	. .

*May be slightly magnetic when cold worked

STAINLESS STEEL FLATS



TYPES 304, 304/304L, 316/316L

Annealed and Pickled – Non-Magnetic*

QQ-S-763 Cond. A ASTM A 276 Cond. A
ASTM A 479 Cond. A ASME SA-479 Cond. A
Chemical Composition, *Page 250,* Mechanical Properties, *Page 262*
Stock Lengths 12 Ft. Random
Identification Colors: 304 — Red; 316/316L — Green
304/304L—Red

STRIP FLATS

Size in Inches	Lbs. per Foot	Est. Lbs. 12′ Bar	304	316/316L
1/8 x 1/2	.2125	2.550	X	. .
5/8	.2656	3.187	X	. .
3/4	.3188	3.826	X	. .
1	.4250	5.100	X	. .
1 1/4	.5313	6.376	X	. .
1 1/2	.6375	7.650	X	. .
1 3/4	.7438	8.962	X	. .
2	.8500	10.20	X	X
2 1/2	1.063	12.76	X	. .
3	1.275	15.30	X	. .
4	1.700	20.40	X	. .
3/16x 1/2	.3188	3.826	X	. .
5/8	.3984	4.781	X	. .
3/4	.4781	5.737	X†	. .
1	.6375	7.650	X†	. .
1 1/4	.7969	9.563	X	. .
1 1/2	.9563	11.48	X†	. .
3/16x 1 3/4	1.116	13.39	X	. .
2	1.275	15.30	X†	X†
2 1/2	1.594	19.13	X	. .
3	1.913	22.96	X	. .
4	2.550	30.60	X	. .
5	3.188	38.26	X	. .
6	3.825	45.90	X	. .
1/4 x 3/4	.6375	7.650	X	. .
1	.8500	10.20	X†	X
1 1/4	1.063	12.76	X†	. .
1 1/2	1.275	15.30	X†	X
1 3/4	1.488	17.86	X	. .
2	1.700	20.40	X†	X†
2 1/4	1.913	22.96	X	. .
2 1/2	2.125	25.50	X	X
3	2.550	30.60	X†	. .
3 1/2	2.975	35.70	X	. .
4	3.400	40.80	X	. .
6	5.100	61.20	X	. .

BAR FLATS

Size in Inches	Lbs. per Foot	Est. Lbs. 12′ Bar	304/304L	316/316L
1/4 x 1/2	.4250	5.100	X	. .
5/8	.5313	6.376	X	. .
3/8 x 1/2	.6375	7.650	X	. .
3/4	.9563	11.48	X	. .
1	1.275	15.30	X	. .
1 1/4	1.594	19.13	X	. .
1 1/2	1.913	22.96	X	. .
2	2.550	30.60	X	. .
3	3.825	45.90	X	. .
4	5.100	61.20	X	. .
5	6.375	76.50	X	. .
1/2 x 3/4	1.275	15.30	X	. .
1	1.700	20.40	X	X
1 1/4	2.125	25.50	X	. .
1 1/2	2.550	30.60	X	X
1 3/4	2.975	35.70	X	. .
1/2 x 2	3.400	40.80	X	
2 1/2	4.250	51.00	X	
3	5.100	61.20	X	
3 1/2	5.950	71.40	X	
4	6.800	81.60	X	
5	8.500	102.0	X	
6	10.20	122.4	X	
5/8 x 1	2.125	25.50	X	
3/4 x 1	2.550	30.60	X	
1 1/4	3.188	38.26	X	
1 1/2	3.825	45.90	X	
2 1/2	6.375	76.50	X	
1 x 1 1/2	5.100	61.20	X	
2	6.800	81.60	X	
3	10.20	122.4	X	
4	13.60	163.2	X	
6	20.40	244.8	X	

* May be slightly magnetic when cold worked
† Also 20 ft.



STAINLESS STEEL PLATE FLATS

TYPE 304 — Non-Magnetic*

Sheared and Edge Conditioned

Hot Rolled, Annealed and Pickled

ASTM A 276 Cond. A ASTM A 479 Cond. A ASME SA-479 Cond. A
QQ-S-763 Cond. A** ASTM A 240** ASME SA-240**

Stock Lengths 12 Ft. Random

Identification Color: White

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/8 x 1	1.275	15.30	**1/2 x 1½**	2.550	30.60
1½	1.913	22.96	**2**	3.400	40.80
1¾	2.231	26.77	**2½**	4.250	51.00
2	2.550	30.60	**3**	5.100	61.20
2½	3.188	38.26	**3½**	5.950	71.40
3	3.825	45.90	**4**	6.800	81.60
4	5.100	61.20	**4½**	7.650	91.80
5	6.375	76.50	**5**	8.500	102.0
6	7.650	91.80	**6**	10.20	122.4
			5/8 x 3½	7.500	89.33
			4	8.500	102.0

***May be slightly magnetic when cold worked
****Except tolerances



STAINLESS STEEL ANGLES

TYPES 304/304L, 316/316L — Non-Magnetic*

Annealed and Pickled

ASTM A 276 Cond. A ASTM A 479 Cond. A ASME SA-479 Cond. A
QQ-S-763 Cond. A

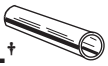
Stock Lengths 20 Ft. Random

Identification Colors: 304/304L — Red; 316/316L — Green

Size in Inches	*t*	Est. Lbs. per Foot	Est. Lbs. 20′ Bar	**304/ 304L**	**316/ 316L**
¾ x ¾ x	**⅛**	0.59	11.80	X	. .
1 x 1 x	**⅛**	0.80	16.00	X	X
	3/16	1.16	23.20	X	. .
	¼	1.49	29.80	X	. .
1¼ x 1¼ x	**⅛**	1.01	20.20	X	. .
	3/16	1.48	29.60	X	. .
	¼	1.92	38.40	X	. .
1½ x 1½ x	**⅛**	1.23	24.60	X	. .
	3/16	1.80	36.00	X	X
	¼	2.34	46.80	X	. .
2 x 2 x	**⅛**	1.65	33.00	X	. .
	3/16	2.44	48.80	X	X
	¼	3.19	63.80	X	X
	⅜	4.70	94.00	X	. .
2½ x 2½ x	**3/16**	3.07	61.40	X	. .
	¼	4.10	82.00	X	. .
	⅜	5.90	118.00	X	. .
3 x 3 x	**¼**	4.90	98.00	X	X
	⅜	7.20	144.00	X	X
3½ x 3½ x	**¼**	5.80	116.00	X	. .
4 x 4 x	**¼**	6.60	132.00	X	. .
	⅜	9.80	196.00	X	. .

***May be slightly magnetic when cold worked

STAINLESS STEEL TUBING
ROUND WELDED TYPE 304/304L†



Cold Finished, Annealed and Pickled or Bright Annealed**
Non-Magnetic*

1/2" & under ASTM A 269 Identification Color: Yellow
Over 1/2" ASTM A 249 ASME SA-249 ASTM A 269 Identification: Pink
Stock Lengths 17-24 Ft. Random

O.D.	Gage	Wall	I.D.	Lbs. per Ft.
1/8 x	22	**.028**	.069	.0293
3/16 x	22	**.028**	.132	.0481
	20	**.035**	.118	.0575
1/4 x	22	**.028**	.194	.0670
	20	**.035**	.180	.0811
	18	**.049**	.152	.1062
5/16 x	22	**.028**	.257	.0859
	20	**.035**	.243	.1047
	18	**.049**	.215	.1392
	16§	**.065**	.183	.1734
3/8 x	22	**.028**	.319	.1047
	20	**.035**	.305	.1283
	18	**.049**	.277	.1722
	16	**.065**	.245	.2172
7/16 x	20	**.035**	.368	.1519
	18	**.049**	.340	.2052
	16	**.065**	.308	.2610
1/2 x	22	**.028**	.444	.1425
	20	**.035**	.430	.1754
	18	**.049**	.402	.2382
	16	**.065**	.370	.3048
	13§	**.095**	.310	.4148
	11††	**.120**	.260	.4916
5/8 x	22	**.028**	.569	.1802
	20	**.035**	.555	.2226
	18	**.049**	.527	.3043
	16	**.065**	.495	.3924
	11	**.120**	.385	.6533
3/4 x	20	**.035**	.680	.2698
	18	**.049**	.652	.3703
	16	**.065**	.620	.4800
	13	**.095**	.560	.6708
	11	**.120**	.510	.8150
7/8 x	20	**.035**	.805	.3169
	18	**.049**	.777	.4363
	16	**.065**	.745	.5676
	11	**.120**	.635	.9767
1 x	20	**.035**	.930	.3641
	18	**.049**	.902	.5023
	16	**.065**	.870	.6552
	14	**.083**	.834	.8205
	11	**.120**	.760	1.1384
	3/16	**.188**	.624	1.6456

O.D.	Gage	Wall	I.D.	Lbs. per Ft.
1 1/8 x	16	**.065**	.995	.7427
1 1/4 x	20	**.035**	1.180	.4584
	18	**.049**	1.152	.6344
	16	**.065**	1.120	.8303
	14	**.083**	1.084	1.0442
	11	**.120**	1.010	1.4618
1 3/8 x	16	**.065**	1.245	.9179
1 1/2 x	20	**.035**	1.430	.5527
	18	**.049**	1.402	.7664
	16	**.065**	1.370	1.0055
	14	**.083**	1.334	1.2678
	11	**.120**	1.260	1.7852
1 5/8 x	16	**.065**	1.495	1.0931
1 3/4 x	20	**.035**	1.680	.6471
	18	**.049**	1.652	.8985
	16	**.065**	1.620	1.1807
	11	**.120**	1.510	2.1086
2 x	20	**.035**	1.930	.7414
	18	**.049**	1.902	1.0306
	16	**.065**	1.870	1.3559
	14	**.083**	1.834	1.7152
	11	**.120**	1.760	2.4320
2 1/4 x	16	**.065**	2.120	1.5310
	11	**.120**	2.010	2.7554
	3/16	**.188**	1.874	4.1789
2 1/2 x	18	**.049**	2.402	1.2947
	16	**.065**	2.370	1.7062
	11	**.120**	2.260	3.0788
3 x	16	**.065**	2.870	2.0566
	14	**.083**	2.834	2.6100
	11	**.120**	2.760	3.7256
3 1/2 x	16	**.065**	3.370	2.4069
	11	**.120**	3.260	4.3724
4 x	16	**.065**	3.870	2.7573
	14	**.083**	3.834	3.5047
	11	**.120**	3.760	5.0192

* May be slightly magnetic when cold worked
** Can be supplied polished
† Produced to O.D. and Wall dimensions
†† Seamless—ASTM A 213 and ASME SA-213 except average wall, ASTM A 269 — Ends Red
§ ASTM A 249, ASME SA-249, ASTM A 269 — Ends Pink



STAINLESS STEEL PIPE ROUND WELDED TYPE 304/304L

Cold Finished, Annealed and Pickled**

Non-Magnetic* ASTM A 312 ASME SA-312

Random Lengths 17-24 Ft.

Identification Colors: Schedule 40—Blue; Schedule 80—Brown

Nominal Size in Inches	Schedule	Wall	O.D.	Lbs. per Ft.
1/8	40	.068	.405	.2470
	80	.095	.405	.3175
1/4	40	.088	.540	.4288
	80	.119	.540	.5401
3/8	40	.091	.675	.5729
1/2	40	.109	.840	.8589
	80	.147	.840	1.098
3/4	40	.113	1.050	1.141
	80	.154	1.050	1.487
1	40	.133	1.315	1.695
	80	.179	1.315	2.192
1 1/4	40	.140	1.660	2.294
1 1/2	40	.145	1.900	2.743
	80	.200	1.900	3.665
2	40	.154	2.375	3.687
	80	.218	2.375	5.069
2 1/2	40	.203	2.875	5.847
3	40	.216	3.500	7.647
	80	.300	3.500	10.35
3 1/2	40	.226	4.000	9.195
4	40	.237	4.500	10.89
5	40	.258	5.563	14.75
6	40	.280	6.625	19.15

*May be slightly magnetic when cold worked **Can be supplied polished

STAINLESS STEEL TUBING SQUARE AND RECTANGULAR WELDED TYPE 304





Non-Magnetic* ASTM A 554

For Ornamental,** Structural and Mechanical Applications

Stock Lengths 20 Ft. Random/Identification Color: Plain Ends

Size in Inches	Wall Gage	Wall Dec	Lbs. per Ft.
3/4 x 3/4	x 16	.065	.6055
1 x 1	x 18	.049	.6337
	x 16	.065	.8265
	x 11	.120	1.436
1 1/4 x 1 1/4	x 16	.065	1.047
1 1/2 x 1 1/2	x 16	.065	1.269
	x 14	.083	1.600
	x 11	.120	2.252
	x 7†	.180	3.321
2 x 1	x 16	.065	1.269
	x 11	.120	2.255
2 x 2	x 11	.120	3.068
	x 7†	.180	4.455
	x 1/4†	.250	6.007
3 x 2	x 11	.120	3.884
	x 7†	.180	5.679
3 x 3	x 11	.120	4.700
	x 7†	.180	6.903
	x 1/4	.250	8.953
4 x 2	x 11	.120	4.700
	x 7†	.180	6.903
	x 1/4	.250	8.953
4 x 4	x 11	.120	6.260
	x 7†	.180	9.270
	x 1/4†	.250	12.683

*May be slightly magnetic when cold worked
**Can be supplied polished †ASTM A 554 chemistry only

STAINLESS STEEL TUBING and PIPE ROUND AND SQUARE WELDED TYPE 304 POLISHED 180 GRIT-OD ONLY



Non-Magnetic* ASTM A 554

For Ornamental, Structural and Mechanical Applications

Stock Lengths 20 Ft. Random/Identification Color: Orange

Round O.D.	Wall Gage	Wall Dec	Lbs. per Ft.
1	x 18	.049	.5023
	x 16	.065	.6552
1 1/4	x 16	.065	.8303
1 1/2	x 16	.065	1.005
1 5/8	x 16	.065	1.093

Square O.D.	Wall Gage	Wall Dec	Lbs. per Ft.
1 x 1	x 18	.049	.6337
	x 16	.065	.8265
	x 11	.120	1.436
1 1/4 x 1 1/4	x 16	.065	1.048
1 1/2 x 1 1/2	x 16	.065	1.269
	x 11	.120	2.252
2 x 2	x 16	.065	1.711
	x 11	.120	3.068

Pipe

Nominal Size in Inches	Schedule	Wall	OD.	Lbs Per Ft.
1 1/4	5**	.065	1.660	1.107
1 1/4	10†	.109	1.660	1.806
1 1/2	5**	.065	1.900	1.274
1 1/2	10†	.109	1.900	2.085

*May be slightly magnetic when cold worked
**Sch 5—Ends White
† Sch 10—Ends Black

SECTION 10

ALUMINUM

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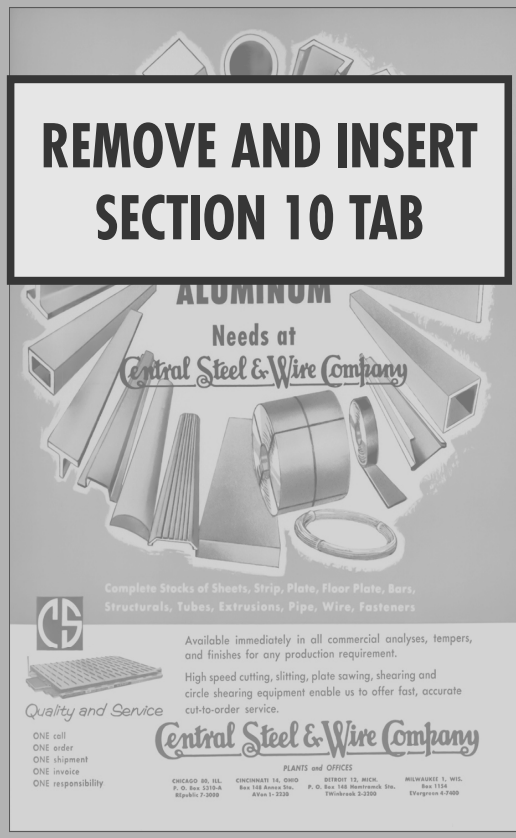

Central Steel & Wire Newspaper Ad from September 1956

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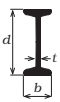

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ALUMINUM COILED* SHEET
1100-H14
Mill Finish

20" I.D. Coils

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Ft.
.050 x 36	.7056	2.117
.063 x 36	.8891	2.667
.090 x 48	1.270	5.080

***Coils can be slit to width, or leveled and cut to length**



ALUMINUM COILED* SHEET
3003-H14
Mill Finish

20" I.D. Coils

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Ft.
.020 x 36	.2851	.8553
.025 x 48	.3564	1.426
.032 x 36	.4562	1.369
48		1.825
60		2.281
.040 x 36	.5702	1.711
48		2.281
60		2.851
.050 x 36	.7128	2.138
48		2.851
60		3.564
.063 x 36	.8981	2.694
48		3.592
60		4.491
.080 x 36	1.141	3.423
48		4.564
60		5.705
.090 x 36	1.283	3.849
48		5.132
60		6.415
.100 x 48	1.426	5.704
60		7.130
.125 x 36	1.782	5.346
48		7.128
60		8.910

***Coils can be slit to width, or leveled and cut to length**

ALUMINUM COILED* SHEET
5052-H32



Mill Finish

20" I.D. Coils

ASTM B 209 AMS 4016

Chemical Composition and Mechanical Properties, *Pages 237-241*

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Ft.
.020 x 36	.2794	.8382
.025 x 36	.3492	1.048
48		1.397
.032 x 36	.4470	1.341
48		1.788
.040 x 36	.5587	1.676
48		2.235
.050 x 36	.6984	2.095
48		2.794
60		3.492
.063 x 36	.8800	2.640
48		3.520
60		4.400
.080 x 36	1.117	3.351
48		4.468
60		5.585
.090 x 36	1.257	3.771
48		5.028
60		6.285
.100 x 36	1.397	4.191
48		5.588
60		6.985
.125 x 36	1.746	5.238
48		6.984
60		8.730

***Coils can be slit to width, or leveled and cut to length

ALUMINUM
SPECULAR LIGHTING SHEET



This lighting sheet is produced from bright-rolled, reflector-quality coiled sheet. It has a guaranteed minimum total reflectivity of 86 percent, along with a high specularity level. Supplied with a strippable vinyl protective coating to protect the anodized surface.

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.025 x 24 x 96	.360	5.76
.032 x 24 x 96	.461	7.38



ALUMINUM FLAT SHEET
1100-H14
Mill Finish

.125" and Heavier — Paper Interleaved

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Yellow with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.050 x 36 x 96	.7056	16.93
.063 x 36 x 96	.8891	21.34
.090 x 48 x 144	1.270	60.96
.125 x 48 x 144	1.764	84.67



ALUMINUM FLAT SHEET
3003-O
Mill Finish

Paper Interleaved

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Pink with Orange Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.040 x 48 x 144	.5702	27.37
.050 x 48 x 144	.7128	34.21
.063 x 48 x 144	.8981	43.11
.080 x 48 x 144	1.141	54.77
.090 x 48 x 144	1.283	61.58
.125 x 48 x 144	1.782	85.54

ALUMINUM FLAT SHEET
3003-H14



Mill Finish

.125" and Heavier — Paper Interleaved
ASTM B 209
Chemical Composition and Mechanical Properties, *Pages 237-241*
Identification Color: Pink with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.020 x 36 x 96	.2851	6.842
36 x 120		8.553
.032 x 36 x 96	.4562	10.95
36 x 120		13.69
48 x 96		14.60
48 x 120		18.25
48 x 144		21.90
60 x 96		18.25
60 x 120		22.81
60 x 144		27.37
.040 x 36 x 96	.5702	13.68
36 x 120		17.11
48 x 96		18.25
48 x 120		22.81
48 x 144		27.37
60 x 96		22.81
60 x 120		28.51
60 x 144		34.21
.050 x 36 x 96	.7128	17.11
36 x 120		21.38
36 x 144		25.66
48 x 96		22.81
48 x 120		28.51
48 x 144		34.21
60 x 96		28.51
60 x 120		35.64
60 x 144		42.77
.063 x 36 x 96	.8981	21.55
36 x 120		26.94
36 x 144		32.33
48 x 96		28.74
48 x 120 **		35.92
48 x 144 **		43.11
60 x 96		35.92
60 x 120		44.91
60 x 144		53.89
.080 x 36 x 96	1.141	27.38
36 x 120		34.23
36 x 144		41.08
48 x 96		36.51
48 x 120		45.64
48 x 144		54.77
60 x 96		45.64
60 x 120		57.05
60 x 144		68.46
.090 x 36 x 96	1.283	30.79
36 x 120		38.49
36 x 144		46.19
48 x 96		41.05
48 x 120		51.32
48 x 144 **		61.58
60 x 96		51.32
60 x 120		64.15
60 x 144		76.98
.100 x 36 x 96	1.426	34.22
36 x 120 *		42.78
36 x 144		51.34
48 x 96		45.63
48 x 120		57.04
48 x 144		68.45
60 x 96 *		57.04
60 x 120 *		71.30
60 x 144 *		85.56
.125 x 36 x 96 *	1.782	42.77
36 x 120 *		53.46
36 x 144 *		64.15
48 x 96 *		57.02
48 x 120 *		71.28
48 x 144 *		85.54
60 x 96 *		71.28
60 x 120 *		89.10
60 x 144 *		106.9
72 x 144 *		128.3
.190 x 48 x 96 *		86.68
48 x 120 *		108.4
48 x 144 *		130.0
60 x 96 *		108.4
60 x 120 *		135.5
60 x 144 *		162.5
.249 x 48 x 96 *		113.6
48 x 120 *		142.0
48 x 144 *		170.4
60 x 96 *		142.0
60 x 120 *		177.5
60 x 144 *		213.0

*****Paper interleaved
******Available paper interleaved or not interleaved



ALUMINUM FLAT SHEET
2024-T3 BARE
Mill Finish

Paper Interleaved and Identified

AMS-QQ-A-250/4 ASTM B 209 AMS 4037

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Red with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.032 x 48 x 144	.4654	22.34
.050 x 48 x 144	.7272	34.91
.063 x 48 x 144	.9163	43.98
.080 x 48 x 144	1.164	55.87
.090 x 48 x 144	1.309	62.83
.100 x 48 x 144	1.454	69.79
.125 x 48 x 144	1.818	87.26
.190 x 48 x 144	2.763	132.6



ALUMINUM FLAT SHEET
2024-T3 ALCLAD
Mill Finish

Paper Interleaved and Identified

AMS-QQ-A-250/5 ASTM B 209 AMS 4041

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Red with Purple Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.020 x 48 x 144	.2909	13.96
.025 x 48 x 144	.3636	17.45
.032 x 48 x 144	.4654	22.34
.040 x 48 x 144	.5818	27.93
.050 x 48 x 144	.7272	34.91
.063 x 48 x 144	.9163	43.98

ALUMINUM FLAT SHEET
5052-H32
Mill Finish



.080" and Heavier—Paper Interleaved
ASTM B 209 AMS 4016
Chemical Composition and Mechanical Properties, *Pages 237-241*
Identification Color: White with Purple Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.020 x 36 x 96	.2794	6.706
36 x 120		8.382
36 x 144		10.06
.025 x 36 x 144	.3492	12.57
48 x 96		11.17
.032 x 36 x 120	.4470	13.41
36 x 144		16.10
48 x 96		14.30
48 x 120		17.88
48 x 144		21.46
60 x 96		17.88
60 x 120		22.35
60 x 144		26.82
.040 x 36 x 96	.5587	13.41
36 x 144		20.11
48 x 96		17.88
48 x 120		22.35
48 x 144		26.82
60 x 96		22.35
60 x 120		27.94
60 x 144		33.52
.050 x 36 x 96	.6984	16.76
36 x 120		20.95
36 x 144		25.14
48 x 96		22.35
48 x 120		27.94
48 x 144		33.52
60 x 96		27.94
60 x 120		34.92
60 x 144		41.90
.063 x 36 x 96	.8800	21.12
36 x 120		26.40
36 x 144		31.68
48 x 96		28.16
48 x 120		35.20
48 x 144*		42.24
60 x 96		35.20
60 x 120		44.00
60 x 144		52.80
.080 x 36 x 96*	1.117	26.81
36 x 120*		33.51
36 x 144*		40.21
48 x 96*		35.74
48 x 120*		44.68
48 x 144*		53.62
60 x 96*		44.68
60 x 120*		55.85
60 x 144*		67.02
.090 x 36 x 96*	1.257	30.17
36 x 120*		37.71
36 x 144*		45.25
48 x 96*		40.22
48 x 120*		50.28
48 x 144*		60.34
60 x 96*		50.28
60 x 120**		62.85
60 x 144*		75.42
.100 x 36 x 96*	1.397	33.53
36 x 120*		41.91
36 x 144*		49.93
48 x 96*		44.38
48 x 120*		55.88
48 x 144*		67.06
60 x 96*		55.88
60 x 120*		69.85
60 x 144*		83.82
.125 x 36 x 96*	1.746	41.90
36 x 120**		52.38
36 x 144*		62.86
48 x 96*		55.87
48 x 120*		69.84
48 x 144*		83.81
60 x 96*		69.84
60 x 120*		87.30
60 x 144*		104.8
72 x 120*		104.8
72 x 144*		125.7
.160 x 36 x 96*	2.235	71.52
36 x 120*		67.05
36 x 144*		80.46
48 x 96*		71.52
48 x 120*		89.40
48 x 144*		107.3
60 x 96*		89.40
60 x 120*		111.8
60 x 144*		134.1
.190 x 36 x 96*	2.654	63.70
36 x 120*		79.62
36 x 144*		95.54
48 x 96*		84.93
48 x 120*		106.2
48 x 144*		127.4
60 x 96*		106.2
60 x 120*		132.7
60 x 144*		159.2
72 x 144*		191.1
.249 x 48 x 96*	3.478	111.3
48 x 120*		139.1
48 x 144*		166.9
60 x 96*		139.1
60 x 120*		173.9
60 x 144*		208.7

***Paper interleaved**
****Available paper interleaved or not interleaved**



ALUMINUM FLAT SHEET
5052-O
Mill Finish

Paper Interleaved

ASTM B 209 AMS 4015

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: White with Orange Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet	Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.063 x 48 x 144	.8800	42.24	**.190 x 48 x 96**	2.654	84.93
.090 x 48 x 144	1.257	60.34	**48 x 120**		106.2
.125 x 48 x 120	1.746	69.84	**48 x 144**		127.4
48 x 144		83.81			



ALUMINUM FLAT SHEET
6061-O
Mill Finish

Paper Interleaved

ASTM B 209 AMS 4025

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Blue with Brown Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet	Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.040 x 48 x 144	.5645	27.10	**.090 x 48 x 144**	1.270	60.96
.050 x 48 x 144	.7056	33.87	**.100 x 48 x 144**	1.411	67.73
.063 x 48 x 144	.8891	42.68	**.125 x 48 x 144**	1.764	84.67
.080 x 48 x 144	1.129	54.19	**.190 x 48 x 144**	2.681	128.7

ALUMINUM FLAT SHEET
6061-T4



Mill Finish

Paper Interleaved and Identified

ASTM B 209 AMS 4026

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Blue with Orange Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet	Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.032 x 48 x 144	.4516	21.68	**.090 x 48 x 144**	1.270	60.96
.040 x 48 x 144	.5645	27.10	**.100 x 48 x 144**	1.411	67.73
.050 x 48 x 144	.7056	33.87	**.125 x 48 x 144**	1.764	84.67
.063 x 48 x 144	.8891	42.68	**.190 x 48 x 144**	2.681	128.7
.080 x 48 x 144	1.129	54.19			

ALUMINUM FLAT SHEET
6061-T6



Mill Finish

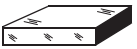
Paper Interleaved and Identified

ASTM B 209 AMS 4027

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Blue with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet	Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
.032 x 48 x 144	.4516	21.68	**.100 x 48 x 144**	1.411	67.73
.040 x 48 x 144	.5645	27.10	**.125 x 36 x 96**	1.764	42.34
.050 x 48 x 144	.7056	33.87	**36 x 144**		63.50
.063 x 36 x 96	.8891	21.34	**48 x 96**		56.45
48 x 144		42.68	**48 x 144**		84.67
60 x 144		53.35	**60 x 120**		88.20
.080 x 48 x 144	1.129	54.19	**60 x 144**		105.8
60 x 144		67.74	**.160 x 48 x 144**	2.258	108.4
.090 x 48 x 144	1.270	60.96	**.190 x 36 x 96**	2.681	64.34
60 x 144		76.20	**48 x 144**		128.7
			60 x 144		160.9



ALUMINUM PLATE
1100-F
Mill Finish

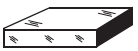
Paper Interleaved

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Yellow with Brown Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/2 x 48 x 144	7.056	338.7



ALUMINUM PLATE
3003-F*
Mill Finish

Paper Interleaved

ASTM B 209

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Pink with Brown Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
3/8 x 48 x 144	5.346	256.6
1/2 x 48 x 144	7.128	342.1

*****.249″ thick, see page 155

ALUMINUM PLATE
5052-H32*



Mill Finish

Paper Interleaved and Identified

ASTM B 209 AMS 4016

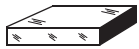
Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: White with Purple Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
3/8 x 48 x 120	5.238	209.5
48 x 144		251.4
1/2 x 48 x 144	6.984	335.2
60 x 120		349.2
3/4 x 48 x 144	10.48	502.8

*.249" thick, see page 157

ALUMINUM PLATE
6061-O



Mill Finish

Paper Interleaved and Identified

ASTM B 209 AMS 4025

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Blue with Brown Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/4 x 48 x 144	3.528	169.3



ALUMINUM PLATE
2024-T351 BARE
Mill Finish

Paper Interleaved and Identified

AMS-QQ-A-250/4 ASTM B 209 AMS 4037

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Red with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/4 x 36½ x 96½	3.636	88.94
48½ x 144½		177.0
5/16 x 48½ x 144½	4.545	221.2
3/8 x 48½ x 144½	5.454	265.4
1/2 x 48½ x 144½	7.272	353.9
3/4 x 48½ x 144½	10.91	531.0
1 x 48½ x 144½	14.54	707.6
1½ x 48½ x 144½	21.82	1062
2 x 48½ x 144½	29.09	1416
3 x 48½ x 144½	43.63	2123

ALUMINUM PLATE
6061-T651



Mill Finish

Paper Interleaved and Identified — Sawed Edges

ASTM B 209 AMS 4027

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Blue with Purple Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/4 x 36½ x 96½	3.528	86.30
48½ x 96½		114.7
48½ x144½		171.7
60½ x144½		214.2
5/16 x 48½ x144½	4.410	214.6
3/8 x 36½ x 96½	5.292	129.4
48½ x144½		257.6
60½ x120½		267.9
60½ x144½		321.3
1/2 x 36½ x 96½	7.056	172.6
48½ x 96½		229.3
48½ x144½		343.4
60½ x144½		428.4
5/8 x 48½ x 96½	8.820	286.7
48½ x144½		429.3
3/4 x 36½ x 96½	10.58	258.8
48½ x144½		514.9
60½ x144½		642.3
7/8 x 48½ x144½	12.35	598.9
1 x 36½ x 96½	14.11	345.1
48½ x 96½		458.6
48½ x144½		686.7
60½ x144½		856.6
1¼ x 48½ x144½	17.64	858.5
60½ x144½		1071
1½ x 48½ x144½	21.17	1030
1¾ x 48½ x144½	24.70	1202
2 x 48½ x144½	28.22	1373
2¼ x 48½ x144½	31.75	1545
60½ x144½		1928
2½ x 48½ x144½	35.28	1717
2¾ x 48½ x144½	38.81	1888
3 x 48½ x144½	42.34	2061
3½ x 48½ x144½	49.39	2404
4 x 48½ x144½	56.45	2747
4½ x 48½ x144½	63.50	3090
5 x 48½ x144½	70.56	3434
6 x 48½ x144½	84.67	4121



ALUMINUM CAST TOOL AND JIG PLATE

Cast, Stress Relieved, and Machined

Vinyl Covered Both Sides and Identified

Both surfaces machined to 25 micro-inches or better. Thickness tolerance is plus or minus .005 in.

Typical uses: stretch-forming dies, rubber pad process form blocks, assembly jigs, locating devices, drill jigs, pattern and core plates, and inspection fixtures.

Mechanical Properties, *Page 241*

Identification Color: Plain Ends

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/4 x 48½ x 96½	3.636	118.2
3/8 x 48½ x 96½	5.454	177.3
1/2 x 48½ x 96½	7.272	236.4
48½ x 144½		353.9
5/8 x 48½ x 144½	9.090	442.4
3/4 x 48½ x 96½	10.91	354.6
48½ x 144½		531.0
60½ x 144½		662.3
1 x 48½ x 96½	14.54	472.6
48½ x 144½		707.6
1½ x 48½ x 144½	21.82	1061
2 x 48½ x 144½	29.09	1411



ALUMINUM PLATE 7075-T651 BARE

Mill Finish

Paper Interleaved and Identified

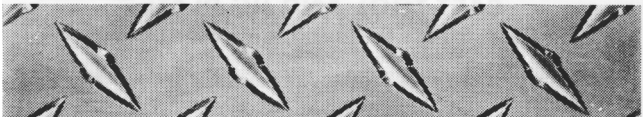
AMS-QQ-A-250/12 ASTM B 209 AMS 4045

Chemical Composition and Mechanical Properties, *Pages 237-241*

Identification Color: Green with Grey Stripe

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/4 x 48½ x144½	3.636	177.0

ALUMINUM TREAD PLATE



Pattern C-102—Length of diamond: $1^{3}/_{16}$" max.
Width of diamond at center: $^{11}/_{32}$" max.

Chemical Composition and Mechanical Properties, *Pages 238-241*

6061-T6

Conforms to ASTM B 632 Pattern B
Identification Color: Blue

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
1/8 x 48 x 192	1.9	121.6
60 x 192		152.0
3/16 x 48 x 192	2.8	179.2
60 x 192		224.0
1/4 x 48 x 144	3.7	177.6
48 x 96		118.4
48 x 192		236.8
60 x 96		148.0
60 x 144		222.0
60 x 192		296.0
3/8 x 48 x 96	5.4	172.8
48 x 192		345.6
60 x 192		432.0

BRIGHT TREAD PLATE 3003-H22

Identification Color: Pink

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
.072 x 60 x 96	1.2	48.00
60 x 192		96.00
.100 x 48 x 120	1.6	64.00
60 x 120		80.00
60 x 144		96.00
1/8 x 48 x 96	1.9	60.80
48 x 120		76.00
48 x 144		91.2
48 x 192		121.6
60 x 96		76.00
60 x 120		95.00
60 x 144		114.0
60 x 192		152.0
3/16 x 48 x 96	2.8	89.60
48 x 120		112.0
48 x 144		134.4
48 x 192		179.2
60 x 96		112.0
60 x 120		140.0
60 x 144		168.0
60 x 192		224.0



ALUMINUM ROUNDS
2011-T3

ASTM B 211
1/2" & Over — Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Brown

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
1/8	.0150	.1800
5/32	.0235	.2820
3/16	.0338	.4056
7/32	.0460	.5520
1/4	.0601	.7212
9/32	.0761	.9132
5/16	.0939	1.127
11/32	.1136	1.363
3/8	.1352	1.622
25/64	.1467	1.760
13/32	.1587	1.904
7/16	.1840	2.208
15/32	.2113	2.536
1/2	.2403	2.884
17/32	.2714	3.257
9/16	.3042	3.650
5/8	.3755	4.506
21/32	.4141	4.969
11/16	.4544	5.453
23/32	.4967	5.960
3/4	.5407	6.488
25/32	.5868	7.042
13/16	.6346	7.615
7/8	.7360	8.832
15/16	.8449	10.14
1	.9613	11.54
1 1/16	1.085	13.02
1 1/8	1.217	14.60
1 3/16	1.356	16.27
1 1/4	1.502	18.02
1 5/16	1.656	19.87
1 3/8	1.818	21.82
1 7/16	1.986	23.83
1 1/2	2.163	25.96
1 9/16	2.347	28.16
1 5/8	2.538	30.46
1 11/16	2.738	32.86
1 3/4	2.944	35.33
1 13/16	3.158	37.90
1 7/8	3.380	40.56
2	3.845	46.14
2 1/16	4.092	49.10
2 1/8	4.341	52.09
2 1/4	4.867	58.40
2 3/8	5.422	65.06
2 1/2	6.008	72.10
2 9/16	6.312	75.74
2 5/8	6.624	79.49
2 3/4	7.270	87.24
3	8.652	103.8
3 1/8	9.388	112.7
3 1/4	10.15	121.8
3 1/2	11.78	141.4
3 3/4*	13.52	162.2
4*	15.38	184.6
4 1/8†	16.36	196.3
4 1/4†	17.36	208.3
4 5/16†	17.88	214.6
5 9/16†	29.74	356.9

***** Above specifications, chemistry only - T4 Temper
† T451 Temper

ALUMINUM ROUNDS
2017-T4 2017-T451



5/8" & Under — 2017-T4
Over 5/8" — 2017-T451
AMS-QQ-A-225/5 ASTM B 211
1/2" & Over — Identified
Stock Lengths: 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Yellow

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
3/16	.0335	.4020	**3/8**	.1339	1.607	**1**	.9519	11.42
1/4	.0595	.7140	**1/2**	.2380	2.856	**1 1/8**	1.205	14.46
5/16	.0930	1.116	**5/8**	.3718	4.462			

ALUMINUM ROUNDS
7075-T6 7075-T651



Under 3/4" — 7075-T6
3/4" & Over — 7075-T651
AMS-QQ-A-225/9 ASTM B 211
1/2" & Over — Identified
Stock Lengths: 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Black

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
3/8	.1339	1.607	**1 1/4**	1.487	17.84	**2**	3.808	45.70
7/16	.1822	2.186	**1 5/16**	1.644	19.73	**2 1/8**	4.298	51.58
1/2	.2380	2.856	**1 3/8**	1.800	21.60	**2 1/4**	4.819	57.83
5/8	.3720	4.464	**1 1/2**	2.142	25.70	**2 1/2**	5.949	71.39
3/4	.5354	6.425	**1 5/8**	2.514	30.17	**2 3/4**	7.199	86.39
7/8	.7288	8.746	**1 3/4**	2.915	34.98	**3**	8.567	102.8
1	.9519	11.42	**1 7/8**	3.347	40.16	**3 1/2**	11.66	139.9



ALUMINUM ROUNDS
2024-T4 2024-T351

Under 3/4" — 2024-T4
3/4" to under 7" — 2024-T351

AMS-QQ-A-225/6 ASTM B 211

1/2" & Over — Identified

Stock Lengths: Up to 4 5/8" Inclusive — 12 Ft.
4 3/4" and Over — 8 to 12 Ft. Random

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Red

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
3/16	.0335	.4020	**2 3/8**	5.369	64.43
1/4	.0595	.7140	**2 1/2**	5.949	71.39
5/16	.0930	1.116	**2 9/16**	6.251	75.01
3/8	.1339	1.607	**2 5/8**	6.559	78.71
7/16	.1822	2.186	**2 3/4**	7.199	86.39
1/2	.2380	2.856	**2 7/8**	7.868	94.42
9/16	.3012	3.614	**3**	8.567	102.8
5/8	.3718	4.462	**3 1/16**	8.928	107.1
11/16	.4499	5.399	**3 1/8**	9.296	111.6
3/4	.5354	6.425	**3 1/4**	10.05	120.6
13/16	.6284	7.541	**3 3/8**	10.84	130.1
7/8	.7288	8.746	**3 1/2**	11.66	139.9
15/16	.8366	10.04	**3 9/16**	12.08	145.0
1	.9519	11.42	**3 3/4**	13.39	160.7
1 1/16	1.075	12.90	**4**	15.23	182.8
1 1/8	1.205	14.46	**4 1/16**	15.71	188.5
1 3/16	1.342	16.10	**4 1/4**	17.19	206.3
1 1/4	1.487	17.84	**4 1/2**	19.28	231.4
1 5/16	1.640	19.68	**4 5/8**	20.36	244.3
1 3/8	1.800	21.60	**4 3/4**	21.48	257.8
1 7/16	1.967	23.60	**5**	23.80	285.6
1 1/2	2.142	25.70	**5 1/8**	25.00	300.0
1 9/16	2.324	27.89	**5 1/4**	26.24	314.9
1 5/8	2.514	30.17	**5 1/2**	28.80	345.6
1 3/4	2.915	34.98	**6**	34.27	411.2
1 7/8	3.347	40.16	**6 1/4**	37.18	446.2
2	3.808	45.70	**6 1/2**	40.22	482.6
2 1/16	4.049	48.59	**7***	46.64	559.7
2 1/8	4.298	51.58			
2 1/4	4.819	57.83			

***T4 Temper**

ALUMINUM ROUNDS
6061-T6 6061-T651



Under 3/4" — 6061-T6 3/4" and Over — 6061-T651
AMS-QQ-A-225/8 ASTM B 211
1/2" & Over — Identified
Stock Lengths: Up to 4 1/2" Incl. — 12 Ft.,
5" & Over — 8-12 Ft. Random
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
1/8	.0144	.1728	1	.9236	11.08	2 1/8	4.171	50.05
3/16	.0325	.3900	1 1/16	1.043	12.52	2 1/4	4.676	56.11
1/4	.0577	.6924	1 1/8	1.169	14.03	2 3/8	5.210	62.52
5/16	.0902	1.082	1 3/16	1.302	15.62	2 1/2	5.773	69.28
3/8	.1299	1.559	1 1/4	1.443	17.32	2 5/8	6.364	76.37
7/16	.1768	2.122	1 5/16	1.591	19.09	2 3/4	6.985	83.82
1/2	.2309	2.771	1 3/8	1.746	20.95	3	8.312	99.74
9/16	.2922	3.506	1 7/16	1.909	22.91	3 1/4	9.756	117.1
5/8	.3608	4.330	1 1/2	2.078	24.94	3 1/2	11.31	135.7
11/16	.4365	5.238	1 9/16	2.255	27.06	3 3/4	12.99	155.9
3/4	.5195	6.234	1 5/8	2.439	29.27	4	14.78	177.4
13/16	.6097	7.316	1 3/4	2.829	33.95	4 1/2	18.70	224.4
7/8	.7071	8.485	1 7/8	3.247	38.96	5 1/2	27.94	335.3
15/16	.8118	9.742	2	3.694	44.33			

ALUMINUM ROUNDS
6061-T6511 (Extruded)



AMS-QQ-A-200/8 ASTM B 221 Identified
Stock Lengths: Up to 4 5/8" Incl. — 12 Ft.,
4 3/4" & Over — 8-12 Ft. Random
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Standard & Half Standard Tolerance – Pink
Special Tolerance—No Paint

Size in Inches	Lbs. per Ft.	Std. Tol.	Half Std. Tol.	Special Tol.*	Size in Inches	Lbs. per Ft.	Std. Tol.	Half Std. Tol.	Special Tol.*
1/4	.0577	. .	±.005	. .	2 5/8	6.364	. .	±.008	±.008
5/16	.0902	. .	±.005	. .	2 3/4	6.985	. .	±.008	±.008
3/8	.1299	. .	±.005	±.0025	2 7/8	7.635	. .	±.008	±.008
7/16	.1768	. .	±.005	. .	3	8.312	. .	±.008	±.008
1/2	.2309	. .	±.005	±.003	3 1/8	9.019	. .	±.012	. .
9/16	.2922	. .	±.005	. .	3 1/4	9.756	. .	±.012	. .
5/8	.3608	. .	±.005	±.003	3 3/8	10.52	. .	±.012	. .
11/16	.4365	. .	±.005	±.003	3 1/2	11.31	. .	±.012	. .
3/4	.5195	. .	±.005	±.003	3 5/8	12.14	. .	±.012	. .
13/16	.6097	. .	±.005	±.003	3 3/4	12.99	. .	±.012	. .
7/8	.7071	. .	±.005	±.003	4	14.78	. .	±.017	. .
15/16	.8118	. .	±.005	±.003	4 1/8	15.24	. .	±.017	. .
1	.9236	. .	±.005	±.003	4 1/4	16.68	. .	±.017	. .
1 1/16	1.043	. .	±.006	±.004	4 1/2	18.70	. .	±.017	. .
1 1/8	1.169	. .	±.006	. .	4 5/8	19.76	. .	±.017	. .
1 3/16	1.302	. .	±.006	±.004	4 3/4	20.84	. .	±.017	. .
1 1/4	1.443	. .	±.006	±.004	5	23.09	. .	±.017	. .
1 5/16	1.591	. .	±.006	±.004	5 1/4	25.46	. .	±.022	. .
1 3/8	1.746	. .	±.006	±.004	5 1/2	27.94	. .	±.022	. .
1 7/16	1.909	. .	±.006	±.004	5 3/4	30.54	. .	±.022	. .
1 1/2	2.078	. .	±.006	±.004	6	33.25	. .	±.022	. .
1 9/16	2.255	. .	±.006	. .	6 1/4	36.08	. .	±.022	. .
1 5/8	2.439	. .	±.006	±.005	6 1/2	39.02	. .	±.022	. .
1 11/16	2.630	. .	. .	±.005	6 3/4	42.08	±.044	. .	. .
1 3/4	2.829	. .	±.006	±.005	7	45.26	±.044	. .	. .
1 13/16	3.034	. .	±.006	±.005	7 1/2	51.96	±.044	. .	. .
1 7/8	3.247	. .	±.006	±.005	8	59.11	±.054	. .	. .
2	3.694	. .	±.008	±.005	8 1/2	66.73	±.054	. .	. .
2 1/8	4.171	. .	±.008	±.008	9†	74.81	±.054	. .	. .
2 1/4	4.676	. .	±.008	±.008	10.13†	94.78	±.074	. .	. .
2 3/8	5.210	. .	±.008	±.008	11†	111.8	±.074	. .	. .
2 1/2	5.773	. .	±.008	±.008	12†	133.0	±.084	. .	. .

*Also Special Straightness
†6061-T6 Extruded



ALUMINUM ROUNDS
6063-T5 (Extruded)

ASTM B 221

Not Identified

Stock Lengths 16 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Purple

Size in Inches	Lbs. per Ft.	Est. Lbs. 16′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 16′ Bar
1/2	.2286	3.658	3/4	.5142	8.227
5/8	.3571	5.714	1	.9142	14.63



ALUMINUM ROUNDS
6262-T6511 (Extruded)

ASTM B 221*

Identified

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: White

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/2	.2309	2.771	1 7/16	1.908	22.90
9/16	.2922	3.506	1 1/2	2.078	24.94
5/8	.3608	4.330	1 9/16	2.256	27.07
11/16	.4365	5.238	1 5/8	2.439	29.27
3/4	.5195	6.234	1 3/4	2.829	33.95
13/16	.6097	7.316	1 13/16	3.034	36.41
7/8	.7071	8.485	1 7/8	3.247	38.96
15/16	.8118	9.742	2	3.694	44.33
1	.9236	11.08	2 1/8	4.171	50.05
1 1/16	1.043	12.52	2 1/4	4.676	56.11
1 1/8	1.169	14.03	2 3/8	5.210	62.52
1 3/16	1.296	15.55	2 1/2	5.773	69.28
1 1/4	1.443	17.32	2 3/4	6.985	83.82
1 5/16	1.591	19.09	3	8.312	99.74
1 3/8	1.746	20.95			

*Tolerances are half of standard

ALUMINUM ROUNDS



SCREW MACHINE STOCK

6262-T9*

ASTM B 211

1/2" & Over — Identified

Stock Lengths 12 Ft.

Chemical Composition, *Page 238* Mechanical Properties, *Page 241*

Identification Color: Orange

Size in Inches	Lbs. per Ft.	Est lbs 12' Bar	Size in Inches	Lbs. per Ft.	Est lbs 12' Bar
1/4	.0577	.6924	**1 3/16**	1.296	15.55
1/2	.2309	2.771	**1 9/16**	2.256	27.07
9/16	.2922	3.506	**1 5/8**	2.439	29.27
5/8	.3608	4.330	**1 3/4**	2.829	33.95
11/16	.4365	5.238	**2**	3.694	44.33
15/16	.8118	9.742	**2 1/2**	5.773	69.28
1	.9236	11.08	**2 3/4**	6.985	83.82
1 1/8	1.169	14.03	**3**	8.312	99.74

*6262-T6511, see page 170

ALUMINUM ROUNDS

4032-T6 4032-T651



Under 7/8" — 4032-T6

7/8" & Over — 4032-T651

Identified

Stock Lengths: 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Orange and White

Size in Inches	Lbs. per Ft.	Est lbs 12' Bar	Size in Inches	Lbs. per Ft.	Est lbs 12' Bar
1/2	.228	2.736	**1**	.911	10.93
5/8	.356	4.272	**1 1/8**	1.153	13.84
11/16	.454	5.453	**1 1/4**	1.424	17.09
7/8	.698	8.376	**1 5/16**	1.574	18.89
			2	3.694	44.33



ALUMINUM HEXAGONS

SCREW MACHINE STOCK

2011-T3

ASTM B 211

1/2" & Over — Identified

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Brown

Size in Inches	Lbs. per Ft.	Est lbs 12' Bar	Size in Inches	Lbs. per Ft.	Est lbs 12' Bar
1/4	.0663	.7956	7/8	.8116	9.739
5/16	.1035	1.242	15/16	.9316	11.18
3/8	.1491	1.789	1	1.060	12.72
7/16	.2029	2.435	1 1/8	1.342	16.10
1/2	.2650	3.180	1 1/4	1.656	19.87
9/16	.3354	4.025	1 3/8	2.004	24.05
5/8	.4141	4.969	1 1/2	2.385	28.62
3/4	.5963	7.156	1 3/4	3.246	38.95
13/16	.6998	8.398			



ALUMINUM HEXAGONS

SCREW MACHINE STOCK

2024-T4 2024-T351

Under 5/8" — 2024-T4

5/8" & Over — 2024-T351

AMS-QQ-A-225/6 ASTM B 211

1/2" & Over — Identified

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Red

Size in Inches	Lbs. per Ft.	Est lbs 12' Bar	Size in Inches	Lbs. per Ft.	Est lbs 12' Bar
3/16	.0369	.4428	5/8	.4100	4.920
1/4	.0656	.7872	7/8	.8036	9.643
3/8	.1476	1.771	1	1.050	12.60
7/16	.2009	2.411	1 1/8	1.328	15.94
1/2	.2624	3.149	1 1/4	1.640	19.68
9/16	.3321	3.985	1 3/8	1.984	23.81

ALUMINUM HEXAGONS



SCREW MACHINE STOCK

6061-T6 6061-T651

Under 5/8" — 6061-T6

5/8" & Over — 6061-T651

AMS-QQ-A-225/8 ASTM B 211

1/2" & Over — Identified

Stock Lengths 12 Ft.

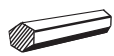
Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
1/4	.0637	.7644	**5/8**	.3978	4.774
3/8	.1432	1.718	**1 1/8**	1.289	15.47

ALUMINUM HEXAGONS

6061-T6511 (Extruded)



AMS-QQ-A-200/8 ASTM B 221

Identified

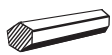
Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
1/2 (±.005)	.2546	3.055	**1** (±.006)	1.018	12.22
9/16 (±.005)	.3222	3.864	**1 1/8** (±.006)	1.289	15.47
5/8 (±.005)	.3978	4.774	**1 1/4** (±.006)	1.591	19.09
11/16 (±.005)	.481	5.772	**1 3/8** (±.006)	1.925	23.10
3/4 (±.005)	.5729	6.875	**1 1/2** (±.007)	2.291	27.49
13/16 (±.005)	.673	8.076	**1 3/4** (±.007)	3.119	37.43
7/8 (±.005)	.779	9.348	**2** (±.008)	4.074	48.89
15/16 (±.005)	.896	10.75			

ALUMINUM HEXAGONS



SCREW MACHINE STOCK

6262-T9

ASTM B 211

Identified

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Orange

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
13/16	.6723	8.068



ALUMINUM SQUARES
2017-T451

AMS-QQ-A-225/5 ASTM B 211

Identified

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Yellow

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1 1/2	2.727	32.72



ALUMINUM SQUARES
2024-T4 2024-T351

Under 1/2″ — 2024-T4

1/2″ & Over — 2024-T351

AMS-QQ-A-225/6 ASTM B 211

1/2″ & Over — Identified

Stock Lengths: Up to 2″ Inclusive — 12 Ft.

Over 2″ — 8 to 12 Ft. Random

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Red

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/4	.0758	.9096	**1 3/4**	3.712	44.54
3/8	.1704	2.045	**2**	4.848	58.18
1/2	.3030	3.636	**2 1/4**	6.136	73.63
5/8	.4734	5.681	**2 1/2**	7.575	90.90
3/4	.6818	8.182	**2 3/4**	9.166	110.0
7/8	.9279	11.13	**3**	10.91	130.9
1	1.212	14.54	**3 1/4**	12.80	153.6
1 1/8	1.534	18.41	**3 1/2**	14.85	178.2
1 1/4	1.894	22.73	**4**	19.39	232.7
1 1/2	2.727	32.72	**5**	29.40	352.8



ALUMINUM SQUARES
6063-T5 (Extruded)

ASTM B 221

Not Identified

Stock Lengths 16 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

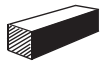
Identification Color: Purple

Size in Inches	Lbs. per Ft.	Est. Lbs. 16′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 16′ Bar
3/8*	.1637	2.619	**1**	1.164	18.62
1/2	.2910	4.656	**1 1/4****	1.819	29.10
5/8	.4547	7.275			
3/4	.6548	10.48	**2****	4.656	74.50

***6063-T52

****Above specifications, chemistry only

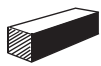
ALUMINUM SQUARES
6061-T6511 (Extruded)



AMS-QQ-A-200/8 ASTM B 221
Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/2	.2940	3.528	**2**	4.704	56.45
5/8	.4600	5.508	**2 1/2**	7.350	88.20
3/4	.6615	7.938	**2 3/4**	8.893	106.72
7/8	.9010	10.81	**3**	10.58	127.0
1	1.176	14.11	**3 1/2**	14.41	172.9
1 1/4	1.838	22.06	**4**	18.82	225.8
1 1/2	2.646	31.75	**4 1/2**	23.81	285.7
1 5/8	3.108	37.30	**5 1/2**	35.57	426.8
1 3/4	3.600	43.20	**6**	42.34	508.1

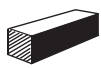
ALUMINUM SQUARES
6061-T6511 (Extruded)
MANIFOLD QUALITY



Elevated Mechanical Properties
Special Tolerance
1/2 Commercial Size to Oversize Thickness and Width
AMS-QQ-A-200/8 ASTM B 221
Identified Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Plain Ends

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
2 (+.024)	4.761	57.13	**4** (+.034)	18.98	227.8
2 1/4 (+.024)	6.017	72.20	**4 1/2** (+.034)	23.99	287.9
2 1/2 (+.024)	7.421	89.05	**5** (+.034)	29.60	355.2
3 (+.024)	10.67	128.0	**5 1/2** (+.034)	35.79	429.5
3 1/2 (+.024)	14.50	174.0	**6** (+.044)	42.65	511.8

ALUMINUM SQUARES
7075-T651



AMS-QQ-A-225/9 ASTM B 211
Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Black

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/4	.6818	8.182	**1 3/4**	3.712	44.54
1	1.212	14.54			



ALUMINUM RECTANGLES
2024-T4 2024-T351

Under 1/2" Thick—2024-T4
1/2" Thick & Over—2024-T351
AMS-QQ-A-225/6 ASTM B 211
Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Red

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
1/8 x 1	.1515	1.818
1 1/4	.1894	2.273
3/16 x 1/2	.1136	1.363
5/8	.1420	1.704
3/4	.1704	2.045
1	.2273	2.728
1 1/2	.3409	4.091
2	.4545	5.454
1/4 x 1/2	.1515	1.818
5/8	.1894	2.273
3/4	.2273	2.728
1	.3030	3.636
1 1/4	.3788	4.546
1 1/2	.4545	5.454
2	.6060	7.272
3	.9090	10.91
4	1.212	14.54
5/16 x 3/4	.2841	3.409
2	.7575	9.090
3/8 x 5/8	.2840	3.408
3/4	.3409	4.091
1	.4545	5.454
1 1/2	.6818	8.182
2	.9090	10.91
2 1/2	1.136	13.63
3	1.364	16.37
4	1.818	21.82
6	2.727	32.72
1/2 x 5/8	.3788	4.546
3/4	.4545	5.454
7/8	.5303	6.364
1	.6060	7.272
1 1/4	.7575	9.090
1 1/2	.9090	10.91
1 3/4	1.061	12.73
2	1.212	14.54
2 1/2	1.515	18.18
3	1.818	21.82
4	2.424	29.09
6	3.636	43.63
5/8 x 3/4	.5681	6.817
7/8	.6628	7.954
1	.7575	9.090
5/8 x 1 1/4	.9469	11.36
1 1/2	1.136	13.63
2	1.515	18.18
3/4 x 1	.9090	10.91
1 1/4	1.136	13.63
1 1/2	1.364	16.37
1 3/4	1.591	19.09
2	1.818	21.82
2 1/2	2.273	27.28
3	2.727	32.72
3 1/2	3.182	38.18
4	3.636	43.63
1 x 1 1/4	1.515	18.18
1 1/2	1.818	21.82
1 3/4	2.121	25.45
2	2.424	29.09
2 1/2	3.030	36.36
3	3.636	43.63
4*	4.848	58.18
5*	6.060	72.72
1 1/4 x 1 1/2	2.273	27.28
2	3.030	36.36
2 1/2	3.788	45.46
3*	4.545	54.54
3 1/2*	5.303	63.64
1 1/2 x 2	3.636	43.63
2 1/2*	4.545	54.54
3*	5.454	65.45
4*	7.272	87.26
6*	10.91	130.9
1 3/4 x 3*	6.360	76.32
2 x 2 1/4*	5.454	65.45
2 1/2*	6.060	72.72
3	7.272	87.26
3 1/2*	8.484	101.8
4*	9.696	116.4
6*	14.54	174.5
2 1/4 x 4*	10.91	130.9
2 1/2 x 3*	9.090	109.1
4*	12.12	145.4
4 1/2*	13.64	163.6
5*	15.15	181.8
3 x 5*	18.18	218.2
6*	21.82	261.8
4 x 5	24.24	290.9

***8 to 12 ft. random lengths

ALUMINUM RECTANGLES
6061-T6511 (Extruded)



AMS-QQ-A-200/8 ASTM B 221
Identified
Stock Lengths 12 Ft. (Sharp Corners)
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Size in Inches	Lbs. per Ft.
1/8 x 3/4	.1103
1	.1470
1 1/4	.1838
1 1/2	.2205
2	.2940
3/16 x 3/4	.1654
1	.2205
1 1/4	.2756
1 1/2	.3308
2	.4410
3	.6615
1/4 x 1/2	.1470
3/4	.2205
1	.2940
1 1/4	.3675
1 1/2	.4410
2	.5880
2 1/2	.7350
3	.8820
3 1/2	1.032
4	1.176
4 1/2	1.320
5	1.470
6	1.764
8	2.352
10	2.940
12	3.528
14	4.116
5/16 x 3/4	.2756
1	.3675
1 1/2	.5513
2	.7350
2 1/2	.9188
3	1.103
3/8 x 1/2	.2205
3/4	.3308
1	.4410
1 1/4	.5513
1 1/2	.6615
1 3/4	.7680
2	.8820
2 1/2	1.103
3	1.323
4	1.764
5	2.205
6	2.646
8	3.628
10	4.410
12	5.292
1/2 x 3/4	.4410
1	.5880
1 1/4	.7320
1 1/2	.8820
1 3/4	1.029
2	1.176

Size in Inches	Lbs. per Ft.
1/2 x 2 1/2	1.470
3	1.764
3 1/2	2.058
4	2.352
4 1/2	2.646
5	2.940
6	3.528
7	4.116
8	4.704
10	5.880
12	7.056
14	8.232
5/8 x 1	.7350
1 1/4	.9180
1 1/2	1.103
2	1.470
2 1/2	1.838
3	2.205
4	2.940
6	4.410
3/4 x 1	.8820
1 1/4	1.103
1 1/2	1.323
1 3/4	1.544
2	1.764
2 1/2	2.205
3	2.646
3 1/2	3.087
4	3.528
5	4.416
6	5.292
8	7.056
10	8.820
12	10.58
14	12.35
1 x 1 1/4	1.470
1 1/2	1.764
1 3/4	2.058
2	2.352
2 1/2	2.940
3	3.528
3 1/2	4.116
4	4.704
5	5.880
6	7.056
8	9.408
10	11.76
12	14.11
14	16.46
1 1/4 x 1 1/2	2.205
1 3/4	2.573
2	2.940
2 1/2	3.675
3	4.410
3 1/2	5.145
3 3/4	5.513

Size in Inches	Lbs. per Ft.
1 1/4 4	5.880
4 1/2	6.615
5 1/2	8.085
6	8.820
1 1/2 x 1 3/4	3.087
2	3.528
2 1/2	4.410
3	5.292
3 1/2	6.174
4	7.056
5	8.820
5 1/2	9.702
6	10.58
6 1/2	11.47
8	14.11
8 1/2	14.99
12	21.17
1 5/8 x 2	3.828
1 3/4 x 3 1/2	7.203
3 3/4	7.718
4 1/2	9.261
5 1/2	11.32
2 x 2 1/2	5.880
3	7.056
3 1/2	8.232
4	9.408
4 1/2	10.58
5	11.76
6	14.11
6 1/2	15.29
7	16.46
8	18.82
2 1/4 x 4	10.58
2 1/2 x 2 5/8	7.718
3	8.820
3 1/4	9.555
3 1/2	10.29
4	11.76
4 1/2	13.23
5	14.70
5 1/2	16.17
6	17.64
3 x 4	14.11
4 1/2	15.87
5	17.64
6	21.17
3 1/2 x 4	16.46
4 1/2	18.52
5	20.58
6	24.70
4 x 4 1/2	21.17
6	28.22
4 1/2 x 5	26.46
5 x 5 1/2	32.34
7	41.16



ALUMINUM RECTANGLES
6061-T6511 (Extruded)
MANIFOLD QUALITY

Elevated Mechanical Properties
Special Tolerance
1/2 Commercial Size to Oversize Thickness and Width
AMS-QQ-A-200/8 ASTM B 221
Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Plain Ends

Size in Inches				Lbs. per Ft.	Est. Lbs. 12′ Bar
1	(+.012)	**x 1½**	(+.014)	1.782	21.39
		2	(+.024)	2.380	28.56
		3½	(+.024)	4.155	49.86
1¼	(+.012)	**x 2½**	(+.024)	3.710	44.52
		5	(+.034)	7.35	88.20
1½	(+.014)	**x 2**	(+.024)	3.566	42.79
		2½	(+.024)	4.452	53.42
		3	(+.024)	5.338	64.06
		4	(+.034)	7.119	85.43
2	(+.024)	**x 2½**	(+.024)	5.944	71.32
		3	(+.024)	7.127	85.52
		3½	(+.024)	8.310	99.72
		4	(+.034)	9.505	114.1
		5	(+.034)	11.76	141.1
		6	(+.044)	14.25	171.0
2½	(+.024)	**x 3**	(+.024)	8.898	106.8
		3¼	(+.024)	9.666	116.0
		3½	(+.024)	10.37	124.4
		4	(+.034)	11.87	142.4
		4½	(+.034)	13.34	160.1
		5	(+.034)	14.82	177.8
		6	(+.044)	17.79	213.5
3	(+.024)	**x 3½**	(+.024)	12.44	149.3
		4	(+.034)	14.23	170.8
		4½	(+.034)	16.00	192.0
		5	(+.034)	17.77	213.2
		6	(+.044)	21.33	256.0
3½	(+.024)	**x 4**	(+.034)	16.59	199.1
		4½	(+.034)	18.66	223.9
		5	(+.034)	20.72	248.6
4	(+.034)	**x 4½**	(+.034)	21.34	256.1
		5	(+.034)	23.70	284.4
		6	(+.044)	28.45	341.4
		7	(+.044)	33.17	398.0
4½	(+.034)	**x 5**	(+.034)	26.65	319.8
		5½*	(+.034)	29.31	351.7
		6	(+.044)	31.99	383.9
5	(+.034)	**x 6**	(+.044)	36.61	439.3
		7	(+.044)	41.43	497.2
		8**	(+.054)	47.36	568.3
6	(+.044)	**x 6½**	(+.044)	46.29	555.5
		7	(+.044)	49.73	596.8

*146″ length
**147″ length

ALUMINUM RECTANGLES
6063-T5 6063-T52 (Extruded)



Under 1/2" Thick—6063-T52
1/2" Thick & Over—6063-T5
ASTM B 221
Not Identified
Stock Lengths 16 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Purple

Size in Inches	Lbs. per Ft.	Est. Lbs. 16' Bar
1/8 x 1/2	.0728	1.165
5/8	.0909	1.454
3/4	.1091	1.746
1	.1455	2.328
1 1/4	.1819	2.910
1 1/2	.2183	3.493
1 3/4	.2546	4.074
2	.2910	4.656
3/16 x 1/2	.1091	1.746
3/4	.1637	2.619
1	.2183	3.493
1 1/4	.2728	4.365
1 1/2	.3274	5.238
2	.4365	6.984
2 1/2	.5456	8.730
3	.6565	10.50
1/4 x 1/2	.1455	2.328
5/8	.1819	2.910
3/4	.2183	3.493
1	.2910	4.656
1 1/4	.3638	5.821
1 1/2	.4365	6.984
1 3/4	.5093	8.149
1/4 x 2	.5820	9.312
2 1/2	.7275	11.64
3	.8730	13.97
3 1/2	1.018	16.29
4	1.164	18.62
3/8 x 5/8	.2728	4.365
3/4	.3274	5.238
1	.4365	6.984
1 1/4	.5456	8.730
1 1/2	.6548	10.48
2	.8730	13.97
3	1.310	20.96
1/2 x 3/4	.4365	6.984
1	.5820	9.312
1 1/2	.8730	13.97
2	1.164	18.62
2 1/2	1.455	23.28
3	1.746	27.94
3/4 x 1 1/2	1.310	20.96
2	1.746	27.94
1 x 1 1/2	1.746	27.94
2	2.328	37.25

ALUMINUM RECTANGLES
7075-T6 7075-T651



Under 1/2" Thick—7075-T6
1/2" Thick & Over—7075-T651
AMS-QQ-A-225/9 ASTM B 211
Identified
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Black

Size in Inches	Lbs. per Ft.	Est. Lbs. 12' Bar
3/8 x 1	.4545	5.454
1 x 1 3/4	2.121	25.45
1 x 2	2.424	29.09
1 1/2 x 2 1/2*	4.545	54.60
1 1/2 x 4*	7.272	87.26

***8 to 12 ft. random lengths**



ALUMINUM BUS BARS
6101-T61 (Extruded)

ASTM B 317 Type B
Not Identified
Stock Lengths 20 Ft. ($^1/_{16}$" Radius on Corners)
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 20′ Bar
1/4 x 2	.5820	11.64
3	.8730	17.46
4	1.164	23.28
6	1.746	34.92



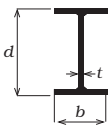
ALUMINUM ROUND WIRE IN COILS

Coil Sizes
.100" and Under — 60 lb. cwc
.101" and Larger — 120 lb. cwc

1100-O

ASTM B 211
Chemical Composition and Mechanical Properties, *Pages 238-241*

Size in Inches	Lbs. per Ft.
.051	.0024
.081	.0061
.102	.0096
.125	.0144



ALUMINUM BEAMS
AMERICAN STANDARD
WIDE FLANGE
6061-T6 (Extruded)

AMS-QQ-A-200/8 (Except for Marking)
ASTM B 221 ASTM B 308
Identified
Stock Lengths 25 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Depth *d* In.		Flange *b* In.	Web *t* In.	Lbs. per Ft.
4	**x**	**4***	**.313**	4.758
5	**x**	**5***	**.313**	6.444
6	**x**	**4**	**.230**	4.161
6	**x**	**6**	**.240**	5.401
8	**x**	**8**	**.288**	10.73

***H Beam**

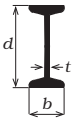
ALUMINUM ANGLES
AMERICAN STANDARD
6061-T6 (Extruded)*



AMS-QQ-A-200/8 (Except for Marking)
ASTM B 221 ASTM B 308
Identified
Stock Lengths 25 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Size in Inches	*t*	Lbs. per Ft.
3/4 x 3/4 x	1/8	.2011
1 x 1 x	1/8	.2752
	3/16	.3998
	1/4	.5139
1 1/4 x 1 1/4 x	1/8	.3434
	3/16	.5104
	1/4	.6562
1 1/2 x 1 1/4 x	1/8	.3869
	3/16	.5657
	1/4	.7338
1 1/2 x 1 1/2 x	1/8	.4234
	3/16	.6221
	1/4	.8091
1 3/4 x 1 1/4 x	3/16	.6209
	1/4	.8091
1 3/4 x 1 3/4 x	3/16	.7315
	1/4	.9561
2 x 1 1/2 x	1/8	.4963
	3/16	.7315
	1/4	.9561
2 x 2 x	1/8	.5774
	3/16	.8502
	1/4	1.110
	3/8	1.606
2 1/2 x 2 x	3/16	.9608
	1/4	1.257
2 1/2 x 2 1/2 x	3/16	1.070
	1/4	1.404
2 1/2 x 2 1/2 x	5/16	1.729
	3/8	2.047
3 x 2 x	3/16	1.071
	1/4	1.403
	3/8	2.047
3 x 2 1/2 x	1/4	1.537
3 x 3 x	3/16	1.275
	1/4	1.684
	3/8	2.550
	1/2	3.227
3 1/2 x 2 1/2 x	1/4	1.684
	3/8	2.474
3 1/2 x 3 1/2 x	1/4	1.989
	5/16	2.461
4 x 3 x	1/4	1.989
	3/8	2.926
4 x 4 x	1/4	2.283
	3/8	3.366
	1/2	4.414
5 x 3 x	3/8	3.349
5 x 3 1/2 x	1/2	4.704
5 x 5 x	3/8	4.237
	1/2	5.578
6 x 3 1/2 x	3/8	4.038
6 x 4 x	3/8	4.237
	1/2	5.578
6 x 6 x	3/8	5.120
	1/2	6.754
8 x 8 x	1/2	9.141

*For Architectural Angles, see *page 189*



ALUMINUM I BEAMS

AMERICAN STANDARD

6061-T6 (Extruded)

AMS-QQ-A-200/8 (Except for Marking)

ASTM B 221 ASTM B 308

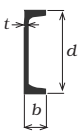
Identified

Stock Lengths 25 Ft.

Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Blue

Depth *d* In.	Flange *b* In.	Web *t* In.	Lbs. per Ft.	Depth *d* In.	Flange *b* In.	Web *t* In.	Lbs. per Ft.
3	**2.330**	**.170**	1.963	**5**	**3.284**	**.494**	5.100
3	**2.509**	**.349**	2.591	**6**	**3.330**	**.230**	4.302
4	**2.660**	**.190**	2.645	**6**	**3.443**	**.343**	5.099
4	**2.796**	**.326**	3.283	**8**	**4.000**	**.270**	6.350
5	**3.000**	**.210**	3.430	**10**	**4.660**	**.310**	8.761



ALUMINUM CHANNELS

AMERICAN STANDARD

6061-T6 (Extruded)

AMS-QQ-A-200/8 (Except for Marking)

ASTM B 221 ASTM B 308

Identified

Stock Lengths 25 Ft.

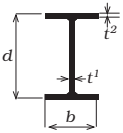
Chemical Composition and Mechanical Properties, *Pages 238-241*

Identification Color: Blue

Depth *d* In.	Flange *b* In.	Web *t* In.	Lbs. per Ft.	Depth *d* In.	Flange *b* In.	Web *t* In.	Lbs. per Ft.
3	**1.410**	**.170**	1.417	**6**	**2.034**	**.314**	3.632
3	**1.498**	**.258**	1.729	**6**	**2.157**	**.438**	4.505
3	**1.596**	**.356**	2.075	**7**	**2.110**	**.230**	3.541
4	**1.580**	**.180**	1.846	**8**	**2.290**	**.250**	4.252
4	**1.647**	**.247**	2.162	**8**	**2.527**	**.487**	6.485
4	**1.720**	**.320**	2.504	**9**	**2.430**	**.230**	4.604
5	**1.750**	**.190**	2.316	**10**	**2.600**	**.240**	5.278
5	**1.885**	**.325**	3.108	**10**	**2.886**	**.526**	8.640
5	**2.032**	**.472**	3.975	**12**	**2.960**	**.300**	7.411
6	**1.920**	**.200**	2.826	**12**	**3.047**	**.387**	8.639
6	**1.945**	**.225**	3.002	**12**	**3.170**	**.510**	10.38

For Architectural Channels, see *page 189*

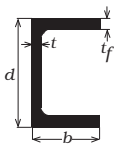
ALUMINUM I BEAMS
ALUMINUM ASSOCIATION
6061-T6 (Extruded)



AMS-QQ-A-200/8 (Except for Marking)
ASTM B 221 ASTM B 308
Stock Lengths 25 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

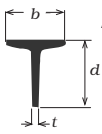
Depth *d* In.	Flange *b* In.	Web t^1 In.	Web t^2 In.	Lbs. per Ft.	Depth *d* In.	Flange *b* In.	Web t^1 In.	Web t^2 In.	Lbs. per Ft.
3	**2.5**	**.150**	.260	2.030	**8**	**5.0**	**.230**	.350	6.181
4	**3.0**	**.170**	.290	2.793	**8**	**5.0**	**.250**	.410	7.023
5	**3.5**	**.190**	.320	3.700	**10**	**6.0**	**.250**	.410	8.647
6	**4.0**	**.190**	.290	4.030					
6	**4.0**	**.210**	.350	4.692	**12**	**7.0**	**.310**	.620	14.29

ALUMINUM CHANNELS
ALUMINUM ASSOCIATION
6061-T6 (Extruded)†

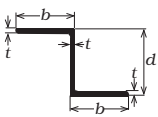


AMS-QQ-A-200/8 (Except for Marking)
ASTM B 221 ASTM B 308
Identified
Stock Lengths 25 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

Depth *d* In.	Flange *b* In.	Web *t* In.	Flange Thickness t_f In.	Lbs. per Ft.	Depth *d* In.	Flange *b* In.	Web *t* In.	Flange Thickness *tf In.*	Lbs. per Ft.
2	**1.00**	**.13**	.13	.5774	**6**	**3.25**	**.21**	.35	4.030
2	**1.25**	**.17**	.26	1.071	**7**	**3.50**	**.21**	.38	4.715
3	**1.50**	**.13**	.20	1.135	**8**	**3.00**	**.19**	.35	4.147
3	**1.75**	**.17**	.26	1.597	**8**	**3.75**	**.25**	.41	5.789
4	**2.00**	**.15**	.23	1.738	**9**	**3.25**	**.23**	.35	4.982
4	**2.25**	**.19**	.29	2.331	**10**	**3.50**	**.25**	.41	6.138
5	**2.25**	**.15**	.26	2.212	**10**	**4.25**	**.31**	.50	8.359
5	**2.75**	**.19**	.32	3.089	**12**	**4.00**	**.29**	.47	8.274
6	**2.50**	**.17**	.29	2.834					



ALUMINUM TEES AND ZEES
6061-T6 (Extruded)†



AMS-QQ-A-200/8 (Except for Marking)
ASTM B 221 ASTM B 308
Identified
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

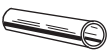
TEES
Stock Lengths 22 Ft.

Die No.	Size Stem Inches *d*	Flange Inches *b*	Thickness Inches *t*	Lbs. per Ft.
83490	**1 1/4**	**1 1/2**	**1/8**	.4351
72290	**1 1/2**	**1 1/2**	**3/16**	.6821
18143	**1 1/2**	**1 1/2**	**1/4**	.8702
	***** **2**	**2**	**1/4**	1.260
	***** **3**	**3**	**3/8**	2.717

ZEES
Stock Lengths 25 Ft.

Web Inches *d*	Thickness Inches *t*	Flange Inches *b*	Lbs. per Ft.
3	**1/4**	**2 11/16**	2.333
3**	**3/8**	**2 11/16**	3.381

*25 ft.
**30 ft.
† For Architectural Shapes, see *page 190*



ALUMINUM ROUND TUBING DRAWN SEAMLESS

3003-H14

Not Identified
Normally Produced to O.D. and Wall Dimensions
ASTM B 210
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Pink

O.D.		Gage	Wall	I.D.	Lbs. per Ft.
1/4	x	20	**.035**	.180	.0281
3/8	x	22	**.028**	.319	.0363
		20	**.035**	.305	.0444
1/2	x	20	**.035**	.430	.0607
		18	**.049**	.402	.0825
		16	**.065**	.370	.1055
5/8	x	22	**.028**	.569	.0624
		20	**.035**	.555	.0771
		18	**.049**	.527	.1053
		16	**.065**	.495	.1359
3/4	x	20	**.035**	.680	.0934
		18	**.049**	.652	.1282
		16	**.065**	.620	.1662
7/8	x	18	**.049**	.777	.1511
		16	**.065**	.745	.1965
1	x	20	**.035**	.930	.1261
		18	**.049**	.902	.1739
		17	**.058**	.884	.2039
		16	**.065**	.870	.2268
1 1/8	x	17	**.058**	1.009	.2310
1 1/4	x	20	**.035**	1.180	.1587
		16	**.065**	1.120	.2875
1 1/2	x	20	**.035**	1.430	.1914
		17	**.058**	1.384	.3121
		16	**.065**	1.370	.3481
1 3/4	x	20	**.035**	1.680	.2240
		16	**.065**	1.620	.4088
2	x	20	**.035**	1.930	.2567
		16	**.065**	1.870	.4694
2 1/2	x	16	**.065**	2.370	.5907
3	x	16	**.065**	2.870	.7120

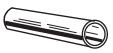
ALUMINUM ROUND TUBING DRAWN SEAMLESS



6061-T6

Under 1/2" — Not Identified
1/2" and Over — Identified
Normally Produced to O.D. and Wall Dimensions
ASTM B 210 AMS 4082
Stock Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

O.D.	Gage	Wall	I.D.	Lbs. per Ft.
3/16 x	20	**.035**	.118	.0197
1/4 x	18	**.049**	.152	.0364
	17	**.058**	.134	.0411
5/16 x	20	**.035**	.243	.0359
	18	**.049**	.215	.0477
	17	**.058**	.197	.0545
3/8 x	20	**.035**	.305	.0440
	18	**.049**	.277	.0590
	17	**.058**	.259	.0679
	16	**.065**	.245	.0744
7/16 x	18	**.049**	.340	.0703
	16	**.065**	.308	.0895
1/2 x	22	**.028**	.444	.0488
	20	**.035**	.430	.0601
	18	**.049**	.402	.0816
	17	**.058**	.384	.0947
	16	**.065**	.370	.1045
	11	**.120**	.260	.1685
5/8 x	20	**.035**	.555	.0763
	18	**.049**	.527	.1043
	17	**.058**	.509	.1215
	16	**.065**	.495	.1345
3/4 x	20	**.035**	.680	.0925
	18	**.049**	.652	.1269
	17	**.058**	.634	.1483
	16	**.065**	.620	.1645
	14	**.083**	.584	.2045
7/8 x	20	**.035**	.805	.1086
	18	**.049**	.777	.1495
	17	**.058**	.759	.1751
	16	**.065**	.745	.1945
1 x	20	**.035**	.930	.1248
	18	**.049**	.902	.1722
1 x	17	**.058**	.884	.2019
	16	**.065**	.870	.2245
	14	**.083**	.834	.2812
	1/8	**.125**	.750	.4041
1 1/8 x	20	**.035**	1.055	.1409
	17	**.058**	1.009	.2286
1 1/4 x	20	**.035**	1.180	.1571
	18	**.049**	1.152	.2174
	17	**.058**	1.134	.2554
	16	**.065**	1.120	.2846
	14	**.083**	1.084	.3579
1 3/8 x	20	**.035**	1.305	.1733
	18	**.049**	1.277	.2400
	17	**.058**	1.259	.2822
1 1/2 x	20	**.035**	1.430	.1894
	18	**.049**	1.402	.2627
	17	**.058**	1.384	.3090
	16	**.065**	1.370	.3446
	14	**.083**	1.334	.4345
1 5/8 x	20	**.035**	1.555	.2056
	17	**.058**	1.509	.3358
1 3/4 x	17	**.058**	1.634	.3626
	14	**.083**	1.584	.5112
1 7/8 x	17	**.058**	1.759	.3893
2 x	18	**.049**	1.902	.3532
	17	**.058**	1.884	.4161
	16	**.065**	1.870	.4647
	14	**.083**	1.834	.5878
2 1/4 x	18	**.049**	2.152	.3984
	16	**.065**	2.120	.5247
	14	**.083**	2.084	.6645
2 1/2 x	16	**.065**	2.370	.5847
3 x	16	**.065**	2.870	.7048
	14	**.083**	2.834	.8945
4 x	16	**.065**	3.870	.9450



ALUMINUM ROUND TUBING EXTRUDED SEAMLESS

6061-T6511

Identified
AMS-QQ-A-200/8 ASTM B 221
Stock Lengths 12 and 24 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Blue

O.D.	Wall	I.D.	Lbs. per Ft.	O.D.	Wall	I.D.	Lbs. per Ft.
1 1/2 x	**1/8**	**1.250**	.6350	**4 x**	**1/8**	**3.750**	1.788
	1/4	**1.000**	1.155		**1/4**	**3.500**	3.464
1 3/4 x	**1/4**	**1.250**	1.375		**1/2**	**3.000**	6.465
2 x	**1/8**	**1.750**	.8659		**3/4**	**2.500**	9.005
	1/4	**1.500**	1.616	**4 1/2 x**	**1/2**	**3.500**	7.389
2 1/4 x	**1/2**	**1.250**	3.233		**3/4**	**3.000**	10.39
2 1/2 x	**1/8**	**2.250**	1.097	**5 x**	**1/2**	**4.000**	8.313
	1/4	**2.000**	2.078		**3/4**	**3.500**	11.78
	1/2	**1.500**	3.695		**1**	**3.000**	14.78
2 3/4 x	**1/2**	**1.750**	4.152	**5 1/2 x**	**1/2**	**4.500**	9.236
	5/8	**1.500**	4.907		**3/4**	**4.000**	13.16
	3/4	**1.250**	5.542		**1**	**3.500**	16.63
3 x	**1/8****	**2.750**	1.328	**6 x**	**1/2**	**5.000**	10.16
	1/4	**2.500**	2.540		**3/4**	**4.500**	14.55
	1/2	**2.000**	4.618		**1***	**4.000**	18.47
	3/4	**1.500**	6.234	**6 1/2 x**	**1**	**4.500**	20.32
3 1/4 x	**3/8**	**2.500**	3.983	**7 x**	**1/2**	**6.000**	12.01
	1/2	**2.250**	5.080		**1***	**5.000**	22.17
3 1/2 x	**1/2**	**2.500**	5.542	**8 x**	**1/4**	**7.500**	7.158
	3/4	**2.000**	7.620		**1***	**6.000**	25.86
3 3/4 x	**1/2**	**2.750**	6.004				

*****12 ft. lengths only
******Also available Extruded Structural



ALUMINUM ROUND PIPE

6063-T6

Schedule 40

Under 1" — Welded - ASTM B 221
1" & Over — Extruded Seamless - ASTM B 241
Identified
Chemical Composition and Mechanical Properties, *Pages 238-241*
Stock Lengths 20 Ft. Identification Color: Yellow

Nominal Size	O.D.	I.D.	Wall	Lbs. per Ft.
1/2*	.840	.622	.109	.2914
3/4*	1.050	.824	.113	.3872
1	1.315	1.049	.133	.5749
1 1/4†	1.660	1.380	.140	.7782
1 1/2†	1.900	1.610	.145	.9306
2	2.375	2.067	.154	1.251
4	4.500	4.026	.237	3.733

***** Not Identified
† Also Handrail Pipe, Not Identified, Plain Ends

ALUMINUM ROUND PIPE
6061-T6



Under 1" — Drawn Seamless
1" & Over — Extruded Seamless
ASTM B 241
Identified
Chemical Composition and Mechanical Properties, *Pages 238-241*
Stock Lengths 20 Ft.
Identification Colors: Schedule 40—Blue; Schedule 80—Purple

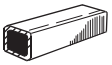
Nominal Size	O.D.	I.D.	Wall	Lbs. per Ft.
		Schedule 40		
1/8*	.405	.269	.068	.0847
1/4*	.540	.364	.088	.1470
3/8*	.675	.493	.091	.1963
1/2	.840	.622	.109	.2944
3/4	1.050	.824	.113	.3912
1	1.315	1.049	.133	.5808
1 1/4	1.660	1.380	.140	.7862
1 1/2	1.900	1.610	.145	.9402
2	2.375	2.067	.154	1.264
2 1/2	2.875	2.469	.203	2.004
3	3.500	3.068	.216	2.621
3 1/2	4.000	3.548	.226	3.151
4	4.500	4.026	.237	3.733
5	5.563	5.047	.258	5.057
6	6.625	6.065	.280	6.564
8	8.625	7.981	.322	9.878
		Schedule 80		
1	1.315	.957	.179	.7513
1 1/4	1.660	1.278	.191	1.037
1 1/2	1.900	1.500	.200	1.256
2	2.375	1.939	.218	1.737
2 1/2	2.875	2.323	.276	2.650
3	3.500	2.900	.300	3.547
3 1/2	4.000	3.364	.318	4.326
4	4.500	3.826	.337	5.183
5	5.563	4.813	.375	7.188

***12 ft. lengths**

ALUMINUM EXTRUDED ROUND STRUCTURAL PIPE
6061-T6

ASTM B 429
Chemical Composition and Mechanical Properties, *Pages 238-241*
Stock Lengths 20 Ft. Identification Color: Plain Ends

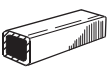
Nominal Size	Schedule	O.D.	I.D.	Wall	Lbs. Per Ft.
3/4	40	1.050	.824	.113	.3912
1	40	1.315	1.049	.133	.5808
1 1/4	40	1.660	1.380	.140	.7862
1 1/2	40	1.900	1.610	.145	.9402
1 1/2	80	1.900	1.500	.200	1.256
2	40	2.375	2.067	.154	1.264
2	80	2.375	1.939	.218	1.737
2 1/2	40	2.875	2.469	.203	2.004
3	40	3.500	3.068	.216	2.621
3 1/2	40	4.000	3.548	.226	3.151
4	40	4.500	4.026	.237	3.733



ALUMINUM SQUARE TUBING 6061-T6

ASTM B 221
Not Identified
Sharp Corners Stock Lengths 24 Ft.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Plain Ends

Size in Inches	Wall	Lbs. per Ft.	Size in Inches	Wall	Lbs. per Ft.
1 x 1	**x .125**	.5150	**2 x 2**	**x .125**	1.102
1½ x 1½	**x .125**	.8090	**2 x 2**	**x .250**	2.058



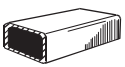
ALUMINUM SQUARE TUBING 6063-T52 (Extruded)

ASTM B 221 Type 2
Not Identified
Sharp Corners Stock Lengths 21 Ft.-1 In.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Yellow

Size in Inches	Wall	Lbs. per Ft.	Size in Inches	Wall	Lbs. per Ft.
¾ x ¾	**x .062**	.1986	**1¾ x 1¾**	**x .125**	.9458
	.125	.3638	**2 x 2**	**x .125**	1.091
1 x 1	**x .062**	.2708		**.188***	1.586
	.125	.5093	**2½ x 2½**	**x .125**	1.426
1¼ x 1¼	**x .125**	.6548	**3 x 3**	**x .125**	1.673
1½ x 1½	**x .125**	.8003	**4 x 4**	**x .125**	2.255

***12 ft. length

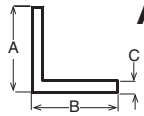
ALUMINUM RECTANGULAR TUBING 6063-T52 (Extruded)



ASTM B 221 Type 2
Not Identified
Sharp Corners Stock Lengths 21 Ft.-1 In.
Chemical Composition and Mechanical Properties, *Pages 238-241*
Identification Color: Yellow

Size in Inches	Wall	Lbs. per Ft.	Size in Inches	Wall	Lbs. per Ft.
½ x 1	**x .125**	.3638	**1¾ x 3½**	**x .125**	1.455
¾ x 1½	**x .125**	.5820	**1¾ x 4**	**x .125**	1.601
1 x 1½	**x .125**	.6548	**1¾ x 4½**	**x .125**	1.746
1 x 2	**x .125**	.8003	**1¾ x 5**	**x .125**	1.892
1¼ x 2½	**x .125**	1.019	**2 x 3**	**x .125**	1.382
1½ x 2	**x .125**	.9458	**2 x 4**	**x .125**	1.673
1½ x 2½	**x .125**	1.091	**2 x 5**	**x .125**	1.964
1½ x 3	**x .125****	1.250	**2 x 6**	**x .125**	2.255
1¾ x 3	**x .125**	1.310	**3 x 6**	**x .188**	3.814

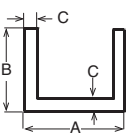
****24 ft. length



ALUMINUM EXTRUSIONS
ARCHITECTURAL SHAPES
ANGLES
6063-T52

ASTM B 221
EQUAL AND UNEQUAL LEGS, SHARP CORNERS
Stock Lengths 16 Ft.
For Structural Angles, see *page 181*

Section number	A Inches	B Inches	C Inches	Lbs. per Ft.	Est. Lbs. 16 Ft.
94887	3/8	3/4	3/32	.1126	1.802
41770	1/2	1/2	1/16	.0682	1.091
31629	1/2	1/2	1/8	.1273	2.037
39709	1/2	1	1/8	.2001	3.202
24858	1/2	1 1/4	1/8	.2364	3.782
57571	3/4	3/4	1/16	.1049	1.678
78340	3/4	3/4	1/8	.2001	3.202
47195	3/4	1	1/8	.2364	3.782
70974	3/4	1 1/2	1/8	.3092	4.947
57143	1	1	1/16	.1410	2.256
30372	1	1	1/8	.2728	4.365
86748	1	1	3/16	.3955	6.328
57457	1	1 1/2	1/8	.3456	5.530
00664	1	2	1/8	.4183	6.693
09412	1 1/4	1 1/4	1/8	.3456	5.530
59370	1 1/4	1 1/4	3/16	.5047	8.075
11316	1 1/4	3 1/2	1/8	.6729	10.77
49985	1 1/2	1 1/2	1/8	.4183	6.693
23173	1 1/2	1 1/2	3/16	.6138	9.821
26292	1 3/4	1 3/4	1/8	.4911	7.858
99198	2	2	1/8	.5638	9.021
88854	2	2	3/16	.8320	13.31
89114	2	2	1/4	1.091	17.46
66805††	2 1/4	5 1/4	1/8	1.073	18.24††



CHANNELS
6063-T52

ASTM B 221
SHARP CORNERS
Stock Lengths 16 Ft.
For Structural Channels, see *page 182*

Section number	A Inches	B Inches	C Inches	Lbs. per Ft.	Est. Lbs. 16 Ft.
58298	1/2	3/8	1/8	.1455	2.328
35040	1/2	1/2	3/32	.1433	2.293
83502	1/2	3/4	1/8	.2547	4.075
32601	5/8	5/8	1/8	.2364	3.782
78569	3/4	3/8	1/8	.1819	2.910
87926	3/4	3/4	1/8	.2910	4.656
78603	1	1/2	1/8	.2547	5.094*
58367	1	1	1/8	.4002	6.403
09973	1 1/4	1/2	1/8	.2910	5.820*
82336	1 1/4	1 1/4	1/8	.5093	8.149
41193	1 1/2	1/2	1/8	.3274	6.548*
28766	1 3/4	1/2	1/8	.3638	5.821
51938	1 3/4	3/4	1/8	.4365	6.984
05232	1 3/4	1	1/8	.5093	8.149
88982	2	1/2	1/8	.4002	6.403
68296	2	1	1/8	.5457	8.731
70696	2	1	1/8	.5457	10.91*
45220	2 1/4	7/8	1/8	.5457	8.731
29627†	2 1/2	1 1/2	1/8	.7718	16.98**
17323	3	1/2	1/8	.5457	8.731
91718	3	1	1/8	.6912	11.06
91689	5	2	3/16	1.882	30.11

*Stock Length 20 ft. — Est. Lbs. for 20 ft. †6061-T6
**Stock Length 22 ft. — Est. Lbs. for 22 ft. ††6063-T6 — Est. lbs. for 17 ft.

ALUMINUM EXTRUSIONS
ARCHITECTURAL SHAPES

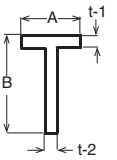
TEES

6063-T52

ASTM B 221

SHARP ANGLES, SHARP CORNERS

Stock Lengths 16 Ft.



Section number	A inches	B inches	t-1 inches	t-2 inches	Est. Lbs. per foot	Est. Lbs. 16′ Lgth.
66982	3/4	3/4	1/8	1/8	.2001	3.202
90387	1	1	1/8	1/8	.2728	4.365
89892	2	3/4	1/8	1/8	.3819	6.110

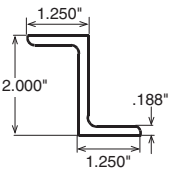
ZEES

6061-T6

AMS-QQ-A-200/8

Stock Lengths 22 Ft.

23135



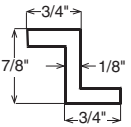
Lbs. per Ft.—.9173

6063-T52

ASTM B 221

Stock Lengths 16 Ft.

94549



Lbs. per Ft.—.319

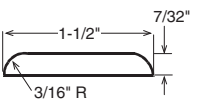
TRIM MOULDING

6063-T52

ASTM B 221

Stock Lengths 16 Ft.

14458

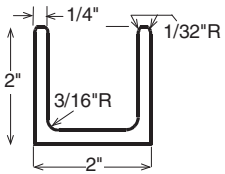


Lbs. per Ft.—.356

ALUMINUM EXTRUSIONS
TRUCK BODY SHAPES

Channel 6063-T6
ASTM B 221
Stock Lengths 22 Ft.

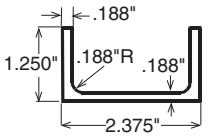
41761



Lbs. per Ft.—1.667

Channel 6063-T6
ASTM B 221
Stock Lengths 24 Ft.

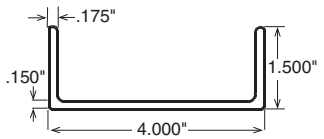
30296



Lbs. per Ft.—1.031

Floor Bolster 6063-T6
ASTM B 221
Stock Lengths 24 Ft.

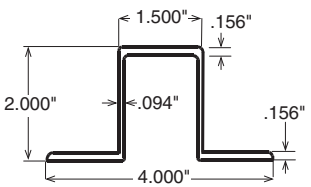
83567



Lbs. per Ft.—1.286

Side Post 6063-T6
ASTM B 221
Stock Lengths 22 Ft.

94942



Lbs. per Ft.—1.163

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SECTION 11

BRASS AND COPPER

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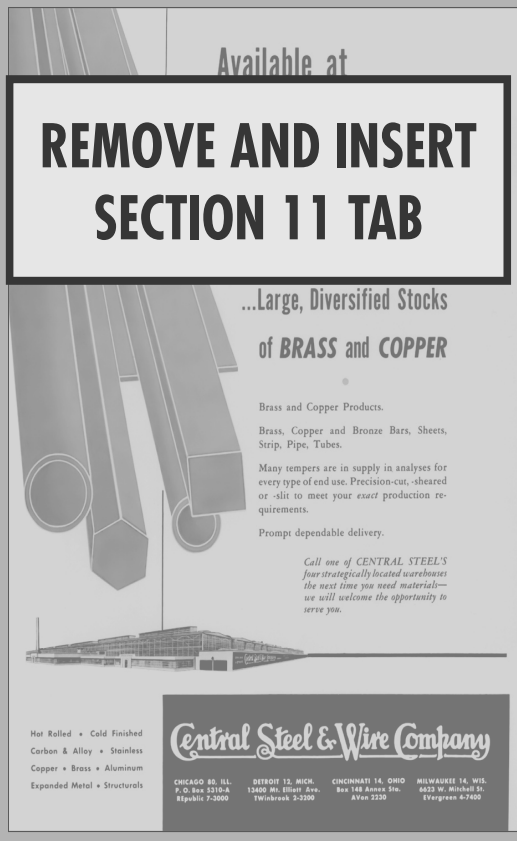
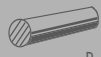


Central Steel & Wire Newspaper Ad from June 1952

COPPER AND COPPER ALLOY INDEX

ROD and BAR

Rounds



Alloy		Page
110	Copper	199
145	Tellurium Copper	203
147	Sulfur Copper	200
314	Commercial Bronze	205
316	Commercial Bronze	205
353	Flanging & Thread Rolling Brass	194
360	Free Cutting Brass	193
464	Non-Leaded Naval	
954	Aluminum Bronze	227
—	Ampco	226

Half Rounds



Alloy		
360	Free Cutting Brass	195

Hexagons



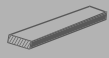
Alloy		
145	Tellurium Copper	204
360	Free Cutting Brass	194

Squares



Alloy		
110	Copper	200
316	Commercial Bronze	205
360	Free Cutting Brass	195
954	Aluminum Bronze	227-229
—	Ampco	227-229

Rectangles



Alloy		
110	Copper	201-202
110	Silver Plated Copper	201-202
316	Commercial Bronze	205
360	Free Cutting Brass	196-197
954	Aluminum Bronze	227-229
—	Ampco	227-229

WIRE



Alloy		
110	Copper	222
260	Brass	222

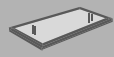
COIL, SHEET, PLATE



Coil

Alloy		Page
110	Copper	214
220	Commercial Bronze	211
260	Brass	207-209
510	Phosphor Bronze	212

Flat Sheet



Alloy		
110	Copper	212, 214-215
		215
		215
		213
		211
		209
		210
		210
		212

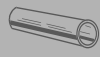
Plate



Alloy		
110	Copper	212, 215
122	(DHP) Copper	215
260	Brass	208
280	Muntz Metal	210
353	Leaded Brass	209
464	Naval Brass	210

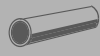
TUBING

Round



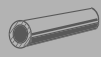
Alloy		
122	Copper General Purpose	220
	Soft	221
272	Brass	218
330	Brass	216-218
954	Aluminum Bronze	230
—	Ampco	230

PIPE



Alloy		
122	Copper	221
230	Red Brass	219

BUSHING



Alloy		
932	Bronze	223-225
—	Ampco	230

SHAPE CUTTING 264

REMOVE AND INSERT SECTION 11 TAB

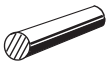
BRASS ROUNDS



ASTM B 16 Alloy 360
Free Cutting
Half Hard (H02) Temper
Random Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Page 233*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/16	.0113	.1356	1 1/16	3.266	39.19
3/32*	.0255	.3060	1 3/32	3.462	41.54
7/64*	.0346	.4152	1 1/8	3.662	43.94
1/8*	.0452	.5424	1 3/16	4.080	48.96
9/64	.0572	.6864	1 1/4	4.521	54.25
5/32*	.0707	.8484	1 5/16††	4.984	59.81
.162*	.0759	.9108	1 3/8	5.470	65.64
11/64	.0855	1.026	1 7/16	5.979	71.75
3/16*	.1017	1.220	1 1/2	6.510	78.12
13/64*	.1194	1.433	1 9/16	7.064	84.77
7/32	.1385	1.662	1 5/8	7.640	91.68
15/64*	.1590	1.908	1 11/16	8.239	98.87
1/4*	.1808	2.170	1 3/4	8.861	106.3
17/64	.2041	2.449	1 13/16	9.505	114.1
9/32	.2290	2.748	1 7/8	10.17	122.0
19/64	.2551	3.061	1 15/16	10.86	130.3
5/16	.2826	3.391	2	11.57	138.8
21/64	.3115	3.738	2 1/16	12.31	147.7
11/32	.3420	4.104	2 1/8	13.07	156.8
23/64	.3737	4.484	2 3/16	13.85	166.2
3/8	.4069	4.883	2 1/4	14.65	175.8
25/64	.4414	5.297	2 3/8††	16.32	195.8
13/32	.4776	5.731	2 1/2	18.08	217.0
27/64	.5150	6.180	2 5/8**	19.94	239.3
7/16	.5538	6.646	2 3/4	21.88	262.6
15/32	.6359	7.631	2 7/8	23.92	287.0
1/2	.7234	8.681	3	26.04	312.5
33/64	.7693	9.232	3 1/8	28.26	339.1
17/32	.8167	9.800	3 1/4	30.56	366.7
9/16	.9155	10.99	3 3/8	32.96	395.5
19/32	1.020	12.24	3 1/2††	35.44	425.3
5/8	1.130	13.56	3 5/8	38.02	456.2
21/32	1.246	14.95	3 3/4	40.69	488.3
11/16	1.368	16.42	3 7/8**	43.45	521.4
23/32	1.495	17.94	4**	46.29	555.5
3/4	1.628	19.54	4 1/8	49.23	590.8
25/32	1.766	21.19	4 1/2	58.59	703.1
13/16	1.910	22.92	4 3/4	65.28	783.4
27/32	2.060	24.72	5 1/2	87.53	1050
7/8	2.215	26.58	6	104.2	1250
29/32	2.377	28.52	7†	141.8	1701
15/16	2.543	30.52	8†	185.2	2222
31/32	2.716	32.59	9†	234.4	2812
1	2.893	34.72	10†	289.3	3471
1 1/32	3.077	36.92			

* Swiss Tol. ±.0005
** Stress Relieved
† Cast and Turned (ASTM B 16 chemistry only)
†† Also Stress Relieved



BRASS ROUNDS

ASTM B 453 Alloy 353

for Flanging and Thread Rolling

Quarter Hard (H01) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Black

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/16	.1017	1.220	5/8	1.130	13.56
7/32	.1385	1.662	11/16	1.368	16.42
1/4	.1808	2.170	3/4	1.628	19.54
5/16	.2826	3.391	7/8	2.215	26.58
11/32	.3420	4.104	15/16	2.543	30.52
3/8	.4069	4.883	1 1/16	3.266	39.19
7/16	.5538	6.646	1 5/16	4.984	59.81
1/2	.7234	8.681	1 7/16	5.979	71.75
9/16	.9155	10.99			



BRASS HEXAGONS

SHARP CORNERS

ASTM B 16 Alloy 360

Free Cutting

Half Hard (H02) Temper

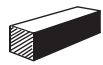
Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8	.0498	.5976	1 3/16	4.499	53.99
5/32	.0779	.9348	1 1/4	4.985	59.82
3/16	.1122	1.346	1 5/16	5.496	65.95
7/32	.1527	1.832	1 3/8	6.032	72.38
1/4	.1994	2.393	1 7/16	6.593	79.12
9/32	.2524	3.029	1 1/2	7.178	86.14
5/16	.3116	3.739	1 9/16	7.789	93.47
11/32	.3771	4.525	1 5/8*	8.424	101.1
3/8	.4486	5.383	1 11/16	9.085	109.0
13/32	.5267	6.320	1 3/4	9.770	117.2
7/16†	.6106	7.327	1 7/8	11.22	134.6
1/2	.7976	9.571	2	12.76	153.1
9/16	1.009	12.11	2 1/8	14.41	172.9
5/8	1.246	14.95	2 1/4	16.15	193.8
11/16	1.508	18.10	2 3/8	18.00	216.0
3/4	1.795	21.54	2 1/2	19.94	239.3
13/16	2.106	25.27	2 3/4	24.13	289.6
7/8	2.443	29.32	3**	28.71	344.5
15/16	2.804	33.65	3 1/8	31.16	373.9
1*	3.190	38.28	3 1/2	39.08	469.0
1 1/16	3.602	43.22	4	51.04	612.5
1 1/8	4.038	48.46			

* Also available Rounded Corners — Ends Yellow
** 8 to10 ft. lengths
† Also Alloy 353 Quarter Hard (H01) Temper — Ends Black

BRASS SQUARES



ASTM B 16 Alloy 360
Free Cutting
Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/32	.0324	.3888
1/8	.0576	.6912
5/32	.0900	1.080
3/16	.1295	1.554
7/32	.1764	2.117
1/4	.2303	.2.764
9/32	.2915	3.498
5/16	.3598	4.318
3/8	.5181	6.217
7/16	.7051	8.461
1/2	.9210	.11.05
9/16	1.166	13.99
5/8	1.439	17.27
11/16	1.741	20.89
3/4	2.072	24.86
13/16	2.432	29.18
7/8	2.821	33.85
1	.3.684	.44.21
1 1/8	4.663	55.96
1 1/4	5.756	69.07
1 3/8	6.965	83.58
1 1/2	8.289	99.47
1 5/8	9.728	116.7
1 3/4	11.28	135.4
2	.14.74	.176.9
2 1/4	18.65	223.8
2 1/2	23.03	276.4
3*	33.16	397.9

*Stress Relieved

BRASS HALF ROUNDS



ASTM B 16 Alloy 360
Free Cutting
Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/2 x 1/4	.3617	4.340
1 x 1/2	1.447	17.36



BRASS RECTANGLES

ASTM B 16 Alloy 360

Free Cutting

Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8 x 1/4	.1151	1.381
3/8	.1727	2.072
1/2	.2303	2.764
3/4	.3454	4.145
7/8	.4029	4.835
1	.4605	5.526
1 1/4	.5756	6.907
1 1/2	.6908	8.290
2	.9210	11.05
2 1/4	1.036	12.43
2 1/2	1.151	13.81
3	1.382	16.58
3/16 x 3/8	.2590	3.108
1/2	.3454	4.145
5/8	.4317	5.180
3/4	.5181	6.217
1	.6908	8.290
1 1/4	.8634	10.36
1 1/2	1.036	12.43
1 3/4	1.209	14.51
2	1.382	16.58
2 1/2	1.727	20.72
3	2.072	24.86
1/4 x 3/8	.3454	4.145
1/2	.4605	5.526
5/8	.5756	6.907
3/4	.6908	8.290
7/8	.8059	9.671
1	.9210	11.05
1 1/4	1.151	13.81
1 1/2	1.382	16.58
1/4 x 1 3/4	1.612	19.34
2	1.842	22.10
2 1/4	2.072	24.86
2 1/2	2.303	27.64
3	2.763	33.16
4	3.684	44.21
4 1/2	4.145	49.74
5	4.605	55.26
5/16 x 3/8	.4317	5.180
1/2	.5756	6.907
5/8	.7195	8.634
3/4	.8634	10.36
1	1.151	13.81
1 1/4	1.439	17.27
1 1/2	1.727	20.72
1 3/4	2.015	24.18
2	2.303	27.64
2 1/2	2.878	34.54
3	3.454	41.45
3/8 x 1/2	.6908	8.290
5/8	.8634	10.36
3/4	1.036	12.43
1	1.382	16.58
1 1/4	1.727	20.72
1 1/2	2.072	24.86
1 3/4	2.418	29.02
2	2.763	33.16
2 1/2	3.454	41.45
3	4.145	49.74
3 1/2	4.835	58.02
4	5.526	66.31

Continued on following page

BRASS RECTANGLES



ASTM B 16 Alloy 360

Free Cutting

Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Continued from preceding page

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/2 x 5/8	1.151	13.81
3/4	1.382	16.58
7/8	1.612	19.34
1	1.842	22.10
1 1/4	2.303	27.64
1 1/2	2.763	33.16
1 3/4	3.224	38.69
2	3.684	44.21
2 1/2	4.605	55.26
3	5.526	66.31
3 1/2	6.447	77.36
4	7.368	88.42
4 1/2	8.289	99.47
5	9.210	110.5
5/8 x 3/4	1.727	20.72
7/8	2.015	24.18
1	2.303	27.64
1 1/2	3.454	41.45
2	4.605	55.26
2 1/2	5.756	69.07
3	6.908	82.90
4	9.21	110.5
3/4 x 1	2.763	33.16
1 1/4	3.454	41.45
1 1/2	4.145	49.74
2	5.526	66.31
2 1/4	6.217	74.60
2 1/2	6.908	82.90
3	8.289	99.47
1 x 1 1/4	4.605	55.26
1 1/2	5.526	66.31
1 3/4	6.447	77.36
2	7.368	88.42
2 1/4	8.289	99.47
2 1/2	9.210	110.5
3	11.05	132.6
3 1/2	12.89	154.7
4	14.74	176.9
5	18.42	221.0
6	22.10	265.2
1 1/4 x 1 1/2	6.908	82.90
1 3/4	8.059	96.71
2	9.210	110.5
2 1/2	11.51	138.1
3	13.82	165.8
4	18.42	221.0
1 1/2 x 2	11.05	132.6
3	16.58	199.0
4	22.10	265.2
1 3/4 x 3	19.34	232.1
2 x 2 1/2	18.42	221.0
3	22.10	265.2
4	29.47	353.6
3 x 4	44.21	530.5



NON-LEADED
NAVAL BRASS ROUNDS

ASTM B 21 Alloy 464

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Red

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
7/16	.5484	6.581
1/2	.7163	8.596
3/4	1.612	19.34
7/8	2.194	26.33
1	2.865	34.38
1 1/4	4.477	53.72
1 3/8	5.417	65.00



LEADED
NAVAL BRASS ROUNDS

ASTM B 21 Alloy 485

Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: White with Yellow Dot

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
5/16	.2807	3.368
3/8	.4042	4.850
1/2	.7187	8.624
5/8	1.123	13.48
3/4	1.617	19.40
7/8	2.201	26.41
1	2.875	34.50
1 1/4	4.492	53.90
1 1/2	6.468	77.62
2	11.50	138.0

COPPER ROUNDS



ASTM B 187 Alloy 110

Electrolytic Tough Pitch

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8*	.0476	.5712
3/16*	.1070	1.284
1/4	.1903	.2.284
5/16	.2973	3.568
3/8	.4281	5.137
7/16	.5827	6.992
1/2	.7611	.9.133
5/8	1.189	14.27
3/4	1.712	20.54
7/8	2.331	27.97
1	3.044	36.53
1 1/8	3.853	46.24
1 1/4	4.757	57.08
1 3/8	5.755	69.06
1 1/2	6.849	82.19
1 5/8	8.039	96.47
1 3/4	9.323	111.9
2	12.18	.146.2
2 1/4	15.41	184.9
2 3/8	17.17	206.0
3	27.40	328.8

*ASTM B 1
**Chemistry only



COPPER SQUARES

ASTM B 187 Alloy 110

Electrolytic Tough Pitch

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/4	.2423	2.908	1	3.876	46.51
1/2	.9690	11.63	1 1/4	6.056	72.67
3/4	2.180	26.16	1 1/2	8.721	104.7
7/8	2.968	35.62	2	15.50	186.0



SULFUR COPPER ROUNDS

ASTM B 301 Alloy 147

Free Cutting

Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Yellow

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/4	.1903	2.284	7/8	2.331	27.97
5/16	.2973	3.568	1	3.044	36.53
3/8	.4281	5.137	1 1/8	3.853	46.24
7/16	.5827	6.992	1 1/4	4.757	57.08
1/2	.7611	9.133	1 3/8	5.755	69.06
5/8	1.189	14.27	1 1/2	6.850	82.20
3/4	1.712	20.54	1 3/4	9.323	111.9
			2	12.18	146.2

COPPER BUS BAR RECTANGLES



ASTM B 187 Alloy 110
SQUARE EDGE
Electrolytic Tough Pitch
Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/16 x 1/2	.1211	1.453
5/8	.1514	1.817
1	.2423	2.908
2	.4845	5.814
3/32 x 5/8	.2272	2.726
1 1/2	.5454	6.545
1/8 x 3/8	.1817	2.180
1/2	.2423	2.908
5/8	.3028	3.634
3/4	.3634	4.361
1	.4845	5.814
1 1/4	.6056	7.267
1 1/2	.7268	8.722
1 3/4	.8479	10.17
2	.9690	11.63
3	1.454	17.45
4	1.938	23.26
3/16 x 1/2	.3634	4.361
5/8	.4542	5.450
3/4	.5451	6.541
7/8	.6359	7.631
1	.7268	8.722
1 1/4	.9084	10.90
1 1/2	1.090	13.08
2	1.454	17.45
2 1/2	1.817	21.80
3*	2.180	26.16
4	2.907	34.88
1/4 x 3/8	.3634	4.361
1/2	.4845	5.814
5/8	.6056	7.267
3/4	.7268	8.722
7/8	.8479	10.17
1	.9690	11.63
1 1/4	1.211	14.53
1 1/2	1.454	17.45
1 3/4	1.696	20.35
2	1.938	23.26
2 1/4	2.180	26.16
2 1/2	2.423	29.08
3*	2.907	34.88
1/4 x 3 1/4**	3.149	37.79
4*	3.876	46.51
5*	4.845	58.14
6	5.814	69.77
8*	7.752	93.02
5/16 x 3/4	.9084	10.90
1 1/4	1.514	18.17
1 1/2	1.817	21.80
3/8 x 3/4	1.090	13.08
1	1.454	17.45
1 1/4	1.817	21.80
1 1/2	2.180	26.16
2	2.907	34.88
2 1/2	3.634	43.61
3	4.361	52.33
4	5.814	69.77
5*	7.268	87.22
6*	8.721	104.7
1/2 x 3/4	1.454	17.45
1	1.938	23.26
1 1/4	2.423	29.08
1 1/2	2.907	34.88
2	3.876	46.51
2 1/2	4.845	58.14
3	5.814	69.77
4	7.752	93.02
5	9.690	116.3
6	11.63	139.6
3/4 x 1	2.907	34.88
1 1/4	3.634	43.61
1 1/2	4.361	52.33
1 3/4	5.087	61.04
2	5.814	69.77
3	8.721	104.7
4	11.63	139.6
6	17.44	209.3
1 x 1 1/4	4.845	58.14
1 1/2	5.814	69.77
2	7.752	93.02
3	11.63	139.6

***** Also Silver Plated (Paper interleaved)
****** Silver Plated only (Paper interleaved)

Continued on following page

COPPER BUS BAR RECTANGLES



ASTM B 187 Alloy 110

SQUARE EDGE

Electrolytic Tough Pitch

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Pink

Continued from preceding page

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1 x 4	15.50	186.0
5	19.38	232.6
6	23.26	279.1
1¼ x 3	14.54	174.5
6	29.07	348.8
1½ x 2	11.63	139.6
2 x 3	23.26	279.1
4	31.01	372.1

COPPER BUS BAR RECTANGLES



ASTM B 187 Alloy 110

FULL ROUND EDGE

Electrolytic Tough Pitch

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Pink

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8 x ½	.2423	2.908
¾	.3634	4.361
1	.4845	5.814
1/4 x ⅝	.6056	7.267
1*	.9690	11.63
1¼	1.211	14.53
1½	1.454	17.45
1/4 x 2*	1.938	23.26
2½**	2.423	29.08
3¼**	3.149	37.79
4*	3.876	46.51
5**	4.845	58.14
6**	5.814	69.77
8**	7.752	93.02
3/8 x 1	1.454	17.45

***Also Silver Plated (Paper interleaved)
****Silver Plated only (Paper interleaved)

TELLURIUM COPPER ROUNDS



ASTM B 301 Alloy 145

Half Hard (H02) Temper — Free Cutting

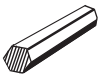
Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8	.0476	.5712
3/16	.1070	1.284
7/32	.1457	1.748
1/4	.1903	2.284
5/16	.2973	3.568
3/8**	.4281	5.137
7/16	.5827	6.992
1/2**	.7611	9.133
9/16	.9632	11.56
5/8	1.189	14.27
11/16	1.439	17.27
3/4	1.712	20.54
7/8	2.331	27.97
1	3.044	36.53
1 1/16	3.437	41.24
1 1/8	3.853	46.24
1 3/16	4.293	51.52
1 1/4	4.757	57.08
1 3/8	5.755	69.06
1 1/2	6.850	82.20
1 3/4	9.323	111.9
2	12.18	146.2
2 1/4	15.41	184.9
2 1/2	19.03	228.4
2 5/8	20.98	251.8
2 3/4*	23.02	276.2
3*	27.40	328.8
3 1/2*	37.29	447.5
4*	48.71	584.5

*ASTM B 301 chemistry only
**Hard Temper (H04) — Ends Grey



TELLURIUM COPPER HEXAGONS

ASTM B 301 Alloy 145

Half Hard (H02) Temper — Free Cutting

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Blue

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/8	.4720	5.664	3/4	1.888	22.66
7/16	.6425	7.710	7/8	2.570	30.84
1/2	.8392	10.07			
5/8	1.311	15.73	1	3.357	40.28



ALUMINUM SILICON BRONZE ROUNDS

ASTM B 150 Alloy 642

Drawn and Stress Relieved (HR50) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Orange

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/4	.1638	1.966	3/4	1.474	17.69
5/16	.2559	3.071	7/8	2.006	24.07
3/8	.3685	4.422	1	2.620	31.44
7/16	.5015	6.018	1 1/8	3.316	39.79
1/2	.6550	7.860	1 3/4	8.024	96.29
5/8	1.024	12.29	2 3/8	14.78	177.4
11/16	1.238	14.86			

COMMERCIAL BRONZE ROUNDS



ASTM B 140 Alloy 316*

Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

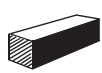
Identification Color: Green

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8	.0471	.5652	11/16	1.426	17.11
3/16	.1060	1.272	3/4	1.696	20.35
7/32	.1444	1.733	1	3.016	36.19
1/4	.1885	2.262	1 1/16	3.400	40.80
5/16	.2945	3.534	1 1/4	4.712	56.54
3/8	.4241	5.089	1 3/4	9.236	110.8
1/2	.7540	9.048	2	12.06	144.7
5/8	1.178	14.14	2 1/4	15.27	183.2
			2 1/2	18.85	226.2

***** All sizes also available Alloy 314 Half Hard Temper



COMMERCIAL BRONZE RECTANGLES and SQUARES



ASTM B 140 Alloy 316

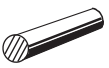
Half Hard (H02) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: Green

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/8 x 3/8	.5400	6.480	1/2 x 1/2	.9600	11.52
3/8 x 1*	1.440	17.28	1/2 x 1	1.920	23.04
3/8 x 1 1/4*	1.800	21.60	3/4 x 3/4	2.160	25.92
3/8 x 2	2.880	34.56	1 x 1	3.840	46.08



PHOSPHOR BRONZE ROUNDS

ASTM B 139 Alloy 544

Free Cutting

Hard (H04) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 233*

Identification Color: White

Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar	Size in Inches	Lbs. per Ft.	Est. Lbs. 12′ Bar
1/8	.0471	.5652	3/4	1.696	20.35
5/32	.0737	.8844	7/8	2.309	27.71
3/16	.1060	1.272	1	3.016	36.19
1/4	.1885	2.262	1 1/16	3.405	40.86
5/16	.2945	3.534	1 1/8	3.817	45.80
3/8	.4241	5.089	1 1/4	4.712	56.54
7/16	.5773	6.928	1 5/16	5.195	62.34
1/2	.7540	9.048	1 3/8	5.702	68.42
9/16	.9542	11.45	1 1/2	6.786	81.43
5/8	1.178	14.14	1 5/8	7.964	95.57
11/16	1.426	17.11	1 3/4	9.236	110.8



BRASS SHEET and COIL



ASTM B 36 Alloy 260

Soft Temper

Drawing and Spinning Quality

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Stock Lengths
26	**.0160 x 24**	.7096	coils
24	**.0201 x 24**	.8915	coils
22	**.0253 x 24**	1.122	coils and 96″
20	**.0320 x 24**	1.419	coils and 96″
18	**.0403 x 24**	1.787	coils and 96″
16	**.0508 x 24**	2.253	coils and 96″
14	**.0641 x 24**	2.843	coils and 96″
	36	2.843	96″
12	**.0808 x 24**	3.584	coils and 96″
1/8	**.125 x 24**	5.544	coils and 96″



BRASS SHEET and COIL



ASTM B 36 Alloy 260

Quarter Hard Temper
(Rockwell B40-65 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Stock Lengths
24	**.0201 x 24**	.8915	coils and 96″
20	**.0320 x 24**	1.419	coils and 96″
18	**.0403 x 24**	1.787	96″
16	**.0508 x 24**	2.253	coils and 96″
14	**.0641 x 24**	2.843	coils and 96″
1/8	**.125 x 24**	5.544	coils and 96″



BRASS SHEET, PLATE, and COIL



ASTM B 36 Alloy 260

Half Hard Temper

(Rockwell B60-77 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Stock Lengths
26	**.0160 x 24**	.7096	coils and 96″
24	**.0201 x 24**	.8915	coils and 96″
23	**.0226 x 24**	1.002	coils
22	**.0253 x 24**	1.122	coils and 96″
20	**.0320 x 24**	1.419	coils and 96″
	36	1.419	96″
19	**.0359 x 24**	1.592	coils
18	**.0403 x 24**	1.787	coils and 96″
16	**.0508 x 24**	2.253	coils and 96″
	36	2.253	96″
1/16	**.0625 x 36**	2.772	96″
14	**.0641 x 24**	2.843	coils and 96″
13	**.0720 x 24**	3.193	coils and 96″
12	**.0808 x 24**	3.584	coils and 96″
11	**.0907 x 24**	4.023	coils and 96″
	.0937 x 36	4.023	96″
9	**.1144 x 24**	5.074	96″
1/8	**.1250 x 24**	5.544	coils and 96″
3/16	**.1875 x 36**	8.316	96″
1/4	**.250 x 36**	11.09	96″



BRASS SHEET and COIL



ASTM B 36 Alloy 260

Hard Temper
(Rockwell B79-86 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Stock Lengths
30	**.0100 x 12**	.4435	coils
26	**.0160 x 12**	.7096	coils
24	**.0201 x 24**	.8915	coils
22	**.0253 x 12**	1.122	coils
—	**.1250 x 24**	5.544	96″

LEADED BRASS PLATE



ASTM B 121 Alloy 353

Engraver Quality
Stress Relief Annealed, Pickled

Half Hard Temper
(Rockwell B57-74 Approximate)

Stock Lengths 8 Ft.

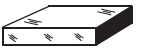
Chemical Composition and Mechanical Properties, *Pages 234, 235*

Size in Inches	Lbs. per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.
1/4 x 24	11.02	**3/8 x 24**	16.52
5/16 x 24	13.77	**1/2 x 24**	22.03

MUNTZ METAL SHEET and PLATE



ASTM B 36 Alloy 280



Quarter Hard (H01) Temper

Chemical Composition and Mechanical Properties, *Pages 234, 235*

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Sheet
3/16 x 36 x 96	8.181	196.3
1/4 x 36 x 96	10.91	261.8
1/2 x 36 x 96	21.82	523.7
1 x 36 x 96	43.63	1047

NAVAL BRASS SHEET and PLATE



ASTM B 171 Alloy 464



Soft (M20) Temper

Chemical Composition and Mechanical Properties, *Pages 234, 235*

Identification Color: Red

Size in Inches	Lbs. per Sq. Ft.	Est. Lbs. per Plate
.051 x 48 x 120	2.23	89.20
.0641 x 48 x 120	2.798	111.9
1/8 x 36 x 96	5.472	131.3
1/4 x 36 x 120	10.94	328.2
3/8 x 36 x 120	16.42	492.6
1/2 x 36 x 120	21.89	656.7
3/4 x 36 x 120	32.83	984.9
1 x 36 x 120	43.78	1313

COMMERCIAL BRONZE SHEET and COIL



ASTM B 36 Alloy 220



Half Hard Temper
(Rockwell B50-66 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches	Lbs. per Sq. Ft.	Stock Lengths
20 .0320 x 24	1.465	96″
16 .0508 x 24	2.326	coils and 96″
14 .0641 x 24	2.935	coils and 96″
12 .0808 x 12	3.700	coils and 96″
1/8 .125 x 24	5.724	coils and 96″
3/16 .1875 x 24*	8.586	96″

***Quarter Hard Temper**

PHOSPHOR BRONZE SHEET and COIL



ASTM B 103 Alloy 510



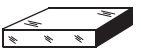
Spring (H08) Temper
(Rockwell B92-98 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches	Lbs. per Sq. Ft.	Stock Lengths
24 .0201 x 12	.9262	coils and 96″
22 .0253 x 12	1.166	coils and 96″
18 .0403 x 12	1.857	96″
16 .0508 x 12	2.341	96″
14 .0641 x 12	2.954	96″



COPPER SHEET and PLATE



COLD ROLLED

ASTM B 152 Alloy 110

Electrolytic Tough Pitch

Soft (060) Temper

Chemical Composition and Mechanical Properties, *Pages 234, 235*

Ounces per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.
—	**.0625 x 36 x 96**	2.898	**.0937 x 36 x 96**	4.345
			1/8 x 36 x 96	5.796
60	**.0809 x 36 x 96**	3.751		
			3/16 x 36 x 96	8.694
			1/4 x 36 x 96	11.59

ROOFING COPPER SHEET



Hot Rolled

ASTM B 370

Soft (060) Temper

Chemical Composition and Mechanical Properties, *Page 234*

Ounces per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.	Lbs. per Sheet
16	**.0216 x 36 x 96**	1.002	24
24	**.0323 x 36 x 96**	1.498	36
32	**.0431 x 36 x 96**	1.999	48

ROOFING COPPER SHEET



Cold Rolled (H00) Temper

ASTM B 370

(Rockwell F54-82 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Ounces per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.	Lbs. per Sheet
16	**.0216 x 30 x 96**	1.002	20
	36 x 96	1.002	24
	36 x 120	1.002	30
20	**.0270 x 36 x 96**	1.252	30
24	**.0323 x 36 x 96**	1.498	36
	36 x 120	1.498	45
32	**.0431 x 36 x 96**	1.999	48



COPPER COIL

ASTM B 152 Alloy 110

Electrolytic Tough Pitch

Cold Rolled Annealed Soft (OSO25) Temper

Drawing and Spinning Quality

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Gage & Size in Inches		Lbs. per Sq. Ft.
16 oz.	**.0216 x 24**	1.002	**—**	**.0625 x 24**	2.898
20	**.0320 x 24**	1.484			



COPPER SHEET and COIL



COLD ROLLED

ASTM B 152 Alloy 110

Electrolytic Tough Pitch

Half Hard Temper
(Rockwell F77-89 Approximate)

Chemical Composition and Mechanical Properties, *Page 234*

Gage & Size in Inches		Lbs. per Sq. Ft.	Stock Lengths
30	**.0100 x 12**	.4637	coils
26	**.0160 x 24**	.7419	coils
22	**.0253 x 24**	1.173	coils
20	**.0320 x 24**	1.484	coils and 96″
18	**.0403 x 24**	1.869	coils and 96″
16	**.0508 x 24**	2.356	coils and 96″
—	**.0625 x 24**	2.898	coils and 96″



COPPER SHEET and PLATE



COLD ROLLED

ASTM B 152 Alloy 110

Electrolytic Tough Pitch

1/8 to 1/4 Hard
(Rockwell F54-84 Approximate)

Chemical Composition and Mechanical Properties, *Pages 234, 235*

Ounces per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.
24	**.0323 x 48 x 120**	1.498
32	**.0431 x 48 x 120**	1.999
38	**.0512 x 36 x 96**	2.374
—	**.0625 x 36 x 96**	2.898
54	**.0728 x 36 x 96**	3.376
60	**.0809 x 36 x 96**	3.751
	48 x 120	3.751
—	**.0937 x 36 x 96**	4.345

Size in Inches	Lbs. per Sq. Ft.
1/8 x 36 x 96	5.796
48 x 120*	5.796
3/16 x 36 x 96	8.694
48 x 120*	8.694
1/4 x 36 x 96	11.59
48 x 120*	11.59
3/8 x 36 1/2 x 96 1/2	17.39
48 x 120*	17.39
1/2 x 36 1/2 x 96 1/2	23.18
5/8 x 36 1/2 x 96 1/2	28.98
3/4 x 36 x 96	34.78
1 x 36 1/2 x 96 1/2	46.37
1 1/2 x 36 1/2 x 96 1/2	69.55

***ASTM B 152 Alloy 122 DHP

COLD ROLLED COPPER SHEET



ASTM B 101

Cold Rolled (H00) Temper

Lead Coated Finish Both Sides

(12 to 15 pounds of lead per 100 Sq. Ft. total both sides)

Ounces per Sq. Ft.	Size in Inches	Lbs. per Sq. Ft.
16	**.0216 x 36 x 96**	1.002
16	**.0216 x 36 x 120**	1.002



BRASS TUBING
ROUND SEAMLESS

ASTM B 135 Alloy 330

Drawn General Purpose (H58) Temper

Normally Produced to O.D. and Wall Dimensions

Random Lengths 10 - 14 Ft.

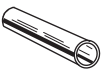
Chemical Composition and Mechanical Properties, *Page 235*

O.D.	B & S Gage	Wall	I.D.	Lbs. per Ft.
1/8 x	26	**.016**	.093	.0202
	24	**.020**	.085	.0243
	20	**.032**	.061	.0344
5/32 x	22	**.025**	.106	.0380
	20	**.032**	.092	.0460
3/16 x	26	**.016**	.155	.0318
	20	**.032†**	.123	.0576
	18	**.040**	.107	.0683
7/32 x	20	**.032**	.154	.0692
	18	**.040**	.138	.0828
1/4 x	24	**.020**	.210	.0532
	22	**.025**	.200	.0651
	20	**.032†**	.186	.0807
	18	**.040**	.170	.0972
	16	**.051*†**	.148	.1175
	14	**.065†**	.120	.1392
5/16 x	24	**.020**	.272	.0677
	22	**.025**	.262	.0832
	20	**.032†**	.248	.1039
	18	**.040**	.232	.1262
	16	**.051**	.210	.1544
	14	**.065†**	.182	.1862
	11	**.091**	.130	.2333
3/8 x	24	**.020**	.335	.0822
	22	**.025**	.325	.1013
	20	**.032†**	.311	.1270
	18	**.040†**	.295	.1551
	16	**.051†**	.273	.1912
	15	**.058**	.259	.2128
	14	**.065†**	.245	.2332
	13	**.072**	.231	.2525
	12	**.081**	.213	.2756
	11	**.091**	.193	.2991
7/16 x	24	**.020**	.397	.0966
	22	**.025**	.387	.1194
7/16 x	20	**.032†**	.373	.1502
	18	**.040**	.357	.1840
	16	**.051**	.335	.2281
	14	**.065**	.307	.2802
	12	**.081**	.275	.3342
1/2 x	22	**.025**	.450	.1374
	20	**.032†**	.436	.1733
	19	**.035**	.430	.1884
	18	**.040†**	.420	.2130
	16	**.051**	.398	.2650
	14	**.065†**	.370	.3272
	12	**.081**	.338	.3928
	11	**.091**	.318	.4308
	8	**.128**	.244	.5511
9/16 x	22	**.025**	.512	.1555
	20	**.032**	.498	.1965
	14	**.065**	.432	.3743
5/8 x	24	**.020**	.585	.1400
	22	**.025**	.575	.1736
	20	**.032†**	.561	.2196
	18	**.040**	.545	.2708
	16	**.051**	.523	.3388
	14	**.065†**	.495	.4213
	12	**.081**	.463	.5100
	11	**.091**	.443	.5624
	8	**.128**	.369	.7363
11/16 x	24	**.020**	.647	.1545
	20	**.032**	.623	.2428
	18	**.040**	.608	.2998
	14	**.065**	.557	.4683
	8	**.128**	.431	.8289

*****Produced to O.D. and I.D. dimensions
†Also available Alloy 260

Continued on following page

BRASS TUBING
ROUND SEAMLESS



ASTM B 135 Alloy 330

Drawn General Purpose (H58) Temper

Normally Produced to O.D. and Wall Dimensions

Random Lengths 10 - 14 Ft.

Chemical Composition and Mechanical Properties, *Page 235*

Continued from preceding page

O.D.	B & S Gage	Wall	I.D.	Lbs. per Ft.
3/4	x 22	**.025**	.700	.2098
	20	**.032†**	.686	.2659
	18	**.040**	.670	.3287
	16	**.051†**	.648	.4126
	14	**.065†**	.620	.5153
	12	**.081**	.588	.6272
	8	**.128**	.494	.9215
13/16	x 22	**.025**	.762	.2279
	20	**.032**	.748	.2891
	14	**.065**	.682	.5623
7/8	x 20	**.032†**	.811	.3122
	18	**.040†**	.795	.3866
	14	**.065*†**	.745	.6094
	11	**.091**	.693	.8257
	8	**.128**	.619	1.107
15/16	x 20	**.032**	.873	.3354
	8	**.128**	.681	1.199
1	x 24	**.020**	.960	.2268
	22	**.025**	.950	.2821
	20	**.032†**	.936	.3585
	18	**.040†**	.920	.4444
	16	**.051†**	.898	.5602
	14	**.065†**	.870	.7034
	11	**.091**	.818	.9574
	8	**.128**	.744	1.292
1 1/16	x 22	**.025**	1.012	.3002
	20	**.032**	.998	.3817
	8	**.128**	.806	1.384
1 1/8	x 20	**.032†**	1.061	.4048
	18	**.040**	1.045	.5023
	14	**.065*†**	.995	.7974
	8	**.128**	.869	1.477
1 3/16	x 20	**.032**	1.123	.4279
	14	**.065**	1.057	.8444
	8	**.128**	.931	1.570
1 1/4	x 22	**.025**	1.200	.3544
	20	**.032†**	1.186	.4511
	16	**.051†**	1.148	.7077
	14	**.065***	1.120	.8915
	8	**.128**	.994	1.662
1 5/16	x 20	**.032**	1.248	.4742
1 3/8	x 20	**.032†**	1.311	.4974
	16	**.051**	1.273	.7815
	14	**.065†**	1.245	.9855
	8	**.128**	1.119	1.847
1 1/2	x 22	**.025**	1.450	.4268
	16	**.051†**	1.398	.8553
	14	**.065†**	1.370	1.080
	11	**.091**	1.318	1.484
	8	**.128**	1.244	2.033
1 5/8	x 14	**.065**	1.495	1.174
	8	**.128**	1.369	2.218
1 3/4	x 20	**.032†**	1.686	.6363
	18	**.040**	1.670	.7916
	14	**.065**	1.620	1.268
	8	**.128**	1.494	2.403
1 7/8	x 20	**.032**	1.811	.6826
	14	**.065**	1.745	1.362
	8	**.128**	1.619	2.588
2	x 20	**.032†**	1.936	.7289
	16	**.051†**	1.898	1.150
	14	**.065†**	1.870	1.456
	8	**.128**	1.744	2.773

***Produced to O.D. and I.D. dimensions**
†Also available Alloy 260

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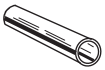


BRASS TUBING
ROUND SEAMLESS

ASTM B 135 Alloy 330

Drawn General Purpose (H58) Temper

Normally Produced to O.D. and Wall Dimensions

Random Lengths 10 - 14 Ft.

Chemical Composition and Mechanical Properties, *Page 235*

Continued from preceding page

O.D.		B & S Gage	Wall	I.D.	Lbs. per Ft.
2 1/8	x	16	**.051**	2.023	1.224
		14	**.065**	1.995	1.550
		8	**.128**	1.869	2.958
2 1/4	x	16	**.051†**	2.148	1.298
		14	**.065**	2.120	1.644
		8	**.128**	1.994	3.144
2 3/8	x	14	**.065**	2.245	1.738
2 1/2	x	14	**.065†**	2.370	1.832
		8	**.128**	2.244	3.514
2 3/4	x	14	**.065†**	2.620	2.020
2 7/8	x	14	**.065**	2.745	2.114
3	x	8	**.128**	2.744	4.255
3 1/4	x	14	**.065**	3.120	2.396
		8	**.128**	2.994	4.625
3 3/4	x	8	**.128**	3.494	5.366
5	x	8	**.128***	4.744	7.218
5 1/4	x	8	**.128***	4.994	7.563
7	x	8	**.128***	6.744	10.15
7 1/4	x	8	**.128§**	6.994	10.52

***** ASTM B 135 Alloy 272 — Drawn General Purpose (H58) Temper
† Also available Alloy 260
§ ASTM B 135 Alloy 272 — Drawn General Purpose (H58) Temper, produced to O.D. and I.D. dimensions

RED BRASS ROUND PIPE



ASTM B 43 Alloy 230

Schedule 40

Drawn General Purpose (H58) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 235*

Identification Color: Yellow

Nominal Size	O.D.	Wall	I.D.	Lbs. per Ft.
1/8*	.405	.062	.281	.2533
1/4	.540	.082	.375	.4474
3/8	.675	.090	.494	.6272
1/2	.840	.107	.625	.9343
3/4	1.050	.114	.822	1.271
1	1.315	.126	1.062	1.785
1 1/4	1.660	.146	1.368	2.633
1 1/2	1.900	.150	1.600	3.127

***Annealed (O61) Temper**

RED BRASS ROUND PIPE



ASTM B 43 Alloy 230

Schedule 80

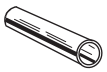
Drawn General Purpose (H58) Temper

Random Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 235*

Identification Color: Purple

Nominal Size	O.D.	Wall	I.D.	Lbs. per Ft.
1/8	.405	.100	.205	.3633
1/4	.540	.123	.294	.6110
3/8	.675	.127	.421	.8291
1/2	.840	.149	.542	1.227
3/4	1.050	.157	.736	1.670
1	1.315	.182	.951	2.457
1 1/4	1.660	.194	1.272	3.388
2	2.375	.221	1.933	5.671
3	3.500	.304	2.892	11.57



COPPER TUBING
ROUND SEAMLESS

ASTM B 75 Alloy 122

Drawn General Purpose (H58) Temper

Normally Produced to O.D. and Wall Dimensions

Random Lengths 14 Ft.

Chemical Composition and Mechanical Properties, *Page 235*

O.D.		B & S Gage	Wall	I.D.	Lbs. per Ft.
1/8	x	20	**.032**	.061	.0362
3/16	x	20	**.032**	.123	.0606
1/4	x	22	**.025**	.200	.0685
		20	**.032**	.186	.0849
		14	**.065**	.120	.1464
5/16	x	20	**.032**	.248	.1093
		14	**.065**	.182	.1959
3/8	x	20	**.032**	.311	.1337
		14	**.065**	.245	.2454
7/16	x	20	**.032**	.373	.1580
1/2	x	21	**.028**	.444	.1609
		20	**.032**	.436	.1824
		19	**.035**	.430	.1982
		–	**.040***	.420	.2241
		14	**.065**	.370	.3443
5/8	x	20	**.032**	.561	.2311
		14	**.065**	.495	.4432
3/4	x	20	**.032**	.686	.2798
		14	**.065**	.620	.5422
		8	**.128**	.494	.9695
7/8	x	14	**.065**	.745	.6411
1	x	20	**.032**	.936	.3772
		14	**.065**	.870	.7400
		8	**.128**	.744	1.359
1 1/8	x	14	**.065**	.995	.8390
1 1/4	x	20	**.032**	1.186	.4746
		14	**.065**	1.120	.9379
1 1/2	x	14	**.065**	1.370	1.136
		8	**.128**	1.244	2.138
1 3/4	x	14	**.065**	1.620	1.334
2	x	14	**.065**	1.870	1.532
2 1/2	x	14	**.065**	2.370	1.927

*12 ft. Produced to O.D. and Wall dimensions

COPPER ROUND PIPE



ASTM B 42 Alloy 122
Schedule 40
Hard Drawn (H80) Temper
Random Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Page 235*
Identification Color: Pink

Nominal Size	O.D.	Wall	I.D.	Lbs. per Ft.
3/8	.675	.090	.494	.6411
1/2	.840	.107	.625	.9550
3/4	1.050	.114	.822	1.299
1	1.315	.126	1.062	1.824
2	2.375	.156	2.062	4.215
2 1/2*	2.875	.187	2.500	6.121

***Light Drawn (H55) Temper**

COPPER ROUND PIPE



ASTM B 42 Alloy 122
Schedule 80
Hard Drawn (H80) Temper
Random Lengths 12 Ft.
Chemical Composition and Mechanical Properties, *Page 235*
Identification Color: Brown

Nominal Size	O.D.	Wall	I.D.	Lbs. per Ft.
3/8	.675	.127	.421	.8475
1/2	.840	.149	.542	1.254
3/4	1.050	.157	.736	1.707
1	1.315	.182	.951	2.511
1 1/2	1.900	.203	1.494	4.195

COPPER TUBING ROUND SEAMLESS



ASTM B 68 Alloy 122
Soft (O60) Temper
Normally Produced to O.D. and Wall Dimensions
50 Ft. Open End Coils
Chemical Composition and Mechanical Properties, *Page 235*

O.D.	B & S Gage	Wall	I.D.	Lbs. per Ft.
3/16	19	**.035**	.1175	.0650
1/4	22	**.025**	.200	.0685
	19	**.035**	.180	.0916
	..	**.049**	.152	.1199
3/8	20	**.032**	.311	.1337
	..	**.049**	.277	.1945
	14	**.065**	.245	.2454
1/2	19	**.035**	.430	.1982
	..	**.049**	.402	.2691
	14	**.065**	.370	.3443
5/8	14	**.065**	.495	.4432
3/4	14	**.065**	.620	.5422
1	14	**.065**	.870	.7400



BRASS ROUND WIRE IN COIL

ASTM B 134 Alloy 260

Chemical Composition and Mechanical Properties, *Page 236*

Diameter Gage	Diameter Dec.	Lbs. per 1000 Ft.	Ft. Per Pound	Soft Temper	Half Hard (H02) Temper	Spring (H08) Temper
19	.0359	3.741	267	. .	X	. .
14	.0641	11.93	84	. .	X	X
8	.1285	47.93	21	X	. .	. .
3/16	.1875	102.1	10	. .	X	. .



COPPER ROUND WIRE IN COIL

ASTM B 3 Alloy 110

Soft Temper

BARE

Chemical Composition and Mechanical Properties, *Page 236*

Diameter Gage	Diameter Dec.	Lbs. per 1000 Ft.	Ft. Per Pound
22	.0253	1.949	514
20	.0320	3.117	321
1/8	.125	47.57	22
8	.1285	50.27	20

BRONZE BUSHING ROUND SOLID



ASTM B 505 Alloy 932 SAE 660
CONTINUOUS CAST SEMI-FINISHED

Random Lengths 105 Inches

Chemical Composition and Mechanical Properties, *Page 233*

Tolerances, See below

Size in Inches	Est. Lbs. per Ft.	Size in Inches	Est. Lbs. per Ft.	Size in Inches	Est. Lbs. per Ft.
1/2	.898	2 1/4	15.81	4 1/2	63.36
5/8	1.346	2 3/8	17.72	4 3/4	70.32
3/4	2.019	2 1/2	19.63	5	77.27
7/8	2.580	2 5/8	21.64	5 1/2	94.43
1	3.364	2 3/4	23.66	6	112.04
1 1/8	4.149	3	27.92	6 1/2	130.99
1 1/4	5.159	3 1/4	32.64	7	151.74
1 3/8	6.168	3 1/2	38.13	7 1/2	174.05
1 1/2	7.290	3 3/4	43.63	8	196.93
1 5/8	8.411	4	50.35	9	248.41
1 3/4	9.533	4 1/4	56.41		
1 7/8	10.99				
2	12.67				
2 1/8	14.24				

BRONZE BUSHING TUBULAR



ASTM B 505 Alloy 932 SAE 660
CONTINUOUS CAST SEMI-FINISHED

Random Lengths 105 Inches

Chemical Composition and Mechanical Properties, *Page 235*

TOLERANCES

Inside Diameter	Outside Diameter
Up to 4" . . . . . – .025 to – .064	Up to 4" . . . . + .027 to + .037
4" to 5" . . . . . – .052 to – .108	4" to 5" . . . . . + .056 to + .072
5 1/4" to 9". . . . – .074 to – .158	5 1/4" to 9" . . . + .062 to + .126
9 1/2" & Over . . – .100 to – .130	9 1/2" & Over. . + .100 to + .130

I.D.	O.D.	Est. Lbs. per in.	Est. Lbs. per Ft.
1/2	x		
	1	.224	2.688
	1 1/8	.299	3.588
	1 1/4	.374	4.488
	1 3/8	.449	5.388
	1 1/2	.551	6.612
	1 3/4	.748	8.976
	2	1.02	12.24
5/8	x		
	1	.196	2.352
	1 1/8	.262	3.144
	1 1/4	.346	4.152
	1 3/8	.421	5.052
	1 1/2	.514	6.168
	1 3/4	.738	8.856
	2	.981	11.77
3/4	x		
	1	.149	1.788
	1 1/4	.299	3.588
	1 3/8	.383	4.596
	1 1/2	.477	5.724
	1 5/8	.579	6.948
	1 3/4	.682	8.184
	2	.925	11.10
	2 1/4	1.215	14.58
	2 1/2	1.505	18.06
	2 3/4	1.83	21.96

Continued on following page



BRONZE BUSHING TUBULAR

ASTM B 505 Alloy 932 SAE 660
CONTINUOUS CAST SEMI-FINISHED

Random Lengths 105 Inches

Chemical Composition and Mechanical Properties, *Page 235*
Tolerances, *Page 223*

Continued from preceding page

I.D.		O.D.	Est. Lbs. per in.	Est. Lbs. per Ft.
7/8	x	1 1/4	.262	3.144
		1 3/8	.336	4.032
		1 1/2	.430	5.160
		1 3/4	.654	7.848
		1 7/8	.748	8.976
		2	.878	10.536
		2 1/4	1.149	13.79
1	x	1 1/4	.187	2.244
		1 3/8	.280	3.360
		1 1/2	.374	4.488
		1 5/8	.477	5.724
		1 3/4	.598	7.176
		1 7/8	.701	8.412
		2	.841	10.09
		2 1/8	.981	11.77
		2 1/4	1.12	13.44
		2 3/8	1.24	14.88
		2 1/2	1.43	17.16
		2 3/4	1.76	21.12
		3	2.13	25.56
		3 1/4	2.49	29.88
		3 1/2	2.95	35.40
		4	3.99	47.88
1 1/8	x	1 5/8	.402	4.824
		1 3/4	.523	6.276
		1 7/8	.645	7.740
		2	.785	9.420
		2 1/4	1.04	12.48
		2 1/2	1.33	15.96
1 1/4	x	1 5/8	.346	4.152
		1 3/4	.467	5.604
		1 7/8	.579	6.948
		2	.720	8.640
		2 1/4	.963	11.55
		2 3/8	1.09	13.08
		2 1/2	1.27	15.24
		2 3/4	1.61	19.32
		3	2.02	24.24
		3 1/4	2.36	28.32
		3 1/2	2.80	33.60
		4	3.83	45.96
1 3/8	x	1 5/8	.262	3.14
		1 7/8	.477	5.72
		2	.635	7.62
		2 1/4	.906	10.87
		2 3/8	1.06	12.72
		2 1/2	1.19	14.28
		2 5/8	1.38	16.56
		2 3/4	1.50	18.00
1 1/2	x	2	.561	6.732
		2 1/8	.682	8.184
		2 1/4	.822	9.864
		2 3/8	.972	11.66
		2 1/2	1.13	13.56
		2 5/8	1.24	14.88
		2 3/4	1.44	17.28
		3	1.83	21.96
		3 1/2	2.64	31.68
1 1/2	x	3 3/4	3.12	37.44
		4	3.70	44.40
		4 1/2	4.79	57.48
1 5/8	x	2 1/8	.589	7.068
		2 3/8	.869	10.428
		2 1/2	1.00	12.00
		2 3/4	1.34	16.08
		3	1.72	20.64
1 3/4	x	2 1/4	.626	7.512
		2 3/8	.766	9.192
		2 1/2	.935	11.22
		2 5/8	1.06	12.72
		2 3/4	1.27	15.24
		3	1.61	19.32
		3 1/4	2.019	24.23
		3 1/2	2.468	29.62
		3 3/4	2.897	34.76
		4	3.505	42.06
		4 1/4	4.019	48.23
1 7/8	x	2 3/8	.654	7.848
		2 1/2	.794	9.528
		2 3/4	1.177	14.12
2	x	2 1/4	.364	4.368
		2 1/2	.701	8.412
		2 5/8	.860	10.32
		2 3/4	1.037	12.44
		2 7/8	1.187	14.24
		3	1.421	17.05
		3 1/2	2.243	26.92
		3 3/4	2.692	32.30
		4	3.299	39.59
		4 1/2	4.327	51.92
		5	5.523	66.28
		5 1/2	6.981	83.77
		6	8.448	101.4
2 1/8	x	2 5/8	.747	8.964
		2 3/4	.869	10.43
		3	1.289	15.47
		3 1/4	1.701	20.41
2 1/4	x	2 3/4	.757	9.084
		3	1.149	13.79
		3 1/4	1.523	18.28
		3 1/2	1.972	23.66
		4	3.037	36.44
		4 1/4	3.551	42.61
2 3/8	x	3	.991	11.89
		3 1/4	1.364	16.37
		3 1/2	1.785	21.42
		3 3/4	2.252	27.02
2 1/2	x	3	.860	10.32
		3 1/8	1.05	12.60
		3 1/4	1.26	15.12
		3 1/2	1.70	20.40
		3 3/4	2.12	25.44
		4	2.72	32.64

Continued on following page

BRONZE BUSHING TUBULAR



ASTM B 505 Alloy 932 SAE 660
CONTINUOUS CAST SEMI-FINISHED

Random Lengths 105 Inches

Chemical Composition and Mechanical Properties, *Page 235*
Tolerances, *Page 223*

Continued from preceding page

I.D.		O.D.	Est. Lbs. per in.	Est. Lbs. per Ft.
2 1/2	x	**4 1/4**	3.35	40.20
		4 1/2	3.83	45.98
		4 3/4	4.35	52.20
		5	5.03	60.36
		5 1/2	6.47	77.64
		6	7.83	93.96
2 5/8	x	**3 3/4**	1.93	23.16
		4 1/2	3.64	43.68
2 3/4	x	**3 1/4**	.90	10.80
		3 1/2	1.36	16.32
		3 3/4	1.81	21.72
		4	2.42	29.04
		4 1/4	3.04	36.48
		4 3/4	4.03	48.36
3	x	**3 1/2**	.963	11.56
		3 3/4	1.47	17.64
		4	2.07	24.84
		4 1/4	2.63	31.56
		4 1/2	3.20	38.40
		4 3/4	3.69	44.28
		5	4.32	51.84
		5 1/2	5.80	69.60
		6	7.27	87.24
		6 1/2	8.85	106.2
3 1/4	x	**4**	1.69	20.28
		4 1/4	2.22	26.64
		4 1/2	2.71	32.52
		4 3/4	3.31	39.72
3 1/2	x	**4 1/4**	1.81	21.72
		4 1/2	2.38	28.56
		4 3/4	2.90	34.80
		5	3.51	42.12
		5 1/2	5.04	60.48
		6	6.50	78.00
3 3/4	x	**4 1/2**	1.91	22.92
		4 3/4	2.45	29.40
		5	3.06	36.72
		5 1/2	4.58	54.96
4	x	**4 3/4**	1.97	23.64
		5	2.59	31.08
		5 1/2	4.12	49.44
		6	5.61	67.32
		6 1/2	7.17	86.04
		7	8.91	106.92
		7 1/2	10.77	129.24
4 1/4	x	**5**	2.09	25.08
		5 1/2	3.62	43.44
		6	5.08	60.96
4 1/2	x	**5 1/2**	3.09	37.08
		6	4.55	54.60
		6 1/2	6.14	73.68
		7	7.87	94.44
4 3/4	x	**6**	4.00	48.00
		6 1/2	5.58	66.96
5	x	**6**	3.39	40.68
		6 1/2	5.00	60.00
		7	6.73	80.76
		7 1/2	8.55	102.6
		8	10.51	126.1
5 1/4	x	**7**	6.17	74.04
5 1/2	x	**6 1/2**	3.69	44.28
		7	5.41	64.92
		7 1/2	7.27	87.24
		8	9.25	111.00
5 3/4	x	**7 1/2**	6.57	78.84
6	x	**7**	3.99	47.88
		7 1/2	5.84	70.08
		8	7.82	93.84
		8 1/2	9.95	119.4
		9	12.15	145.8
		10	17.14	205.7
6 1/2	x	**7 1/2**	14.30	51.60
		8	6.30	75.60
		9	10.59	127.1
7	x	**9†**	8.91	106.9
		9 1/2†	11.44	137.3
		10†	13.90	166.8
7 1/2	x	**9 1/2†**	9.65	115.8
8	x	**9**	5.30	63.60
		9 1/2†	7.75	93.00
		10†	10.22	122.6
		11†	15.55	186.6
8 1/2	x	**10 1/2†**	10.81	129.7
9	x	**10**	6.18	74.16
		11†	11.34	136.1
		12†	17.18	206.2
10	x	**11†**	6.93	83.16
11	x	**12†**	7.48	89.76
11 1/2	x	**13†**	11.24	134.9

†39 1/2"



ROUNDS

AMPCO 18W

ASTM B 150
Alloy 624 Extruded Aluminum Bronze

AMPCO 45

ASTM B 150 AMS 4640 QQ-C-465
Alloy 630 Extruded Nickel-Aluminum Bronze

Stock Lengths: *Page 231*

Chemical Composition and Mechanical Properties, *Pages 236*

Tolerances, *Page 231*

Identification Colors: 18W–Purple; 45–Purple and Yellow

Size in Inches	Est. Lbs. per Foot	
	AMPCO 18W ASTM B 150	**AMPCO 45 ASTM B 150**
3/8	.36	.36
1/2	.64	.64
5/8	.99	1.00
3/4	1.43	1.44
13/16	1.67	. .
7/8	1.94	1.95
1	2.54	2.55
1 1/16	2.86	2.88
1 1/8	3.21	3.23
1 3/16	3.58	. .
1 1/4	3.97	4.00
1 5/16	4.37	. .
1 3/8	4.80	4.83
1 1/2	5.71	5.75
1 5/8	6.69	6.74
1 11/16	7.22	. .
1 3/4	7.77	7.83
1 7/8	8.91	. .
2	10.14	10.22
2 1/8	11.45	. .
2 3/8	14.30	. .
2 1/2	15.85	15.97
2 5/8	17.47	. .
2 3/4	19.18	. .
3	22.82	22.99

ROUNDS



ALLOY 954

ASTM B 505 CONTINUOUS CAST ALUMINUM BRONZE

Stock Lengths 12 Ft.

Chemical Composition and Mechanical Properties, *Page 236*

Tolerances, *Page 231*

Identification Color: Purple

Nominal Size in Inches	Cast Size	Est. Lbs. per Foot
3 1/4	(3.329 - 3.359)	28.75
3 1/2	(3.579 - 3.609)	33.25
3 3/4	(3.829 - 3.859)	37.92
4	(4.079 - 4.109)	42.83
4 1/4	(4.355 - 4.395)	48.50
4 1/2	(4.605 - 4.645)	54.25
5	(5.109 - 5.145)	67.42
6	(6.163 - 6.213)	98.25



SQUARES and RECTANGLES



ALLOY 954*

ASTM B 505 CONTINUOUS CAST ALUMINUM BRONZE

Stock Lengths, 12 ft.

Chemical Composition and Mechanical Properties, *Page 236*

Identification Color: Purple

Nominal Size in Inches		Est. Lbs. per Foot
1/4 (.312 - .352)		
x 1	(1.062 - 1.102)	1.25
1 1/4	(1.312 - 1.352)	1.50
1 1/2	(1.562 - 1.602)	1.75
2	(2.062 - 2.102)	2.33
2 1/2	(2.562 - 2.602)	2.83
3	(3.062 - 3.102)	3.42
4	(4.062 - 4.102)	4.58
3/8 (.438 - .478)		
x 1	(1.062 - 1.102)	1.67
1 1/2	(1.562 - 1.602)	2.41
2	(2.062 - 2.102)	3.17
2 1/2	(2.562 - 2.602)	3.91
3	(3.062 - 3.102)	4.75
4	(4.062 - 4.102)	6.17
5	(5.062 - 5.102)	7.75
6	(6.062 - 6.102)	9.59

***Ampco 18 available**

Continued on following page



SQUARES and RECTANGLES



ALLOY 954*

ASTM B 505 CONTINUOUS CAST ALUMINUM BRONZE

Stock Lengths 12 ft.

Chemical Composition and Mechanical Properties, *Page 236*

Identification Color: Purple

Continued from preceding page

Nominal Size in Inches		Est. Lbs. per Foot
1/2 (.562 - .602)		
x 1	(1.062 - 1.102)	2.09
1 1/4	(1.312 - 1.352)	2.66
1 1/2	(1.562 - 1.602)	3.08
1 3/4	(1.812 - 1.852)	3.59
2	(2.062 - 2.102)	4.00
2 1/2	(2.562 - 2.602)	5.00
3	(3.062 - 3.102)	6.00
3 1/2	(3.562 - 3.602)	6.91
4	(4.062 - 4.102)	7.75
5	(5.062 - 5.102)	9.75
6	(6.062 - 6.112)	12.08
5/8 (.688 - .692)		
x 1	(1.062 - 1.102)	2.58
1 1/2	(1.562 - 1.602)	3.76
2	(2.062 - 2.102)	4.92
2 1/2	(2.562 - 2.602)	6.00
3	(3.062 - 3.102)	7.16
4	(4.062 - 4.102)	9.58
5	(5.062 - 5.102)	11.83
6	(6.062 - 6.112)	14.50
3/4 (.812 - .852)		
x 3/4	(.812 - .852)	2.26
1	(1.062 - 1.102)	3.00
1 1/2	(1.562 - 1.602)	4.42
2	(2.062 - 2.102)	5.75
2 1/2	(2.562 - 2.602)	7.08
3	(3.062 - 3.102)	8.50
4	(4.062 - 4.102)	11.17
5	(5.062 - 5.102)	13.75
6	(6.062 - 6.112)	17.00
1 (1.062 - 1.102)		
x 1	(1.062 - 1.102)	3.83
1 1/4	(1.312 - 1.352)	4.84
1 1/2	(1.562 - 1.602)	5.66
1 3/4	(1.812 - 1.852)	6.50
2	(2.062 - 2.102)	7.42
2 1/2	(2.562 - 2.602)	9.17
3	(3.062 - 3.102)	10.92
3 1/2	(3.562 - 3.602)	12.76
4	(4.062 - 4.102)	14.50
5	(5.062 - 5.102)	18.08
6	(6.062 - 6.112)	22.08

***Ampco 18 available**

Continued on following page



SQUARES and RECTANGLES



ALLOY 954*

ASTM B 505 CONTINUOUS CAST ALUMINUM BRONZE

Stock Lengths 12 ft.

Chemical Composition and Mechanical Properties, *Page 236*

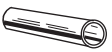
Identification Color: Purple

Continued from preceding page

Nominal Size in Inches		Est. Lbs. per Foot
1¼ (1.312 - 1.352)		
x **1½**	(1.562 - 1.602)	6.91
1¾	(1.812 - 1.852)	8.00
2	(2.062 - 2.102)	9.08
3	(3.062 - 3.102)	13.42
4	(4.062 - 4.102)	17.83
5	(5.062 - 5.102)	22.00
6	(6.062 - 6.102)	25.70
1½ (1.562 - 1.602)		
x **1½**	(1.562 - 1.602)	8.26
1¾	(1.812 - 1.852)	9.59
2	(2.062 - 2.102)	10.84
2½	(2.562 - 2.602)	13.25
3	(3.062 - 3.102)	16.08
3½	(3.562 - 3.602)	18.59
4	(4.062 - 4.102)	21.08
5	(5.062 - 5.102)	26.17
1¾ (1.812 - 1.852)		
x **2**	(2.062 - 2.102)	12.59
2½	(2.562 - 2.602)	15.59
3	(3.062 - 3.102)	18.33
3½	(3.562 - 3.602)	20.90
5	(5.062 - 5.102)	29.83
2 (2.062 - 2.102)		
x **2**	(2.062 - 2.102)	14.17
2½	(2.562 - 2.602)	17.58
3	(3.062 - 3.102)	21.00
3½	(3.562 - 3.602)	24.00
4	(4.062 - 4.102)	27.75
2½ (2.562 - 2.602)		
x **2½**	(2.562 - 2.602)	21.58
3	(3.062 - 3.102)	26.17
4	(4.062 - 4.102)	34.50
5	(5.062 - 5.102)	42.92
3 (3.062 - 3.102)		
x **3**	(3.062 - 3.102)	31.08

***Ampco 18 available**

ALUMINUM BRONZE ROUND TUBING



ALLOY 954*

ASTM B 505 CONTINUOUS CAST ALUMINUM BRONZE

Stock Lengths 12 Ft.

Finish allowances permit finishing to tube sizes shown.

Chemical Composition and Mechanical Properties, *Page 236*

Identification Color: Purple

I.D.	O.D.	Lbs. per Ft.	Est. Lbs. 12′ Bar
3/4	**x**		
	1 1/4	3.34	40
	2	9.76	117
1	**x**		
	1 1/2	4.16	50
	2	8.92	107
	2 1/2	15.00	180
	3	22.16	266
1 1/4	**x**		
	1 3/4	5.00	60
	2	7.58	91
	2 1/4	10.42	125
	2 1/2	13.58	163
1 1/2	**x**		
	2 1/4	8.75	105
	2 1/2	11.92	143
	2 3/4	15.42	185
	3	19.25	231
	3 1/2	28.67	344
	4	38.42	461
1 3/4	**x**		
	2 1/2	9.83	118
	2 3/4	13.42	161
	3	17.26	207
2	**x**		
	2 1/2	7.58	91
	2 3/4	11.00	132
	3 1/4	20.42	245
	3 1/2	24.50	294
	3 3/4	29.42	353
	4	34.42	413
	4 1/2	45.17	542
2 1/4	**x**		
	2 3/4	8.26	99
	3	12.25	147
	4	31.67	380
2 1/2	**x**		
	3	9.17	110
	3 1/2	19.33	232
	3 3/4	24.17	290
	4	29.17	350
	4 1/2	40.16	482
2 3/4	**x**		
	3 3/4	20.83	250
3	**x**		
	3 1/2	12.17	146
	4	22.50	270
	4 1/4	28.16	338
	4 1/2	33.76	405
	5	46.92	563
	5 1/2	60.76	729
	6	78.17	938
	7	112.50	1350
3 1/4	**x**		
	4 1/4	23.33	280
3 1/2	**x**		
	4 1/2	25.50	306
	5	39.25	471
	5 1/2	52.84	634
	6	70.50	846
4	**x**		
	4 3/4	23.66	284
	5	30.25	363
	5 1/2	44.09	529
	6	61.58	739
	7	95.33	1144
5	**x**		
	6	39.83	478
	7	73.33	880

***Ampco 18 available**

TOLERANCES

ROUNDS



Size in Inches	AMPCO 18W Extruded, Drawn and Stress Relieved (HR50)	AMPCO 45 Extruded High Strength Drawn & Stress Relieved (HR50)
1/4 - 1/2	± .002	± .002
9/16 - 5/8	± .003	± .003
11/16 - 1	± .003	± .003
1 1/16	± .004	± .004
1 1/8 - 2 1/8	± .004	± .004
2 1/4 - 2 5/8	± .005	± .005
2 3/4 - 3	± .006	± .006

	ALLOY 954 Continuous Cast (Solid)	Extruded Quench Hardened & Temper Annealed (TQ50)
3 1/8 - 3 1/2	+ .109 – .000	± .035
3 9/16 - 4	+ .109 – .000	± .050
4 1/8 - 4 1/2	+ .145 – .000	—
4 9/16 - 5	+ .145 – .000	—
5 1/4 - 5 1/2	+ .145 – .000	—
5 3/4 - 6	+ .213 – .000	—

MILL LENGTHS

ROUNDS



Diameter in Inches		Ampco Extruded (in feet)	Alloy 954 Continuous Cast (in feet)
Over	**Incl.**		
Up	to **2**	12 to 12	. .
2	to **3**	10 to 12	. .
3	to **3 1/2**	4 to 9	12
3 1/2	to **4 1/4**	2 to 6	12
4 1/4	to **4 1/2**	1 to 4 1/2	12
4 1/2	to **4 3/4**	1 to 4	12
4 3/4	to **5**	1 to 3 1/2	12
5	to **5 1/4**	1 to 3 1/4	12
5 1/4	to **5 1/2**	1 to 3	12
5 1/2	to **5 3/4**	3/4 to 2 3/4	12
5 3/4	to **6**	3/4 to 2 1/2	12

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SECTION 12

DATA

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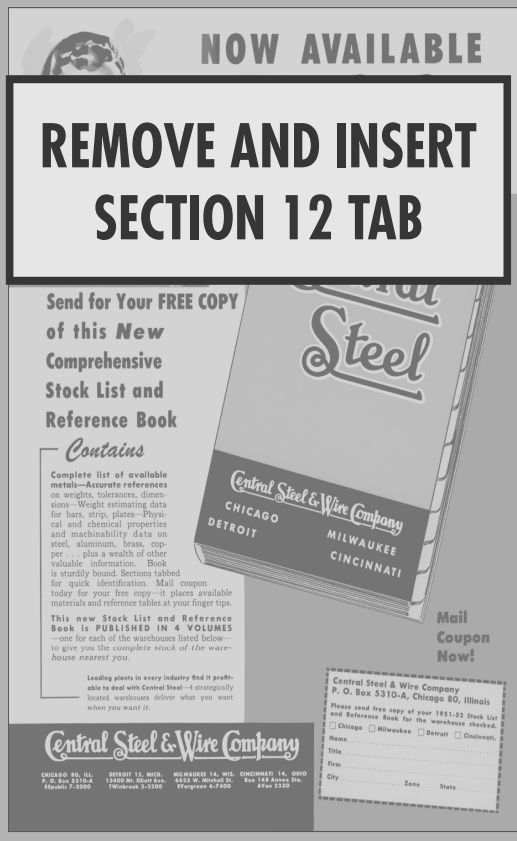

Central Steel & Wire Newspaper Ad from November 1950

DATA

STEEL

Alloy

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COPPER AND COPPER ALLOYS

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COPPER AND COPPER ALLOY PRODUCTS—NOMINAL CHEMICAL COMPOSITION AND TYPICAL MECHANICAL PROPERTIES

These figures are NOT GUARANTEED and are given only as an indication of what may be expected and should under no circumstances be used in specifying the raw materials. It must not be assumed that these properties will be obtained in all cases, as they vary widely with permissible variations in analysis and size of section. These figures cannot be used as a basis of acceptance or rejection of material.

				COMPOSITION %						MECHANICAL				PHYSICAL		
Copper Alloy	UNS Number	Description	Temper	Copper	Zinc	Lead	Tin	Nickel	Others	Tensile Strength ksi†	Yield Strength ksi†	Elongation in 2" %	Rockwell Hardness	Melting Point °F	Electrical Conductivity (Annealed) %	Machinability Rating %*
ROD (1.00" Dia.)**																
110	C11000	Copper	1/8H	99.9+	—	—	—	—	—	32.0	10.0	55	F40	1981	101	20
			Hard	"	—	—	—	—	—	48.0	44.0	16	B47	"	"	"
145	C14500	Tellurium Copper (FC)	1/2H	99.5	—	—	—	—	Te .55	42.0	40.0	25	B42	1967	85 Min	85
			Hard	"	—	—	—	—	"	48.0	44.0	20	B48	"	"	"
147	C14700	Sulfur Copper	1/2H	99.6	—	—	—	—	S .40	43.0	40.0	20	B43	1969	90 Min	85
314	C31400	Commercial Bronze	Bending	89.0	9.1	1.9	—	—	—	45.0	28.0	22	—	1900	42	80
316	C31600	Commercial Bronze	1/2H	89.0	8.1	1.9	—	1.0	—	65.0	57.0	15	B70	1900	32	80
			Bending	"	"	"	—	"	—	45.0	27.5	20	—	"	"	"
353	C35300	Flanging Brass	1/4H	62.0	35.5	2.5	—	—	—	54.0	40.0	20	B70	1660	26	90
360	C36000	Free Cutting Brass	1/2H	61.5	35.5	3.0	—	—	—	58.0	45.0	25	B78	1650	26	100
464	C46400	Naval Brass (NonLeaded)	Hard	60.0	39.2	—	0.8	—	—	88.0	66.0	18	B95	1650	26	30
485	C48500	Naval Brass (Leaded)	1/2H	60.0	37.5	1.8	0.7	—	—	75.0	53.0	15	B82	1650	26	70
544	C54400	Phosphor Bronze (FC)	Hard	88.0	4.0	4.0	4.0	—	—	68.0	57.0	20	B80	1830	19	80
624	C62400	Aluminum Bronze	HR50	85.5	—	—	—	—	Fe 3.5 Al 10.5	105.0	52.0	14	B92	1900	12	50
630	C63000	Nickel-Aluminum Bronze	HR50	81.0	—	—	—	5.0	Fe 2.5 Al 10.0	118.0	75.0	15	B98	1930	9	30
642	C64200	Aluminum Silicon Bronze	HR50	91.2	—	—	—	—	Si 1.8 Al 7.0	102.0	68.0	22	B94	1840	8	60
932	C93200	Bronze Bushing As Cast	—	83.0	3.0	7.0	7.0	—	—	44.0	24.0	17	F76	1790	12	70

* FC Brass = 100%

Continued on following page

**Alloy 954 Aluminum Bronze and Ampco Rod: See Page 236.

† 1 ksi = 1000 psi

COPPER AND COPPER ALLOY PRODUCTS—NOMINAL CHEMICAL COMPOSITION AND TYPICAL MECHANICAL PROPERTIES

Continued from preceding page

These figures are NOT GUARANTEED — See Note *page 233*

Copper Alloy	UNS Number	Description	Temper	COMPOSITION % Copper	Zinc	Lead	Tin	Nickel	Others	MECHANICAL Tensile Strength ksi †	Yield Strength ksi †	Elongation in 2" %	Rockwell Hardness	PHYSICAL Melting Point °F	Electrical Conductivity (Annealed) %	Machinability Rating %*
SHEET (.040" Thick)																
110	C11000	Copper	Soft	99.9+	—	—	—	—	—	32.0	10.0	45	F40	1981	101	20
			1/8-1/4H	"	—	—	—	—	—	37.0	29.0	27	F69	"	"	"
			1/2H	"	—	—	—	—	—	42.0	36.0	14	B40	"	"	"
122	C12200	(DHP) Copper	1/8-1/4H	99.9+	—	—	—	—	P .02	38.0	30.0	25	F70	1981	85	20
—	—	Roofing Copper	Soft	99.9+	—	—	—	—	—	34.0	11.0	45	F45	1981	98	20
			H00	"	—	—	—	—	—	36.0	28.0	30	F60	"	"	"
220	C22000	Commercial Bronze	Soft	90.0	10.0	—	—	—	—	37.0	10.0	45	F53	1910	44	20
			1/4H	"	"	—	—	—	—	47.0	37.0	25	B47	"	"	"
			1/2H	"	"	—	—	—	—	52.0	45.0	11	B58	"	"	"
260	C26000	Brass	Soft	70.0	30.0	—	—	—	—	47.0	15.0	62	F64	1750	28	30
			1/4H	"	"	—	—	—	—	54.0	40.0	43	B55	"	"	"
			1/2H	"	"	—	—	—	—	62.0	52.0	25	B70	"	"	"
			3/4H	"	"	—	—	—	—	69.0	57.0	15	B70	"	"	"
			Hard	"	"	—	—	—	—	76.0	63.0	8	B82	"	"	"
			Spring	"	"	—	—	—	—	94.0	65.0	3	B91	"	"	"
280	C28000	Muntz Metal	CR	60.0	40.0	—	—	—	—	60.0	35.0	30	B55	1660	28	40
353	C35300	Leaded Brass	1/2H	61.5	36.7	1.8	—	—	—	61.0	50.0	20	B70	1670	26	90
464	C46400	Naval Brass	CR	60.0	39.25	—	0.75	—	—	62.0	41.0	42	B60	1650	26	30
510	C51000	Phosphor Bronze	Hard	94.8	—	—	5.0	—	P .20	81.0	75.0	10	B87	1920	15	20
			Spring	"	—	—	"	—	"	100.0	80.0	4	B95	"	"	"
752	C75200	Nickel Silver	Soft	65.0	17.0	—	—	18.0	—	58.0	25.0	40	B40	2030	6	20

*FC Brass = 100%
†1ksi = 1000 psi

Continued on following page

COPPER AND COPPER ALLOY PRODUCTS—NOMINAL CHEMICAL COMPOSITION AND TYPICAL MECHANICAL PROPERTIES

Continued from preceding page

These figures are NOT GUARANTEED—See Note *page 233*

Copper Alloy	UNS Number	Description	Temper	COMPOSITION % Copper	Zinc	Lead	Tin	Nickel	Others	MECHANICAL Tensile Strength ksi†	Yield Strength ksi†	Elongation in 2" %	Rockwell Hardness	PHYSICAL Melting Point °F	Electrical Conductivity (Annealed) %	Machinability Rating %*
PLATE (1.00" Thick)																
110	C11000	Copper	Soft	99.9+	—	—	—	—	—	32.0	10.0	50	F40	1981	101	20
			1/8-1/4H	"	—	—	—	—	—	38.0	30.0	25	F70	"	"	"
122	C12200	(DHP) Copper	1/8-1/4H	99.9+	—	—	—	—	P .02	32.0	10.0	50	F40	1981	85	20
280	C28000	Muntz Metal	CR	60.0	40.0	—	—	—	—	60.0	35.0	30	B55	1660	28	40
353	C35300	Leaded Brass	1/2H	61.5	36.7	1.8	—	—	—	61.0	50.0	20	B70	1670	26	90
464	C46400	Naval Brass	HR	60.0	39.25	—	0.75	—	—	55.0	25.0	50	B55	1650	26	30
TUBE (1.00" OD x .065 Wall)																
122	C12200	(DHP) Copper	Soft	99.9+	—	—	—	—	P .02	32.0	10.0	45	F40	1981	85	20
			DGP	"	—	—	—	—	"	40.0	32.0	25	F77	"	"	"
272	C27200	Brass	DGP	63.0	37.0	—	—	—	—	54.0 min	—	—	53 min 30T	1690	26	40
330	C33000	Brass	DGP	66.0	33.5	0.5	—	—	—	54.0 min	—	—	53 min 30T	1720	26	60
932	C93200	Bronze Bushing**As Cast	—	83.0	3.0	7.0	7.0	—	—	44.0	24.0	17	F76	1790	12	70
954	C95400	Aluminum Bronze As Cast	—	85.0	—	—	—	—	Fe 4.0 Al 11.0	89.0	35.0	14	B89	1900	14	60
PIPE (3/4" SPS)																
122	C12200	(DHP) Copper	Hard	99+	—	—	—	—	P .02	55.0	50.0	12	B55	1981	85	20
230	C23000	Red Brass	DGP	85.0	15.0	—	—	—	—	50.0	40.0	30	B55	1880	37	30

*FC Brass = 100% **Based on 7/8" ID x 1-3/8" OD †1 ksi = 1000 psi
DGP = Drawn General Purpose

Continued on following page

COPPER AND COPPER ALLOY PRODUCTS—NOMINAL CHEMICAL COMPOSITION AND TYPICAL MECHANICAL PROPERTIES

Continued from preceding page

These figures are NOT GUARANTEED—See Note *page 233*

Ampco Alloy	Copper Alloy	UNS Number	Description	Temper	COMPOSITION % Copper	Zinc	Iron	Alum	Nickel	Chromium	MECHANICAL Tensile Strength ksi†	Yield Strength ksi†	Elongation in 2" %	Rockwell Hardness	PHYSICAL Melting Point °F	Electrical Conductivity (Annealed) %	Machinability Rating %*
ALUMINUM BRONZE																	
—	954	C95400	Cast	—	85.0	—	4.0	11.0	—	—	89.0	34.0	14	B89	1900	13	50
WIRE (.080" Dia.)																	
—	110	C11000	Copper	Soft	99.9	—	—	—	—	—	35.0	—	35**	—	1981	101	20
—	260	C26000	Brass	Soft	70.0	30.0	—	—	—	—	52.0	—	58	—	1760	28	30
				1/2H	"	"	—	—	—	—	70.0	—	20	—	"	"	"
				Spring	"	"	—	—	—	—	130.0	—	3	—	"	"	"
AMPCO (1.00" Dia.)																	
18W	624	C62400	Ext Rod	HR50	85.5	—	3.5	10.5	—	—	105.0	52.0	14	B92	1900	12	50
45	630	C63000	Ext Rod	HR50	81.0	—	3.0	10.0	5.0	Mn 1.0	118.0	75.0	15	B98	1930	9	30
				TQ50	81.0	—	3.0	10.0	5.0	Mn 1.0	115.0	66.0	15	B98	1930	9	30

*FC Brass = 100% †1 ksi = 1000 psi
**Elongation in 10"



ALUMINUM SHEET AND PLATE
RECOMMENDED MINIMUM BEND RADII FOR 90 DEGREE COLD FORMING OF SHEET AND PLATE[1,2,3,4]



Alloy and Temper	Radii for various thicknesses expressed in terms of thickness (t)							
	1/64 in.	1/32 in.	1/16 in.	1/8 in.	3/16 in.	1/4 in.	3/8 in.	1/2 in.
1100-O	0	0	0	0	$\frac{1}{2}t$	$1t$	$1t$	$1\frac{1}{2}t$
H14	0	0	0	$1t$	$1t$	$1\frac{1}{2}t$	$2t$	$2\frac{1}{2}t$
2024-T3 & T351	$2\frac{1}{2}t$	$3t$	$4t$	$5t$	$5t$	$6t$	$7t$	$7\frac{1}{2}t$
3003-O	0	0	0	0	$\frac{1}{2}t$	$1t$	$1t$	$1\frac{1}{2}t$
H14	0	0	0	$1t$	$1t$	$1\frac{1}{2}t$	$2t$	$2\frac{1}{2}t$
5052-O	0	0	0	$\frac{1}{2}t$	$1t$	$1t$	$1\frac{1}{2}t$	$1\frac{1}{2}t$
H32	0	0	$1t$	$1\frac{1}{2}t$	$1\frac{1}{2}t$	$1\frac{1}{2}t$	$1\frac{1}{2}t$	$2t$
H34	0	$1t$	$1\frac{1}{2}t$	$2t$	$2t$	$2\frac{1}{2}t$	$2\frac{1}{2}t$	$3t$
5086-H32	0	$\frac{1}{2}t$	$1t$	$1\frac{1}{2}t$	$1\frac{1}{2}t$	$2t$	$2\frac{1}{2}t$	$3t$
6061-O	0	0	0	$1t$	$1t$	$1t$	$1\frac{1}{2}t$	$2t$
T4	0	0	$1t$	$1\frac{1}{2}t$	$2\frac{1}{2}t$	$3t$	$3\frac{1}{2}t$	$4t$
T6 & T651	$1t$	$1t$	$1\frac{1}{2}t$	$2\frac{1}{2}t$	$3t$	$3\frac{1}{2}t$	$4\frac{1}{2}t$	$5t$
7075-T6 & T651	$3t$	$4t$	$5t$	$6t$	$6t$	$8t$	$9t$	$9\frac{1}{2}t$

[1]The radii listed are the minimum recommended for bending sheets and plates without fracturing in a standard press brake with air bend dies. Other types of bending operations may require larger radii or permit smaller radii. The minimum permissible radii will also vary with the design and condition of the tooling.

[2]Alclad sheet in the heat-treatable alloys can be bent over slightly smaller radii than the corresponding tempers of the bare alloy.

[3]Heat-treatable alloys can be formed over appreciably smaller radii immediately after solution heat treatment.

[4]Not applicable for Tread Plate or Cast Tool and Jig Plate.

ALUMINUM

NOMINAL CHEMICAL COMPOSITION† OF WROUGHT ALLOYS

Alloy	Per Cent of Alloying Elements—Aluminum and Normal Impurities Constitute Remainder								
	Copper	Silicon	Manganese	Magnesium	Zinc	Titanium	Chromium	Lead	Bismuth
1060		99.60% minimum aluminum							
1100	0.12	99.00% minimum aluminum							
1230*		99.30% minimum aluminum							
1350		99.50% minimum aluminum							
2011	5.5	. .	. .	. .	. .	. .	. .	0.40	0.40
2014	4.4	0.8	0.8	0.50	. .	. .	. .	. .	. .
2017	4.0	0.50	0.7	0.6	. .	. .	. .	. .	. .
2024	4.4	. .	0.6	1.5	. .	. .	. .	. .	. .
3003	0.12	. .	1.2	. .	. .	. .	. .	. .	. .
3004	. .	. .	1.2	1.0	. .	. .	. .	. .	. .
3105	. .	. .	0.6	0.50	. .	. .	. .	. .	. .
4032	0.9	12.2	. .	1.0	. .	. .	. .	. .	Ni 0.9
4043	. .	5.2	. .	. .	. .	. .	. .	. .	. .
5005	. .	. .	. .	0.8	. .	. .	. .	. .	. .
5050	. .	. .	. .	1.4	. .	. .	. .	. .	. .
5052	. .	. .	. .	2.5	. .	. .	0.25	. .	. .
5083	. .	. .	0.7	4.4	. .	. .	0.15	. .	. .
5086	. .	. .	0.45	4.0	. .	. .	0.15	. .	. .
5154	. .	. .	. .	3.5	. .	. .	0.25	. .	. .
5356	. .	. .	0.12	5.0	. .	0.13	0.12	. .	. .
5454	. .	. .	0.8	2.7	. .	. .	0.12	. .	. .
5456	. .	. .	0.8	5.1	. .	. .	0.12	. .	. .
5457	. .	. .	0.3	1.0	. .	. .	. .	. .	. .
5554	. .	. .	0.8	2.7	. .	0.12	0.12	. .	. .
5556	. .	. .	0.8	5.1	. .	0.12	0.12	. .	. .
5657	. .	. .	. .	0.8	. .	. .	. .	. .	. .
6013	0.8	0.8	0.5	1.0	. .	. .	. .	. .	. .
6020	0.6	.65	. .	0.9	. .	. .	. .	. .	Sn1.2
6061	0.28	0.6	. .	1.0	. .	. .	0.20	. .	. .
6063	. .	0.40	. .	0.7	. .	. .	. .	. .	. .
6101	. .	0.5	. .	0.6	. .	. .	. .	. .	. .
6262	0.28	0.6	. .	1.0	. .	. .	0.09	0.55	0.55
7075	1.6	. .	. .	2.5	5.6	. .	0.23	. .	. .

*Cladding on 2024
†Source: Aluminum Association Inc.

ALUMINUM

TYPICAL MECHANICAL PROPERTIES OF WROUGHT ALLOYS

These typical properties are average for various forms, sizes, and methods of manufacture and may not exactly describe any one particular product or size and do not imply availability in all products. They should not be used in specifying the raw material.

Alloy and Temper	UNS Number	Tensile Strength[3] (ksi)	Yield (.2%) Strength[3] (ksi)	% Elongation -2"	
				1/16" Thick Specimen	1/2" Diam. Specimen
1100-O	A91100	13.0	5.0	35	45
1100-H12	A91100	16.0	15.0	12	25
1100-H14	A91100	18.0	17.0	9	20
1100-H16	A91100	21.0	20.0	6	17
1100-H18	A91100	24.0	22.0	5	15
1100-H19	A91100	27.0	24.0	. .	12
2011-T3	A92011	55.0	43.0	. .	15
2011-T451	A92011	40.6	18.0	. .	16
2011-T8	A92011	59.0	45.0	. .	12
2014-O	A92014	27.0	14.0	. .	18
2014-T4,-T451	A92014	62.0	42.0	. .	20
2014-T6,-T651	A92014	70.0	60.0	. .	13
Alclad 2014-O	A92014	25.0	10.0	21	. .
Alclad 2014-T3	A92014	63.0	40.0	20	. .
Alclad 2014-T4,-T451	A92014	61.0	37.0	22	. .
Alclad 2014-T6,-T651	A92014	68.0	60.0	10	. .
2017-H13	A92017	35.0	. .	. .	15
2017-O	A92017	26.0	10.0	. .	22
2017-T4,-T451	A92017	62.0	40.0	. .	22
2024-O	A92024	27.0	11.0	20	22
2024-T3	A92024	70.0	50.0	18	. .
2024-T361[1]	A92024	72.0	57.0	13	. .
2024-T4,-T351	A92024	68.0	47.0	20	19
2024-T6	A92024	69.0	57.0	. .	10
2024-T81,-T851	A92024	70.0	65.0	7	8
2024-T861[1]	A92024	75.0	71.0	6	7
Alclad 2024-O	A92024	26.0	11.0	20	. .
Alclad 2024-T3	A92024	65.0	45.0	18	. .
Alclad 2024-T361[1]	A92024	67.0	53.0	11	. .
Alclad 2024-T4,-T351	A92024	64.0	42.0	19	. .
Alclad 2024-T81,-T851	A92024	65.0	60.0	6	. .
Alclad 2024-T861[1]	A92024	70.0	66.0	6	. .
3003-O	A93003	16.0	6.0	30	40
3003-H12	A93003	19.0	18.0	10	20
3003-H14	A93003	22.0	21.0	8	16
3003-H16	A93003	26.0	25.0	5	14
3003-H18	A93003	29.0	27.0	4	10
3003-H22	A93003	23.0	20.0	. .	12
Alclad 3003-O	A93003	16.0	6.0	30	40
Alclad 3003-H12	A93003	19.0	18.0	10	20
Alclad 3003-H14	A93003	22.0	21.0	8	16
Alclad 3003-H16	A93003	26.0	25.0	5	14
Alclad 3003-H18	A93003	29.0	27.0	4	10

See footnotes, page 241 Continued on following page

ALUMINUM

TYPICAL MECHANICAL PROPERTIES OF WROUGHT ALLOYS

These figures are not guaranteed. See note on *Page 239*

Continued from preceding page

Alloy and Temper	UNS Number	Tensile Strength[3] (ksi)	Yield (.2%) Strength[3] (ksi)	% Elongation -2"	
				1/16" Thick Specimen	1/2" Diam. Specimen
3004-O	A93004	26.0	10.0	20	25
3004-H32	A93004	31.0	25.0	10	17
3004-H34	A93004	35.0	29.0	9	12
3004-H36	A93004	38.0	33.0	5	9
3004-H38	A93004	41.0	36.0	5	6
Alclad 3004-O	A93004	26.0	10.0	20	25
Alclad 3004-H32	A93004	31.0	25.0	10	17
Alclad 3004-H34	A93004	35.0	29.0	9	12
Alclad 3004-H36	A93004	38.0	33.0	5	9
Alclad 3004-H38	A93004	41.0	36.0	5	6
3105-H14	A93105	25.0	22.0	5	. .
4032-T6,-T651	A94032	54.0	50.0	. .	7
5005-O	A95005	18.0	6.0	25	. .
5005-H12	A95005	20.0	19.0	10	. .
5005-H14	A95005	23.0	22.0	6	. .
5005-H16	A95005	26.0	25.0	5	. .
5005-H18	A95005	29.0	28.0	4	. .
5005-H32	A95005	20.0	17.0	11	. .
5005-H34	A95005	23.0	20.0	8	. .
5005-H36	A95005	26.0	24.0	6	. .
5005-H38	A95005	29.0	27.0	5	. .
5050-O	A95050	21.0	8.0	24	. .
5052-O	A95052	28.0	13.0	25	30
5052-H32	A95052	33.0	28.0	12	18
5052-H320	A95052	29.0	19.0	. .	8
5052-H34	A95052	38.0	31.0	10	14
5052-H36	A95052	40.0	35.0	8	10
5052-H38	A95052	42.0	37.0	7	8
5083-O	A95083	42.0	21.0	. .	22
5083-H112	A95083	43.0	23.0	20	22
5083-H321,-H116	A95083	46.0	33.0	. .	16
5083-H323	A95083	47.0	36.0	10	. .
5083-H343	A95083	52.0	41.0	8	. .
5086-O	A95086	38.0	17.0	22	. .
5086-H32,-H116	A95086	42.0	30.0	12	. .
5086-H34	A95086	47.0	37.0	10	. .
5086-H36	A95086	50.0	41.0	8	. .
5086-H112	A95086	39.0	19.0	14	. .
5154-O	A95154	35.0	17.0	27	. .
5154-H112	A95154	35.0	17.0	25	. .
5154-H32	A95154	39.0	30.0	15	. .

See footnotes, page 241 Continued on following page

ALUMINUM

TYPICAL MECHANICAL PROPERTIES OF WROUGHT ALLOYS

These figures are not guaranteed. See note on *Page 239*

Continued from preceding page

Alloy and Temper	UNS Number	Tensile Strength[3] (ksi)	Yield (.2%) Strength[3] (ksi)	% Elongation -2"	
				1/16" Thick Specimen	1/2" Diam. Specimen
5154-H34	A95154	42.0	33.0	13	. .
5154-H36	A95154	45.0	36.0	12	. .
5154-H38	A95154	48.0	39.0	10	. .
5454-O	A95454	36.0	17.0	22	. .
5454-H32	A95454	40.0	30.0	10	. .
5454-H34	A95454	44.0	35.0	10	. .
5454-H112	A95454	36.0	18.0	18	. .
5456-O	A95456	45.0	23.0	. .	24
5456-H112	A95456	45.0	24.0	. .	22
5456-H321,-H116	A95456	51.0	37.0	. .	16
5457-O	A95457	19.0	7.0	22	. .
5457-H25	A95657	26.0	23.0	12	. .
5457-H28	A95457	30.0	27.0	6	. .
5657-H25	A95657	23.0	20.0	. .	10
6013-T8	A96013	64.0	62.0	. .	11
6020-T9	A96020	58.0	53.0	. .	8
6020-T651	A96020	45.0	40.0	. .	15
6061-O	A96061	18.0	8.0	25	30
6061-T4,-T451	A96061	35.0	21.0	22	25
6061-T6,-T651,-T6511	A96061	45.0	40.0	12	17
6061-T6511*	A96061	42.0	38.0	. .	10
Alclad 6061-O	A96061	17.0	7.0	25	. .
Alclad 6061-T4,-T451	A96061	33.0	19.0	22	. .
Alclad 6061-T6,-T651	A96061	42.0	37.0	12	. .
6063-O	A96063	13.0	7.0	. .	. .
6063-T1	A96063	22.0	13.0	20	. .
6063-T4	A96063	25.0	13.0	22	. .
6063-T5, T52	A96063	27.0	21.0	12	. .
6063-T6	A96063	35.0	31.0	12	. .
6063-T83	A96063	37.0	35.0	9	. .
6063-T831	A96063	30.0	27.0	10	. .
6063-T832	A96063	42.0	39.0	12	. .
6101-T61	A96101	32.0	28.0	15	. .
6262-T6511[2]	A96262	45.0	41.0	. .	15
6262-T8	A96262	42.0	32.0	. .	10
6262-T9	A96262	58.0	55.0	. .	10
7075-O	A97075	33.0	15.0	17	16
7075-T6,-T651	A97075	83.0	73.0	11	11
Alclad 7075-O	A97075	32.0	14.0	17	. .
Cast Tool and Jig Plate	. .	26.0	15.0	. .	. .

[1]Tempers T361 and T861 were formerly designated T36 and T86, respectively.
[2]For stress-relieved tempers, the characteristics and properties other than those specified may differ somewhat from the corresponding characteristics and properties of material in the basic temper.
[3]1 ksi = 1,000 psi
*Minimum Properties (Manifold Quality)

HARDNESS CONVERSION TABLE
FOR CARBON AND ALLOY STEELS
NON-AUSTENITIC STAINLESS STEEL
MOST NON-FERROUS ALLOYS-EXCEPT ALUMINUM
ALL VALUES ARE APPROXIMATE

Rockwell Hardness Numbers					Brinell Hardness Number (Carbide Ball)	Tensile Strength	
C Scale	A Scale	15N Scale Superficial	B Scale	30T Scale Superficial		ksi	MPa
60	81.2	90.2	—	—	(654)*	—	—
58	80.1	89.3	—	—	615	—	—
56	79.0	88.3	—	—	577	313	2160
54	78.0	87.4	—	—	543	292	2010
52	76.8	86.4	—	—	512	273	1880
50	75.9	85.5	—	—	481	255	1760
48	74.7	84.5	—	—	455	238	1640
47	74.1	83.9	—	—	443	229	1580
46	73.6	83.5	—	—	432	221	1520
45	73.1	83.0	—	—	421	215	1480
44	72.5	82.5	—	—	409	208	1430
43	72.0	82.0	—	—	400	201	1390
42	71.5	81.5	—	—	390	194	1340
41	70.9	80.9	—	—	381	188	1300
40	70.4	80.4	—	—	371	182	1250
39	69.9	79.9	—	—	362	177	1220
38	69.4	79.4	—	—	353	171	1180
37	68.9	78.8	—	—	344	166	1140
36	68.4	78.3	—	—	336	161	1110
35	67.9	77.7	—	—	327	156	1080
34	67.4	77.2	—	—	319	152	1050
33	66.8	76.6	—	—	311	149	1030
32	66.3	76.1	—	—	301	146	1010
31	65.8	75.6	—	—	294	141	970
30	65.3	75.0	—	—	286	138	950
29	64.6	74.5	—	—	279	135	930
28	64.3	73.9	—	—	271	131	900
27	63.8	73.3	—	—	264	128	880
26	63.3	72.8	—	—	258	125	860
25	62.8	72.2	—	—	253	123	850
24	62.4	71.6	—	—	247	119	820
23	62.0	71.0	—	—	243	117	810
—	—	—	100	83.1	240	116	800
—	—	—	98	81.8	228	111	766
—	—	—	96	80.4	216	104	717
—	—	—	94	79.1	205	98	676
—	—	—	92	77.8	195	92	635
—	—	—	90	76.4	185	89	615
—	—	—	88	75.1	176	86	590
—	—	—	86	73.8	169	83	570
—	—	—	84	72.4	162	81	560
—	—	—	82	71.1	156	77	530
—	—	—	80	69.7	150	72	495
—	—	—	78	68.4	144	69	475
—	—	—	76	67.1	139	67	460
—	—	—	74	65.7	135	65	450
—	—	—	72	64.4	130	63	435
—	—	—	70	63.1	125	61	420
—	—	—	68	61.7	121	59	405
—	—	—	66	60.4	117	57	395
—	—	—	64	59.0	114	—	—
—	—	—	62	57.7	110	—	—
—	—	—	60	56.4	107	—	—

*Outside recommended Brinell hardness testing range (ASTM E 10)

STANDARD CARBON NON-RESULFURIZED STEELS* CHEMICAL COMPOSITION LIMITS†

ASTM/AISI Grade	UNS Number	C	Mn	P Max.	S Max.
1005	G10050	0.06 max.	0.35 max.	0.040	0.050
1006	G10060	0.08 max.	0.25-0.40	0.040	0.050
1008	G10080	0.10 max.	0.30-0.50	0.040	0.050
1008	SHEET	0.10 max.	0.50 max.	0.030	0.035
1009	SHEET	0.15 max.	0.60 max.	0.030	0.035
1010	G10100	0.08-0.13	0.30-0.60	0.040	0.050
1010	SHEET	0.08-0.13	0.30-0.60	0.030	0.035
MT1010	TUBE	0.02-0.15	0.30-0.60	0.035	0.035
1011	G10110	0.08-0.13	0.60-0.90	0.040	0.050
1012	G10120	0.10-0.15	0.30-0.60	0.040	0.050
1013	G10130	0.11-0.16	0.50-0.80	0.040	0.050
1015	G10150	0.13-0.18	0.30-0.60	0.040	0.050
1016	G10160	0.13-0.18	0.60-0.90	0.040	0.050
1017	G10170	0.15-0.20	0.30-0.60	0.040	0.050
1018	G10180	0.15-0.20	0.60-0.90	0.040	0.050
1019	G10190	0.15-0.20	0.70-1.00	0.040	0.050
1020	G10200	0.18-0.23	0.30-0.60	0.040	0.050
1020	TUBE	0.17-0.23	0.30-0.60	0.035	0.035
1020	PLATE	0.17-0.23	0.30-0.60	0.035	0.04
M1020	—	0.17-0.24	0.25-0.60	0.04	0.05
1021	G10210	0.18-0.23	0.60-0.90	0.040	0.050
1022	G10220	0.18-0.23	0.70-1.00	0.040	0.050
1023	G10230	0.20-0.25	0.30-0.60	0.040	0.050
1025	G10250	0.22-0.28	0.30-0.60	0.040	0.050
1026	G10260	0.22-0.28	0.60-0.90	0.040	0.050
1026	TUBE	0.22-0.28	0.60-0.90	0.035	0.035
1030	G10300	0.28-0.34	0.60-0.90	0.040	0.050
1035	G10350	0.32-0.38	0.60-0.90	0.040	0.050
1037	G10370	0.32-0.38	0.70-1.00	0.040	0.050
1038	G10380	0.35-0.42	0.60-0.90	0.040	0.050
1040	G10400	0.37-0.44	0.60-0.90	0.040	0.050
1042	G10420	0.40-0.47	0.60-0.90	0.040	0.050
1043	G10430	0.40-0.47	0.70-1.00	0.040	0.050
1044	G10440	0.43-0.50	0.30-0.60	0.040	0.050
M1044	—	0.40-0.50	0.25-0.60	0.04	0.05
1045	G10450	0.43-0.50	0.60-0.90	0.040	0.050
1046	G10460	0.43-0.50	0.70-1.00	0.040	0.050
1050	G10500	0.48-0.55	0.60-0.90	0.040	0.050
1050	SHEET	0.47-0.55	0.60-0.90	0.030	0.035
1053	G10530	0.48-0.55	0.70-1.00	0.040	0.050
1055	G10550	0.50-0.60	0.60-0.90	0.040	0.050
1059	G10590	0.55-0.65	0.50-0.80	0.040	0.050
1060	G10600	0.55-0.65	0.60-0.90	0.040	0.050
1064	G10640	0.60-0.70	0.50-0.80	0.040	0.050
1065	G10650	0.60-0.70	0.60-0.90	0.040	0.050
1070	G10700	0.65-0.75	0.60-0.90	0.040	0.050
1074	G10740	0.70-0.80	0.50-0.80	0.040	0.050
1074	STRIP	0.69-0.80	0.50-0.80	0.030	0.035
1075	G10750	0.70-0.80	0.40-0.70	0.040	0.050
1078	G10780	0.72-0.85	0.30-0.60	0.040	0.050
1080	G10800	0.75-0.88	0.60-0.90	0.040	0.050
1084	G10840	0.80-0.93	0.60-0.90	0.040	0.050
1086	G10860	0.80-0.93	0.30-0.50	0.040	0.050
1090	G10900	0.85-0.98	0.60-0.90	0.040	0.050
1095	G10950	0.90-1.03	0.30-0.50	0.040	0.050
1095	STRIP	0.90-1.04	0.30-0.50	0.030	0.035

*The above chemistries are Recognized Industry Standards for Bar Products, unless otherwise noted. Plate, sheet, and tubing may be slightly different. Source: ASTM A 29, ISS Steel Bar Product Guidelines, UNS 7th Ed.

†When lead is added to a grade (e.g.,10L18), the limits of lead are 0.15% / 0.35%.

STANDARD CARBON-RESULFURIZED STEELS* CHEMICAL COMPOSITION LIMITS†

ASTM/AISI Grade	UNS Number	C	Mn	P Max.	S
1108	G11080	0.08/0.13	0.60/0.80	.040	0.08/0.13
1109	G11090	0.08/0.13	0.60/0.90	.040	0.08/0.13
1110	G11100	0.08/0.13	0.30/0.60	.040	0.08/0.13
1116	G11160	0.14/0.20	1.00/1.40	.040	0.16/0.23
1117	G11170	0.14/0.20	1.00/1.30	.040	0.08/0.13
1118	G11180	0.14/0.20	1.30/1.60	.040	0.08/0.13
1119	G11190	0.14/0.20	1.00/1.30	.040	0.24/0.33
1132	G11320	0.27/0.34	1.35/1.65	.040	0.08/0.13
1137	G11370	0.32/0.39	1.35/1.65	.040	0.08/0.13
1139	G11390	0.35/0.43	1.35/1.65	.040	0.13/0.20
1140	G11400	0.37/0.44	0.70/1.00	.040	0.08/0.13
1141	G11410	0.37/0.45	1.35/1.65	.040	0.08/0.13
1144	G11440	0.40/0.48	1.35/1.65	.040	0.24/0.33
1145	G11450	0.42/0.49	0.70/1.00	.040	0.04/0.07
1146	G11460	0.42/0.49	0.70/1.00	.040	0.08/0.13
1151	G11510	0.48/0.55	0.70/1.00	.040	0.08/0.13
ASTM A 311 or STRESSPROOF®	G11440	0.40/0.48	1.35/1.65	.040	0.24/0.33
FATIGUE-PROOF®	G11440	0.40/0.48	1.35/1.65	.040	0.24/0.33

*The above chemistries are Recognized Industry Standards for Bar Products.
Source: ASTM A 29, ISS Steel Bar Product Guidelines, and UNS 7th Edition
†When lead is added to a grade (e.g., 11L17), the limits of lead are 0.15%/0.35%.

STANDARD CARBON — REPHOSPHORIZED AND RESULFURIZED STEELS* CHEMICAL COMPOSITION LIMITS

ASTM/AISI Grade	UNS Number	C Max	Mn	P	S	Pb
1211	G12110	.13	.60/.90	.07/.12	.10/.15	—
1212	G12120	.13	.70/1.00	.07/.12	.16/.23	—
1213	G12130	.13	.70/1.00	.07/.12	.24/.33	—
1215	G12150	.09	.75/1.05	.04/.09	.26/.35	—
12L13	G12134	.13	.70/1.00	.07/.12	.24/.33	.15/.35
12L14	G12144	.15	.85/1.15	.04/.09	.26/.35	.15/.35
INcut®100/ 1214SA	—	.09	.85/1.15	.04/.09	.26/.35	Bismuth .05 min. (.10 Nom)
INcut®200	—	.09	.85/1.15	.04/.09	.26/.35	Bismuth .15 min (.20 Nom)

*The above chemistries are Recognized Industry Standards for Bar Products.
Source: ASTM A 29, ISS Steel Bar Product Guidelines, and UNS 7th Edition.

STANDARD CARBON — HIGH MANGANESE STEELS* CHEMICAL COMPOSITION LIMITS

ASTM/AISI Grade	UNS Number	C	Mn	P Max.	S Max.	Former Std SAE
1513	G15130	0.10/0.16	1.10/1.40	.040	.050	—
1518	G15180	0.15/0.21	1.10/1.40	.040	.050	—
1522	G15220	0.18/0.24	1.10/1.40	.040	.050	—
1524	G15240	0.19/0.25	1.35/1.65	.040	.050	1024
1525	G15250	0.23/0.29	0.80/1.10	.040	.050	—
1526	G15260	0.22/0.29	1.10/1.40	.040	.050	—
1527	G15270	0.22/0.29	1.20/1.50	.040	.050	1027
1533	G15330	0.30/0.37	1.10/1.40	.040	.050	—
1534	G15340	0.30/0.37	1.20/1.50	.040	.050	—
1536	G15360	0.30/0.37	1.20/1.50	.040	.050	1036
1541	G15410	0.36/0.44	1.35/1.65	.040	.050	1041
1544	G15440	0.40/0.47	0.80/1.10	.040	.050	—
1545	G15450	0.43/0.50	0.80/1.10	.040	.050	—
1547	G15470	0.43/0.51	1.35/1.65	.040	.050	—
1548	G15480	0.44/0.52	1.10/1.40	.040	.050	1048
1551	G15510	0.45/0.56	0.85/1.15	.040	.050	1051
1552	G15520	0.47/0.55	1.20/1.50	.040	.050	1052
1553	G15530	0.48/0.55	0.80/1.10	.040	.050	—
1561	G15610	0.55/0.65	0.75/1.05	.040	.050	1061
1566	G15660	0.60/0.71	0.85/1.15	.040	.050	1066
1570	G15700	0.65/0.75	0.80/1.10	.040	.050	—
1572	G15720	0.65/0.76	1.00/1.30	.040	.050	1072
1580	G15800	0.75/0.88	0.80/1.10	.040	.050	—
1590	G15900	0.85/0.98	0.80/1.10	.040	.050	—

*The above chemistries are Recognized Industry Standards for Bar Products. Plate, sheet, and tubing may be slightly different. Source: ASTM A 29, ISS Steel Bar Product Guidelines and UNS 7th Edition

STANDARD ALLOY STEELS* — CHEMICAL COMPOSITION LIMITS†

See notes *page 249*

ASTM/AISI Grade	UNS Number	Composition Limits, Per Cent							
		C	Mn	P Max.	S Max.	Si	Ni	Cr	Mo
1330	G13300	0.28/0.33	1.60/1.90	0.035	0.040	0.15/0.35	..	..	..
1335	G13350	0.33/0.38	1.60/1.90	0.035	0.040	0.15/0.35	..	..	..
1340	G13400	0.38/0.43	1.60/1.90	0.035	0.040	0.15/0.35	..	..	..
1345	G13450	0.43/0.48	1.60/1.90	0.035	0.040	0.15/0.35	..	..	..
4023	G40230	0.20/0.25	0.70/0.90	0.035	0.040	0.15/0.35	..	..	0.20/0.30
4024	G40240	0.20/0.25	0.70/0.90	0.035	0.035/0.050	0.15/0.35	..	..	0.20/0.30
4027	G40270	0.25/0.30	0.70/0.90	0.035	0.040	0.15/0.35	..	..	0.20/0.30
4028	G40280	0.25/0.30	0.70/0.90	0.035	0.035/0.050	0.15/0.35	..	..	0.20/0.30
4037	G40370	0.35/0.40	0.70/0.90	0.035	0.040	0.15/0.35	..	..	0.20/0.30
4042	G40420	0.40/0.45	0.70/0.90	0.035	0.040	0.15/0.35	..	..	0.20/0.30
4047	G40470	0.45/0.50	0.70/0.90	0.035	0.040	0.15/0.35	..	..	0.20/0.30
4118	G41180	0.18/0.23	0.70/0.90	0.035	0.040	0.15/0.35	..	0.40/0.60	0.08/0.15
4120	G41200	0.18/0.23	0.90/1.20	0.035	0.040	0.15/0.35	..	0.40/0.60	0.13/0.20
4121	G41210	0.18/0.23	0.75/1.00	0.035	0.040	0.15/0.35	..	0.45/0.65	0.20/0.30
4130	G41300	0.28/0.33	0.40/0.60	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4135	G41350	0.33/0.38	0.70/0.90	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4137	G41370	0.35/0.40	0.70/0.90	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4140	G41400	0.38/0.43	0.75/1.00	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4142	G41420	0.40/0.45	0.75/1.00	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4145	G41450	0.43/0.48	0.75/1.00	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4147	G41470	0.45/0.50	0.75/1.00	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4150	G41500	0.48/0.53	0.75/1.00	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15/0.25
4150MRS	—	0.48/0.53	1.00/1.20	0.035	0.06/0.10	0.15/0.35	..	0.70/0.90	0.15/0.25
4161	G41610	0.56/0.64	0.75/1.00	0.035	0.040	0.15/0.35	..	0.70/0.90	0.25/0.35
4320	G43200	0.17/0.22	0.45/0.65	0.035	0.040	0.15/0.35	1.65/2.00	0.40/0.60	0.20/0.30
4340	G43400	0.38/0.43	0.60/0.80	0.035	0.040	0.15/0.35	1.65/2.00	0.70/0.90	0.20/0.30

*The above chemistries are Recognized Industry Standards for Bar Products. Plate, sheet and tubing may be slightly different.
†When lead is added to a grade (e.g., 41L42), the limits of lead are 0.15%/0.35%.

Continued on following page

STANDARD ALLOY STEELS** — CHEMICAL COMPOSITION LIMITS†

See notes *page 249*

Continued from preceding page

ASTM/AISI Grade	UNS Number	Composition Limits, Per Cent							
		C	Mn	P Max.	S Max.	Si	Ni	Cr	Mo
E4340	G43406	0.38/0.43	0.65/0.85	0.025	0.025	0.15/0.35	1.65/2.00	0.70/0.90	0.20/0.30
4422	G44220	0.20/0.25	0.70/0.90	0.035	0.040	0.15/0.35	. .	. .	0.35/0.45
4427	G44270	0.24/0.29	0.70/0.90	0.035	0.040	0.15/0.35	. .	. .	0.35/0.45
4615	G46150	0.13/0.18	0.45/0.65	0.035	0.040	0.15/0.35	1.65/2.00	. .	0.20/0.30
4620	G46200	0.17/0.22	0.45/0.65	0.035	0.040	0.15/0.35	1.65/2.00	. .	0.20/0.30
4626	G46260	0.24/0.29	0.45/0.65	0.035	0.040	0.15/0.35	0.70/1.00	. .	0.15/0.25
4715	G47150	0.13/0.18	0.70/0.90	0.035	0.040	0.15/0.35	0.70/1.00	0.45/0.65	0.45/0.60
4718	G47180	0.16/0.21	0.70/0.90	0.035	0.040	0.15/0.35	0.90/1.20	0.35/0.55	0.30/0.40
4720	G47200	0.17/0.22	0.50/0.70	0.035	0.040	0.15/0.35	0.90/1.20	0.35/0.55	0.15/0.25
4815	G48150	0.13/0.18	0.40/0.60	0.035	0.040	0.15/0.35	3.25/3.75	. .	0.20/0.30
4817	G48170	0.15/0.20	0.40/0.60	0.035	0.040	0.15/0.35	3.25/3.75	. .	0.20/0.30
4820	G48200	0.18/0.23	0.50/0.70	0.035	0.040	0.15/0.35	3.25/3.75	. .	0.20/0.30
5046	G50460	0.43/0.48	0.75/1.00	0.035	0.040	0.15/0.35	. .	0.20/0.35	. .
50B44*	G50441	0.43/0.48	0.75/1.00	0.035	0.040	0.15/0.35	. .	0.20/0.60	. .
50B46*	G50461	0.44/0.49	0.75/1.00	0.035	0.040	0.15/0.35	. .	0.20/0.35	. .
50B60*	G50601	0.56/0.64	0.75/1.00	0.035	0.040	0.15/0.35	. .	0.40/0.60	. .
5115	G51150	0.13/0.18	0.70/0.90	0.035	0.040	0.15/0.35	. .	0.70/0.90	. .
5120	G51200	0.17/0.22	0.70/0.90	0.035	0.040	0.15/0.35	. .	0.70/0.90	. .
5130	G51300	0.28/0.33	0.70/0.90	0.035	0.040	0.15/0.35	. .	0.80/1.10	. .

Continued on following page

*Boron content is .0005%/.003%.

**The above chemistries are Recognized Industry Standards for bar products. Plate, sheet, and tubing may be slightly different.

†When lead is added to a grade (e.g., 41L42), the limits of lead are 0.15%/0.35%.

E=Electric Furnace Quality

STANDARD ALLOY STEELS** — CHEMICAL COMPOSITION LIMITS†

See notes *page 249*
Continued from preceding page

ASTM/AISI Grade	UNS Number	Composition Limits, Per Cent C	Mn	P Max.	S Max.	Si	Ni	Cr	Mo
5132	G51320	0.30/0.35	0.60/0.80	0.035	0.040	0.15/0.35	..	0.75/1.00	..
5135	G51350	0.33/0.38	0.60/0.80	0.035	0.040	0.15/0.35	..	0.80/1.05	..
5140	G51400	0.38/0.43	0.70/0.90	0.035	0.040	0.15/0.35	..	0.70/0.90	..
5147	G51470	0.46/0.51	0.70/0.95	0.035	0.040	0.15/0.35	..	0.85/1.15	..
5150	G51500	0.48/0.53	0.70/0.90	0.035	0.040	0.15/0.35	..	0.70/0.90	..
5155	G51550	0.51/0.59	0.70/0.90	0.035	0.040	0.15/0.35	..	0.70/0.90	..
5160	G51600	0.56/0.64	0.75/1.00	0.035	0.040	0.15/0.35	..	0.70/0.90	..
51B60*	G51601	0.56/0.64	0.75/1.00	0.035	0.040	0.15/0.35	..	0.70/0.90	..
E50100	G50986	0.98/1.10	0.25/0.45	0.025	0.025	0.15/0.35	..	0.40/0.60	..
E51100	G51986	0.98/1.10	0.25/0.45	0.025	0.025	0.15/0.35	..	0.90/1.15	..
E52100	G52986	0.98/1.10	0.25/0.45	0.025	0.025	0.15/0.35	..	1.30/1.60	..
									V
6118	G61180	0.16/0.21	0.50/0.70	0.035	0.040	0.15/0.35	..	0.50/0.70	0.10/0.15
6150	G61500	0.48/0.53	0.70/0.90	0.035	0.040	0.15/0.35	..	0.80/1.10	0.15 Min.
									Mo
8115	G81150	0.13/0.18	0.70/0.90	0.035	0.040	0.15/0.35	0.20/0.40	0.30/0.50	0.08/0.15
8615	G86150	0.13/0.18	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8617	G86170	0.15/0.20	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8620	G86200	0.18/0.23	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
E8620	G86200	0.18/0.23	0.70/0.90	0.025	0.025	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8622	G86220	0.20/0.25	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8625	G86250	0.23/0.28	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8627	G86270	0.25/0.30	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25

*Boron content is .0005%/.003%.

**The above chemistries are Recognized Industry Standards for bar products. Plate, sheet, and tubing may be slightly different.

†When lead is added to a grade (e.g., 41L42), the limits of lead are 0.15%/0.35%.

E=Electric Furnace Quality

Continued on following page

STANDARD ALLOY STEELS** — CHEMICAL COMPOSITION LIMITS††

See notes below
Continued from preceding page

ASTM/AISI Grade	UNS Number	Composition Limits, Per Cent							
		C	Mn	P Max.	S Max.	Si	Ni	Cr	Mo
8630	G86300	0.28/0.33	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8637	G86370	0.35/0.40	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8640	G86400	0.38/0.43	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8642	G86420	0.40/0.45	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8645	G86450	0.43/0.48	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8650	G86500	0.48/0.53	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8655	G86550	0.51/0.59	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8660	G86600	0.56/0.64	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.15/0.25
8720	G87200	0.18/0.23	0.70/0.90	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.20/0.30
8740	G87400	0.38/0.43	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.20/0.30
8822	G88220	0.20/0.25	0.75/1.00	0.035	0.040	0.15/0.35	0.40/0.70	0.40/0.60	0.30/0.40
9254	G92540	0.51/0.59	0.60/0.80	0.035	0.040	1.20/1.60	. .	0.60/0.80	. .
9260	G92600	0.56/0.64	0.75/1.00	0.035	0.040	1.80/2.20	. .	. .	. .
E9310	G93106	0.08/0.13	0.45/0.65	0.025	0.025	0.15/0.30	3.00/3.50	1.00/1.40	0.08/0.15
94B17†	G94171	0.15/0.20	0.75/1.00	0.035	0.040	0.15/0.35	0.30/0.60	0.30/0.50	0.08/0.15
94B30†	G94301	0.28/0.33	0.75/1.00	0.035	0.040	0.15/0.35	0.30/0.60	0.30/0.50	0.08/0.15
"e.t.d." 150®*	K11542	0.40 min.	0.70/1.10	0.035	0.060	0.15/0.35	. .	0.80/1.20	0.15/0.25

*Proprietary Grade—Nearest Standard grade is 4142H Modified with additives to improve machinability — may be Te, Se, S (.06 Max.) or others separately or in combination.
**The above chemistries are Recognized Industry Standards for bar products. Plate, sheet, and tubing may be slightly different.
†Boron content is .0005%/.003%.
††When lead is added to a grade (e.g., 41L42), the limits of lead are 0.15%/0.35%.
NOTE 1. Small quantities of certain elements which are not specified or required are present in alloy steels. These elements are considered as incidental and may be present to the following maximum amounts: Copper, 0.35 per cent; Nickel, 0.25 per cent; Chromium, 0.20 per cent and Molybdenum, 0.06 per cent.
NOTE 2. Source for all chemical composition limits: ASTM A 29, ISS Steel Bar Product Guidelines, UNS 7th edition. These limits are subject to standard variations in product analysis shown in these sources.
E=Electric Furnace Quality

STANDARD WROUGHT STAINLESS STEELS — CHEMICAL COMPOSITION LIMITS†

ASTM/ AISI Grade	SAE No.	UNS Number	Composition Limits, Per Cent† C Max.	Mn Max.	Si Max.	P Max.	S Max.	Cr	Ni	Other Elements
201	30201	S20100	0.15	5.50/7.50	1.00	0.060	0.030	16.00/18.00	3.50/ 5.50	N 0.25 Max.
202	30202	S20200	0.15	7.50/10.00	1.00	0.060	0.030	17.00/19.00	4.00/ 6.00	N 0.25 Max.
205	....	S20500	0.12/0.25	14.00/15.50	1.00	0.060	0.030	16.50/18.00	1.00/ 1.75	N 0.32/0.40
301	30301	S30100	0.15	2.00	1.00	0.045	0.030	16.00/18.00	6.00/ 8.00	N 0.10 Max.
302	30302	S30200	0.15	2.00	1.00*	0.045	0.030	17.00/19.00	8.00/10.00	N 0.10 Max.
302B	30302B	S30215	0.15	2.00	2.00/3.00	0.045	0.030	17.00/19.00	8.00/10.00	N 0.10 Max.
303	30303	S30300	0.15	2.00	1.00	0.20	0.15 Min.	17.00/19.00	8.00/10.00	Mo Max. 1.00
303Se	30303Se	S30323	0.15	2.00	1.00	0.20	0.060	17.00/19.00	8.00/10.00	Se 0.15 Min.
304	30304	S30400	0.08	2.00	1.00*	0.045	0.030	18.00/20.00	8.00/10.50	N 0.10 Max.
304L	30304L	S30403	0.030	2.00	1.00*	0.045	0.030	18.00/20.00	8.00/12.00	N 0.10 Max.
304H	....	S30409	0.04/.010	2.00	0.75	0.045	0.030	18.00/20.00	8.00/10.50	
304N	....	S30451	0.08	2.00	1.00*	0.045	0.030	18.00/20.00	8.00/10.50§	N 0.10/0.16
305	30305	S30500	0.12	2.00	1.00*	0.045	0.030	17.00/19.00	10.50/13.00•	
308	30308	S30800	0.08	2.00	1.00	0.045	0.030	19.00/21.00	10.00/12.00	
309	30309	S30900	0.20	2.00	1.00	0.045	0.030	22.00/24.00	12.00/15.00	
309S	30309S	S30908	0.08	2.00	1.00*	0.045	0.030	22.00/24.00	12.00/15.00	
310	30310	S31000	0.25	2.00	1.50	0.045	0.030	24.00/26.00	19.00/22.00	
310S	30310S	S31008	0.08	2.00	1.50	0.045	0.030	24.00/26.00	19.00/22.00	
314	30314	S31400	0.25	2.00	1.50/3.00	0.045	0.030	23.00/26.00	19.00/22.00	
316	30316	S31600	0.08	2.00	1.00*	0.045	0.030	16.00/18.00	10.00/14.00	Mo 2.00/3.00, N 0.10 Max.‡‡
316F	....	S31620	0.08	2.00	1.00	0.20	0.10 Min.	16.00/18.00	10.00/14.00	Mo 1.75/2.50, N 0.10 Max.
316L	30316L	S31603	0.030	2.00	1.00*	0.045	0.030	16.00/18.00	10.00/14.00	Mo 2.00/3.00, N 0.10 Max.‡‡
316N	....	S31651	0.08	2.00	1.00*	0.045	0.030	16.00/18.00	10.00/14.00	Mo 2.00/3.00, N 0.10 /0.16
317	30317	S31700	0.08	2.00	1.00*	0.045	0.030	18.00/20.00	11.00/15.00	Mo 3.00/4.00, N 0.10 Max.
317L	....	S31703	0.030	2.00	1.00*	0.045	0.030	18.00/20.00	11.00/15.00	Mo 3.00/4.00, N 0.10 Max.
321	30321	S32100	0.08	2.00	1.00*	0.045	0.030	17.00/19.00	9.00/12.00	Ti 5x (C + N) Min. - 0.70 Max., N 0.10 Max‡‡
329	....	S32900	0.08	1.00	0.75	0.040	0.030	23.00/28.00	2.50/ 5.00	Mo 1.00/2.00
330	30330	N08330	0.08	2.00	0.75/1.50	0.040	0.030	17.00/20.00	34.00/37.00	Cu 1.00 Max., Pb .005 Max.; Sn.025 Max.
347	30347	S34700	0.08	2.00	1.00*	0.045	0.030	17.00/19.00	9.00/13.00§§	Cb 10xC Min., 1.00 Max.•
348	30348	S34800	0.08	2.00	1.00*	0.045	0.030	17.00/19.00	9.00/13.00§§	Cb + Ta 10xC Min., 1.00 Max•., Ta 0.10 Max., Co 0.20 Max.
384	30384	S38400	0.08	2.00	1.00	0.045	0.030	15.00/17.00	17.00/19.00	

†Maximums unless otherwise indicated.
*Bars 1.00 Max., Sheet/Plate 0.75 Max., Tubing varies depending on specific action.
§Bars Ni = 8.00 - 11.00
•Bars Ni = 11.00 - 13.00
•Bars 10 x C min - 1.10 Max.
§§Ni 9.00 - 12.00 Bars
‡‡N 0.10 Max For Sheet/Plate ONLY

Continued on following page

STANDARD WROUGHT STAINLESS STEELS — CHEMICAL COMPOSITION LIMITS†

Continued from preceding page

ASTM/ AISI Grade	SAE No.	UNS Number	Composition Limits, Per Cent C Max.	Mn Max.	Si Max.	P Max.	S Max.	Cr	Ni	Other Elements
17-4	. .	S17400	0.07	1.00	1.00	0.040	0.030	15.00/17.50	3.00/5.00	Cu 3.00-5.00, Cb + Ta (0.15-0.45)
17-7PH*	. .	S17700	0.09	1.00	1.00	0.040	0.040	16.00/18.00	6.50/7.75	Al .75-1.50
403	51403	S40300	0.15	1.00	0.50	0.040	0.030	11.50/13.00	. .	
405	51405	S40500	0.08	1.00	1.00	0.040	0.030	11.50/14.50	0.50 Max.	Al .10-.30
409§	51409	S40900	0.08	1.00	1.00	0.045	0.030	10.50/11.75	0.50 Max.	Ti 6xC Min. to .75 Max.
410	51410	S41000	0.15	1.00	1.00	0.040	0.030	11.50/13.50	0.75 Max.	
414	51414	S41400	0.15	1.00	1.00	0.040	0.030	11.50/13.50	1.25/2.50	
416	51416	S41600	0.15	1.25	1.00	0.060	0.15 Min.	12.00/14.00	. .	Mo 0.60 Optional
416Se	51416Se	S41623	0.15	1.25	1.00	0.060	0.060	12.00/14.00	. .	Se 0.15 Min.
420	51420	S42000	0.15 Min.	1.00	1.00	0.040	0.030	12.00/14.00	. .	
420F	51420F	S42020	0.15 Min.	1.25	1.00	0.060	0.15 Min.	12.00/14.00	. .	Mo 0.60 Max.
422	. .	S42200	0.20/0.25	0.50/1.00	0.50	0.025	0.025	11.00/12.50	0.50/1.00	Mo 0.90/1.25, V 0.20/0.30, W 0.90/1.25
429	51429	S42900	0.12	1.00	1.00	0.040	0.030	14.00/16.00	. .	
430	51430	S43000	0.12	1.00	1.00	0.040	0.030	16.00/18.00	0.75 Max.	
430F	51430F	S43020	0.12	1.25	1.00	0.060	0.15 Min.	16.00/18.00	. .	Mo 0.60 Optional
430FSe	51430FSe	S43023	0.12	1.25	1.00	0.060	0.060	16.00/18.00	. .	Se 0.15 Min.
431	51431	S43100	0.20	1.00	1.00	0.040	0.030	15.00/17.00	1.25/2.50	
434	51434	S43400	0.12	1.00	1.00	0.040	0.030	16.00/18.00	. .	Mo 0.75/1.25
436	51436	S43600	0.12	1.00	1.00	0.040	0.030	16.00/18.00	. .	Mo 0.75/1.25 Cb + Ta; 5xC Min. / 0.70 Max.◆
440A	51440A	S44002	0.60/0.75	1.00	1.00	0.040	0.030	16.00/18.00	. .	Mo 0.75 Max.
440B	51440B	S44003	0.75/0.95	1.00	1.00	0.040	0.030	16.00/18.00	. .	Mo 0.75 Max.
440C	51440C	S44004	0.95/1.20	1.00	1.00	0.040	0.030	16.00/18.00	. .	Mo 0.75 Max.
440F	51440F	S44020	0.95/1.20	1.25	1.00	0.040	.15/.35	16.00/18.00	.75 Max.	Mo 0.40/0.60
440FSe	51440FSe	S44023	0.95/1.20	1.25	1.00	0.06	0.06	16.00/18.00	.75 Max.	Se 0.15 Min., Mo .60 Max.
442	51442	S44200	0.20	1.00	1.00	0.040	0.030	18.00/23.00	.60 Max.	
446	51446	S44600	0.20	1.50	1.00	0.040	0.030	23.00/27.00	.75 Max.	N 0.25 Max.
501	51501	S50100	0.11 Min.	1.00	1.00	0.040	0.030	4.00/6.00	. .	Mo 0.40/0.65
502	51502	S50200	0.10	1.00	1.00	0.040	0.030	4.00/6.00	. .	Mo 0.40/0.65

*Proprietary Grades, not Standard AISI Types
†Maximums unless otherwise indicated
§ See Footnote "L" in ASTM A240 for acceptable substitutes
◆ASTM allows .80 Max.

STEEL PLATES (Over 24" Wide) — CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

Description	Size Range Inches	COMPOSITION % (Maximum unless otherwise specified) C	Mn	P (Max)	S (Max)	Si	Other	TYPICAL MECHANICAL* Tensile Strength ksi ††	Yield Strength ksi ††	Elongation in 2" %	Rockwell Hardness
COMMERCIAL QUALITY											
Carbon Steel	3/4 & Under:	.05/.13**	.30/.60	.035	.040	.10 Max.	—	50	35	25	B65
(Typical Composition)	Over 3/4 – 2	.05/.21	.30/.60	.035	.040	.15/.40	—	60	35	25	B72
(ASTM A 830)											
1045 (ASTM A 830)	All	.43/.50	.60/.90	.035	.040	.15/.40	—	90	50	20	B90
FREE MACHINING											
FM 45 (Typical Composition)	All	.40/.50	1.00/1.35	.040	.20/.30	.10 Max	—	92	50	20	B90
ALLOY STEEL											
4140	All	.36/.44	.75/1.00	.035	.040	.15/.35	Cr .80/1.10, Mo .15/.25	95	54	25	B92
8620	All	.17/.23	.70/.90	.035	.040	.15/.35	Cr .40/.60, Ni .40/.70, Mo .15/.25	78	52	25	B89
ASTM A 829 (Both Grades)											
ABRASION RESISTING								Brinell			
AR Medium (Typical Composition)	1 & Under	.32/.45	1.15/1.90	.035	.035	.15/.40	—	200/250 Typical			
AR 400 Formable	All	.12/.19	1.25/1.65	.025	.005	.15/.70	Mo .55 Max,	360/444 (Reported)			
(Typical Composition)							V.08 Max, B .0005/.003	See *Page 257* For Forming Data			

*NOT GUARANTEED or REPORTED by producing mill

**For various widths and thicknesses, 0.05/0.21 Carbon may be available. Unless otherwise specified, either carbon range may be furnished.

††1 ksi = 1000 psi

Continued on following page

STEEL PLATES (Over 24" Wide) — SPECIFIED CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

Continued from preceding page

Description	Size Range Inches	COMPOSITION % (Maximum unless otherwise specified) C	Mn	P	S	Si	Other	MECHANICAL Tensile Strength ksi†	Yield Strength ksi†	Elongation* % in 8"	in 2"	Typical** Rockwell Hardness
HIGH STRENGTH LOW ALLOY								min	min	min	min	
ASTM A 588†† (Cor-Ten)	Plate 4 & Under	.20	.75/1.35	.04	.05	.15/.65	Ni .50 max, Cr .40/.70, Cu .20/.40, V .01/.10	70	50	16	19	B83
	Shapes	"	"	"	"	"	"	70	50	18	21	B83
ASTM A 572 Gr 50	3/8 & Under	.23	.50/1.35	.04	.05	.40	V .01/.15 or Cb .005/.05	65	50	16	19	B79
(Ex-Ten 50)	Over 3/8 – 1-1/2	.23	.80/1.35	.04	.05	.40	V .01/.15 or Cb .005/.05	"	"	"	"	"
	Over 1-1/2 – 2-1/2	.23	.80/1.35	.04	.05	.15/.40	V .01/.15 or Cb .005/.05	"	"	"	"	"
ASTM A 656 Gr 80	3/4 & Under	.18	1.65	.025	.035	.60	N.02, V .008/.15 or Cb .008/.10	90	80	9	12	B96
CleanForm® 100		.08	1.70	.020	.005	.13	AL .02/.08, Mo.23	110	100	11	15	C25
(Typical Composition)							B-Cb-V-Ti***	(Charpy V-notch Impact Tested)				
Domex® 100 XF		.12	2.0	.025	.010	.15	AL .015 min, Cb .09 max, Ti .15 max	110	100	–	15	C25
								(Charpy V-Notch 20 ft/lbs min at –40°F)§				
PRESSURE VESSEL QUALITY												
ASME SA-516 Gr 70	1/2 & Under	.27	85/1.20	.035	.035	.15/.40	Ni .40, Cr .30, Mo .12,	70/90	38	17	21	B85
	Over 1/2 – 2	.28	"	"	"	"	Cu .40, V .03, Cb .02,	"	"	"	"	"
	Over 2 – 4	.30	"	"	"	"	Cu + Ni + Cr + Mo = 1.00, Cr + Mo = .32	"	"	"	"	"
	Over 4 – 8	.31	"	"	"	"		"	"	"	"	"

*Adjustments required for thicknesses under 5/16" and over 3-1/2"
**NOT GUARANTEED or REPORTED by producing mill
***May be added, either singly or in combination at the discretion of the steel producer, to achieve the required mechanical properties.
†1 ksi = 1000 psi
††Composite of Grades A and B
§ Adjustments in minimum ft/lbs required for sub-size specimens per ASTM A 673

Continued on following page

STEEL PLATES (Over 24" Wide) — SPECIFIED CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

Continued from preceding page

Description	Size Range Inches	COMPOSITION % (Maximum unless otherwise specified) C	Mn	P	S	Si	Other	MECHANICAL Tensile Strength ksi §	Yield Strength ksi §	Elongation* % in 8" min	Elongation* % in 2" min	Typical** Rockwell Hardness
STRUCTURAL												
ASTM A 36	3/4 & Under	.25	—	.04	.05	.40	—	58/80	36	18	21	B76
	Over 3/4 – 1-1/2	.25	.80/1.20	.04	.05	.40	—	"	"	"	"	"
(Refer to page 263	Over 1-1/2 – 2-1/2	.26	.80/1.20	.04	.05	.15/.40	—	"	"	"	"	"
for A36 bars	Over 2-1/2 – 4	.27	.85/1.20	.04	.05	.15/.40	—	"	"	"	"	"
& shapes)	Over 4 – 8	.29	.85/1.20	.04	.05	.15/.40	—	"	"	"	"	"
	Over 8 – 10	.29	.85/1.20	.04	.05	.15/.40	—	58/80	32	18	21	B76
										Elong* in 2" % min	Reduction in Area % min	
ASTM A 514 Gr B (T-1 Type A)	3/16 – 1-1/4	.12/.21	.70/1.00	.035	.035	.20/.35	Cr .40/.65, Mo .15/.25, V .03/.08, Ti .01/.03, B .0005/.005	110/130	100	16	35†	C25
ASTM A 514 Gr H (T-1 Type B)	1-3/8 – 2	.12/.21	.95/1.30	.035	.035	.20/.35	Ni .30/.70, Cr .40/.65, Mo .20/.30, V .03/.08, B .0005/.005	110/130	100	16	35†	C25
ASTM A 514 Gr F (T-1)	2-1/4 – 2-1/2	.10/.20	.60/1.00	.035	.035	.15/.35	Ni .70/1.00, Cr .40/.65, Mo .40/.60, V .03/.08, Cu .15/.50, B .0005/.006	110/130	100	16	35†	C25
ASTM A 514 Gr Q (T-1 Type C)	3 – 6	.14/.21	.95/1.30	.035	.035	.15/.35	Ni 1.20/1.50, Cr 1.00/1.50, Mo .40/.60, V .03/.08	100/130	90	14	45	C25

*Adjustments required for thicknesses under 5/16" and over 3-1/2"
**NOT GUARANTEED or REPORTED by producing mill
†Adjustments required depending on test specimen size
§1 ksi = 1000 psi

STEEL SHEETS—SPECIFIED CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

Description	CHEMICAL COMPOSITION % (Maximum unless otherwise specified) C	Mn	P	S	Si	Other	MECHANICAL PROPERTIES Tensile Strength ksi † min	Yield Strength ksi † min	Elongation in 2" % min	Typical* Rockwell Hardness
HIGH STRENGTH LOW ALLOY										
ASTM A 606 Type 4 Cold Rolled	.22	1.25	.15	.04	.75	Contains additional alloying elements to enhance atmospheric corrosion resistance	65	45	22	B88
(Cor-Ten A) Hot Rolled	〃	〃	〃	〃	〃		70	50	22	B88
ASTM A 1011 HSLAS Gr 50 Class 1 Hot Rolled (Ex-Ten H50)	.23	1.35	.04	.04	—	Cu .20, Ni .20, Cr .15, Mo .06, V .005 min, Cb .005 min	65	50	22	B88
ASTM A 1011 HSLAS-F Gr 80	.15	1.65	.020	.025	—	Cu .20, Ni .20, Cr .15, Mo .06, V .005 min, Cb .005 min	90	80	18	B99
Domex® 100 XF	.12	2.0	.025	.010	.15	AL .015 min, Cb .09 max Ti .15 max	110	100	15	C25
							(Charpy V-Notch 20 ft/lbs min at –40°F)§			
GALVANIZED										
ASTM A 653 CS Type B	.02/.15	.60	.030	.035	—	Cu .25, Ni .20, Cr .15, Mo .06, V .008, Cb .008, Ti .025	**	**	**	B65
ASTM A 653 SS Gr 33	.20	1.35	.10	.04	—	Cu .25, Ni .20, Cr .15, Mo .06, V .008, Cb .008, Ti .025	45	33	20	B70

*NOT GUARANTEED or REPORTED by producing mill
**ASTM A 653 Type B is produced chemistry-only. Mechanical Properties not tested or reported.
† 1 ksi = 1000 psi
§ Adjustments in minimum ft/lbs required for sub-size specimens per ASTM A 673

STEEL PLATES TECHNICAL DATA

Nominal Chemical Composition and Mechanical Properties—See *page 252*

FREE MACHINING PLATES

FM 45 Medium Carbon Free Machining

A medium carbon, high manganese plate which is produced from killed steel to promote uniformity. The chemical content is balanced to permit high surface hardness by flame or induction hardening and better response to standard quench and temper heat treatments than is possible with SAE 1045 steel. The free machining characteristics of this plate allow the user to employ speeds and feeds up to 85% of those recommended for 1212 and obtain a superior finish. Free machining analyses are inherently less sound than non-free machining grades. Where soundness is the first consideration, free machining analyses are not recommended.

ABRASION RESISTING STEELS

Not Recommended for Structural Applications

AR Medium Hard

As rolled. Typical hardness of 200/250 BHN is not guaranteed.

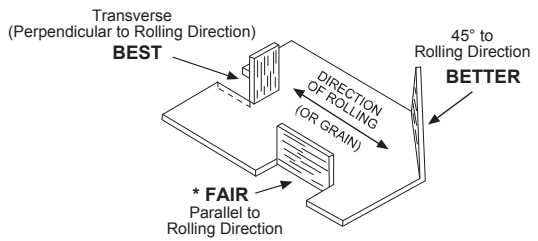
AR 400 Formable

This premium performance abrasion resisting plate is a low carbon, extra-low sulfur, quenched and tempered alloy plate that exhibits outstanding forming and welding capabilities in addition to providing the wear and durability associated with a hardness level of BHN 360-444. See page 257 for recommended bending parameters.

FABRICATING PRACTICE FOR COLD FORMING

(Bend Axis Transverse to Rolling Direction)*†

Description and Thickness (in.)	Suggested Minimum Inside Radius
Mild Steel (CQ) Plate	
Thru .500"**	1*t*
ASTM A 36 Plate	
Thru .500"**	1½*t*
Cor-Ten® or ASTM A 606 Type 4 (Sheet)	
Cor-Ten® or ASTM A 588 (Plate)	
Thru .062"	1*t*
Over .062" thru .500"**	1½*t*
Ex-Ten® 50 or ASTM A 572 Gr 50 (Plate)	
Ex-Ten® H50 or ASTM A 1011 HSLAS Gr 50 Class 1 (Sheet)	
Thru .2299" (Sheet)	1½*t*
Thru .500" (Plate)**	1½*t*
ASTM A 656 Gr 80	
Thru .250"	2½*t*
Over .250" thru .750"**	3*t*
AR 400 Formable (Plate)	
Up to 1"	3*t* (use 13.5*t* Bottom V-die)
Over 1" to 1¼"	4*t* (use 18*t* Bottom V-die)
Over 1¼" to 1½"	5*t* (use 18*t* Bottom V-die)
Hot Forming is not recommended due to loss of abrasion properties.	
100,000 psi Minimum Yield Strength (Plate)	
ASTM A 514 Gr B (T-1 Type A)	
ASTM A 514 Gr H (T-1 Type B)	
Thru ¾"	1¾*t*
Over ¾" thru 2"	3*t*
Hot Forming is not recommended due to loss of mechanical properties.	
CleanForm® 100	
Thru .375"	2*t*
Domex® 100 XF	
Thru .250"	1.6*t*
Over .250" thru .394"	1.8*t*



*Larger minimum radii should be used for bending parallel to rolling direction

**Hot forming is recommended for thicker sections which may result in lowering of mechanical properties

†All guidelines regarding bending and edge preparation per ASTM A 6 Sect. x4 apply

TYPICAL MECHANICAL PROPERTIES OF STANDARD CARBON STEELS

- These figures show the APPROXIMATE ranges of mechanical properties of steels in common use in 1" Rounds and cannot be used as a basis of acceptance or rejection of material.
- They are NOT GUARANTEED and are given only as an indication of what may be expected and should under no circumstances be used in specifying the raw materials. It must not be assumed that these properties will be obtained in all cases, as they vary widely with permissible variations in analysis, size of section, rolling conditions, grain size, and methods of heat treatment.
- Dependable mechanical properties can only be obtained through carefully controlled heat treatment or special processing.

		MECHANICAL PROPERTIES				TYPICAL HARDNESS		
ASTM/AISI Grade	Condition of Steel	Tensile Strength ksi†	Yield Strength ksi†	Elongation in 2" %	Reduction of Area %	Brinell	Rockwell	Average Machinability % of CD 1212
1008	Hot Rolled	42/52	21/31	25/35	50/60	95/120	B60/67	—
	Cold Drawn	50/65	40/55	20/30	40/50	110/140	B63/80	55
1018**	Hot Rolled	55/70	35/50	30/40	55/65	120/140	B67/80	55
	Cold Drawn	70/85	60/75	18/25	45/55	150/180	B80/90	65
	*Carburize 1700°F, Austenitize 1425°F, Water Quench, Temper 350°F (Core)	90	55	26	55	185	B90	—
1020	Hot Rolled	55/70	35/50	30/40	55/65	120/140	B67/80	50
M1044	Hot Rolled	75/85	40/50	12/20	35/45	140/170	B80/87	—
1045	Hot Rolled	90/105	55/65	15/25	35/45	190/220	B90/98	55
	Cold Drawn	90/110	75/90	12/20	30/45	195/230	B90/99	58
	*Austenitize 1550°F, Water Quench, Temper 1000°F	120	92	20	55	255	C25	—
1050	Hard Drawn Stress Relieved — .524 & Under	145 typical	100 min	5 min	—	253 min	C25 min	50
	— .587 – 1.000 Incl	155 typical	125 min	5 min	—	286 min	C30 min	50
	— Over 1.000	150 min	130 min	5 min	—	319 typical	C34 typical	50

*Not stocked—typical properties if heat treated as shown

Continued on following page

**With the addition of 0.15%/0.35% lead, longitudinal mechanical properties are not appreciably affected, and machinability is increased approximately 25%.

†1 ksi = 1000 psi

TYPICAL MECHANICAL PROPERTIES OF STANDARD CARBON STEELS

These figures are NOT GUARANTEED – See Note *page 258*

Continued from preceding page

ASTM/AISI Grade	Condition of Steel	MECHANICAL PROPERTIES: Tensile Strength ksi††	Yield Strength ksi††	Elongation in 2" %	Reduction of Area %	TYPICAL HARDNESS: Brinell	Rockwell	Average Machinability % of CD 1212
1095	Hot Rolled	130/150	75/95	7/17	10/25	260/300	C26/32	—
	Spheroidize Annealed	90/110	55/65	15/25	35/45	190/220	B90/99	42
	*Austenitize 1450°F, Water Quench, Temper 1000°F	170	110	14	38	290	C36	—
1117**	Hot Rolled	65/75	40/50	25/35	55/65	135/155	B74/82	80
	Cold Drawn	80/90	65/80	15/20	45/55	150/190	B80/90	90
	*Carburize 1700°F, Austenitize 1450°F, Water Quench, Temper 350°F (Core)	95	58	24	53	195	B92	—
1137	Hot Rolled	90/105	55/70	15/25	35/50	180/220	B89/98	65
	Cold Drawn	90/110	75/90	9/19	25/35	190/225	B90/99	72
	*Austenitize 1550°F, Water Quench, Temper 1000°F	120	105	18	60	260	C26	—
	*Austenitize 1550°F, Oil Quench, Temper 1000°F	100	88	22	62	225	B98	—
1141**	Hot Rolled Average	95/110	55/70	15/25	30/45	190/220	B90/99	63
	Cold Drawn	100/120	85/105	8/18	25/35	200/250	B93/C24	70
	*Austenitize 1550°F, Oil Quench, Temper 1000°F	120	90	20	50	250	C24	—
1144	Cold Drawn	100/120	90/110	7/17	20/35	210/250	B96/C24	85
	*Austenitize 1550°F, Oil Quench, Temper 1000°F	122	92	19	50	250	C24	—
ASTM A 311 Class B or STRESSPROOF®	Hard Drawn Stress Relieved (1144) Thru 2"	115 min	100 min	8 min	25 min	235/285	C22/30	83
	Over 2" Thru 3"	115 min	100 min	8 min	20 min	235/285	C22/30	83
	Over 3" Thru 4-1/2"	115 min	100 min	7 min	20 min	235/285	C22/30	83
FATIGUE-PROOF® or Equivalent Mechanical Properties		140 min	125 min	5/15	15/30	280 min†	C30 min†	80

*Not stocked—typical properties if heat treated as shown

Continued on following page

**With the addition of 0.15%/0.35% lead, longitudinal mechanical properties are not appreciably affected and machinability is increased approximately 25%.

†In the event of disagreement between hardness and tensile strength, the tensile strength shall govern.

††1 ksi = 1000 psi

TYPICAL MECHANICAL PROPERTIES OF STANDARD CARBON AND ALLOY STEELS

These figures are NOT GUARANTEED – See Note *page 258*

Continued from preceding page

ASTM/AISI Grade	Condition of Steel		MECHANICAL PROPERTIES: Tensile Strength ksi †	Yield Strength ksi †	Elongation in 2" %	Reduction of Area %	TYPICAL HARDNESS: Brinell	Rockwell	Average Machinability % of CD 1212
1215	Cold Drawn		80/95	70/80	10/15	34/45	150/210	B80/95	135
12L14	Cold Drawn		70/85	60/75	12/18	40/50	150/180	B80/90	185
12L14 + Te	Cold Drawn		70/85	60/75	12/18	40/50	150/180	B80/90	250
INcut® 100/ 1214 SA	Cold Drawn		70/85	60/75	12/18	40/50	150/180	B80/90	185
INcut® 200	Cold Drawn		70/85	60/75	12/18	40/50	150/180	B80/90	250
4130	Normalized Cold Drawn		85/110	70/85	20/30	50/60	185/217	B90/96	70
4142*	Hot Rolled Annealed		90/100	60/70	20/30	50/60	185/210	B90/95	55
	Annealed Cold Drawn		105/120	85/95	15/25	45/55	215/235	B96/100	65
4142/50	HR & CF Heat Treated	1-1/2 and under	130 min	110 min	16 min	50 min	269/321	C28/34	50
		—Over 1-1/2 – 2-1/2 incl	125 min	105 min	16 min	50 min	269/321	C28/34	
		—Over 2-1/2 – 4 incl	115 min	95 min	16 min	50 min	269/321	C28/34	
41L42/50	HR & CF Heat Treated	—Over 4 – 7 incl	110 min	85 min	16 min	45 min	262/311	C26/33	63
		—Over 7 – 9-1/2 incl	105 min	80 min	15 min	40 min	262/311	C26/33	
4150*	Hot Rolled Annealed		90/110	65/75	20/30	45/55	185/215	B90/96	52
4150 MRS	HR Heat Treated	1-1/2 and under	130 min	110 min	16 min	50 min	269/321	C28/34	62
		—Over 1-1/2 – 2-1/2 incl	125 min	105 min	16 min	50 min	269/321	C28/34	
		—Over 2-1/2 – 4 incl	115 min	95 min	16 min	50 min	269/321	C28/34	
		—Over 4 – 7 incl	110 min	85 min	16 min	45 min	262/311	C26/33	
		—Over 7 – 9-1/2 incl	105 min	80 min	15 min	40 min	262/311	C26/33	
4150 MRS	Hot Rolled Annealed		90/110	65/75	20/30	45/55	185/215	B90/96	73

*With the addition of 0.15%/0.35% lead, longitudinal mechanical properties are not appreciably affected, and machinability is increased approximately 25%.
†1 ksi = 1000 psi

Continued on following page

TYPICAL MECHANICAL PROPERTIES OF STANDARD STEELS

These figures are NOT GUARANTEED – See Note *page 258*

Continued from preceding page

ASTM/AISI Grade	Condition of Steel	MECHANICAL PROPERTIES: Tensile Strength ksi††	Yield Strength ksi††	Elongation in 2" %	Reduction of Area %	TYPICAL HARDNESS: Brinell	Rockwell	Average Machinability % of CD 1212
4340	Hot Rolled Annealed	100/120	65/85	20/30	45/55	210/250	B95/C25	45
	*Austenitize 1550°F, Oil Quench, Temper 1000°F	185	165	15	40	380	C40	—
4820	Hot Rolled	105/115	68/78	20/30	50/60	205/235	B94/99	52
	*Carburize 1700°F, Austenitize 1475°F, Oil Quench, Temper 300°F (Core)	165/180	120/135	15/20	45/55	335/365	C35/40	—
E52100	Annealed Cold Drawn	100/120	80/90	12/22	50/60	200/220	B93/100	40
	*Austenitize 1550°F, Oil Quench, Temper 400°F	—	—	—	—	—	C60/65	—
8620**	Hot Rolled	80/95	60/70	18/25	55/65	165/200	B85/93	55
	Cold Drawn	95/105	80/90	15/25	50/60	200/220	B93/97	60
	*Carburize 1700°F, Austenitize 1550°F, Oil Quench, Temper 300°F (Core)	125/150	100/120	15/20	45/55	250/300	C24/32	—
E8620**	Cold Drawn	95/105	80/90	15/25	50/60	200/220	B93/97	60
	*Carburize 1700° F, Austenitize 1550°F, Oil Quench, Temper 300°F (Core)	125/150	100/120	15/20	45/55	250/300	C24/32	—
"e.t.d." 150®	Elevated Temperature Drawn	150 min	130 min	10/30	35/45	302 min†	C32 min†	75
W-1	Spheroidize Annealed	80/95	65/75	10/15	30/35	200/230	B94/97	43
	*Austenitize 1450°F, Water Quench, Temper 400°F	—	—	—	—	627/745	C59/62	—
O-1	Spheroidize Annealed	90/105	75/85	10/15	25/30	200/240	B94/100	39
	*Austenitize 1450°F, Oil Quench, Temper 400°F	—	—	—	—	627/682	C59/61	—

*Not stocked—typical properties if heat treated as shown

**With the addition of 0.15%/0.35% lead, longitudinal mechanical properties are not appreciably affected, and machinability is increased approximately 25%.

†In the event of disagreement between hardness and tensile strength, the tensile strength shall govern.

††1 ksi = 1000 psi

TYPICAL MECHANICAL PROPERTIES OF STANDARD STAINLESS STEELS
Approximate range for 1" rounds

These figures are NOT GUARANTEED – See Note *page 258*

ASTM/AISI Grade	SAE Number	Material	MECHANICAL PROPERTIES Tensile Strength ksi†	Yield Strength ksi†	Elongation in 2" %	Reduction of Area %	TYPICAL HARDNESS Brinell	Rockwell	Average Machinability % of CD 1212
303	30303	*Annealed Bar	85/95	30/40	45/55	50/60	160/210	B83/95	73
304	30304	*Annealed Bar	80/90	30/40	55/65	65/75	150/185	B80/90	45
		*Sheet/Plate	75 min	30 min	40 min	—	202 max	B92 max	—
304L	30304L	*Sheet/Plate	70 min	25 min	40 min	—	183 max	B88 max	—
309	30309	*Sheet	75 min	30 min	40 min	—	217 max	B95 max	—
316	30316	*Annealed Bar	75/90	30/40	40/50	60/70	150/180	B80/90	40
		*Sheet/Plate	75 min	30 min	40 min	—	217 max	B95 max	—
316L	30316L	*Sheet/Plate	70 min	25 min	40 min	—	217 max	B95 max	—
		*Annealed Bar	80/90	30/45	50/60	60/70	150/200	B80/93	35/40
321	30321	*Sheet	75 min 100 max	30 min	40 min	—	217 max	B95 max	—
416	51416	Annealed Bar	80/100	55/65	15/25	40/50	190/220	B90/95	90
420	51420	Annealed Bar	95	50	25	55	195	B92	55
430	51430	Sheet	65 min	30 min	20 min	—	183 max	B88 max	—
440F Se	51440F Se	Annealed Bar	100/120	60/70	10/15	20/30	200/260	B94/C25	48
630 (17-4)	—	Cond-A Bar	150	110	6/15	30/60	321	C35	45
		**Cond-H900 Bar	200	185	14	50	415	C44	—
		**Cond-H1025 Bar	170	165	15	56	352	C38	—

*May be slightly magnetic when cold worked
**Not stocked—typical properties
†1 ksi = 1000 psi

ASTM A 36 BARS AND SHAPES

Chemical Composition

Thickness or Diameter	C Max	Mn	P Max	S Max	Si Max
All Shapes	.26	. .	.04	.05	.40
Bars to 3/4" incl.	.26	. .	.04	.05	.40
Bars over 3/4" to 1 1/2" incl.	.27	.60/.90	.04	.05	.40
Bars over 1 1/2" to 4" incl.	.28	.60/.90	.04	.05	.40
Bars over 4"	.29	.60/.90	.04	.05	.40

Mechanical Properties

Mechanical Properties	Bars	Shapes
Yield point, min, ksi	36	36
Tensile, ksi	58-80	58-80
Elongation in 8 inches, min, %	20*	20*
Elongation in 2 inches, min, %	23	21

*For material under 5/16" in thickness or diameter, % Elongation in 8 inches is reduced by 1.25% for each decrease of 1/32" below 5/16" in thickness or diameter.
1 ksi = 1000 psi

ASTM A 992 ASTM A 572 GRADE 50 ASTM A 709 GR 50 "W" SHAPES

Chemical Composition*

(% – **Max.** unless range is shown)

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	.Sn	Other
.23	.50/1.35	.035	.045	.40	.60	.45	.35	.15	.02	Cb .005/.11 or V .01/.11 Cb+V=.02/.11 N=.015 max

Mechanical Properties

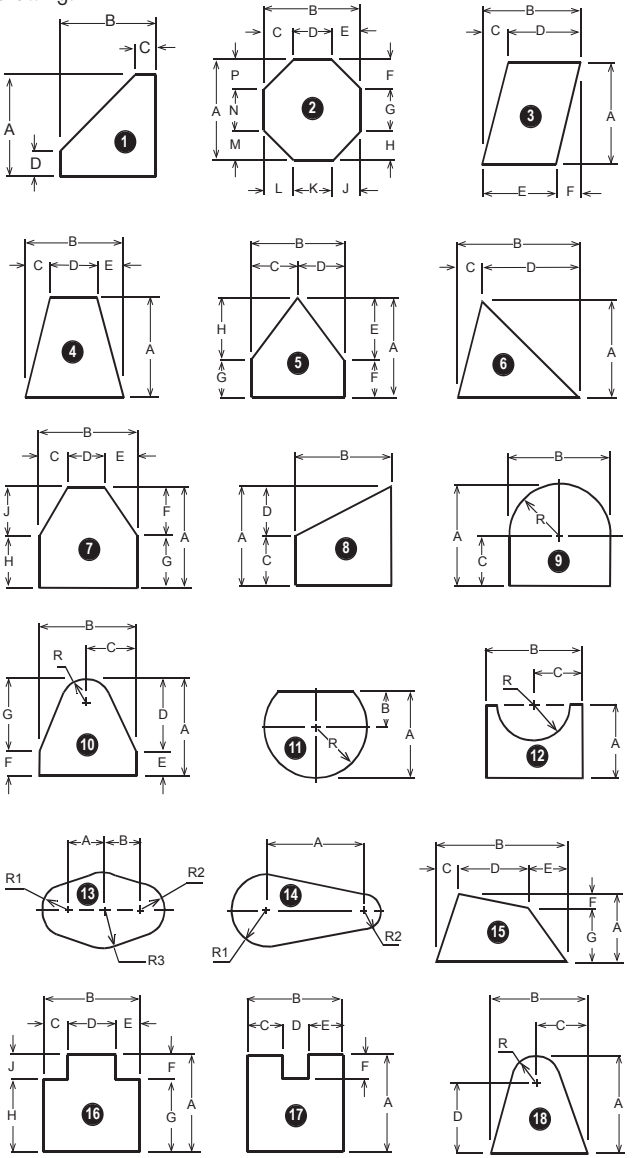
Yield Point, ksi	50-65
Tensile, min, ksi	65 min
Yield to Tensile Ratio	.85 max
Elongation in 8 inches, %	18 min
Elongation in 2 inches, %	21 min

*C.E. (Carbon Equivalant)=$C + \frac{Mn}{6} + \frac{Cr+ Mo+V}{5} + \frac{Ni+Cu}{15}$ =.47 max

SHAPE CUTTING

- ▶ SAW CUT (Straight or Contour)
- ▶ SHEAR (Straight or Contour)
- ▶ NC PUNCH
- ▶ NC OXYGEN-GAS BURN
- ▶ NC PLASMA CUT
- ▶ NC LASER CUT

Sheet and plate can be furnished cut to the shape/sketch you require. Specify the sketch number and the required dimensions or mail/fax your drawing.



TO ORDER, SPECIFY:

- ▶ Sketch number and dimensions (or furnish drawing)
- ▶ Material type and thickness
- ▶ Quantity required
- ▶ Type of cutting preferred
- ▶ Special requirements (tolerances, machining allowances, etc.)

SECTION 13

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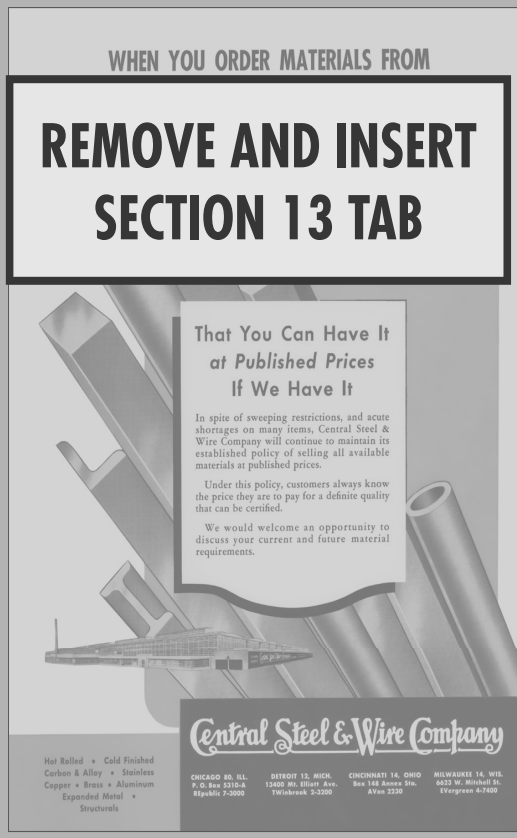

Central Steel & Wire Newspaper Ad from September 1951

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UNS S17400	251 (Also see 144, 262)
UNS S17700	251
UNS S20100, UNS S20200, UNS S20500, UNS S30100, UNS S30200, UNS S30215, UNS S30300, UNS S30323	250
UNS S30400	250 (Also see 27, 28, 30, 131, 132, 136, 137, 141, 142, 145, 147-150, 262)
UNS S30403	250 (Also see 133, 137, 141, 142, 145, 147-150, 262)
UNS S30409, UNS S30451, UNS S30500, UNS S30800	250
UNS S30900	250 (Also see 262)
UNS S30908, UNS S31000. UNS S31008, UNS S31400	250
UNS S31600	250 (Also see 134, 138, 142, 146-148, 262)
UNS S31603	250 (Also see 28, 134, 138, 142, 146-148, 262)
UNS S31620, UNS S31651, UNS S31700, UNS S31703	250
UNS S32100	250 (Also see 262)
UNS S32900, UNS S34700, UNS S34800, UNS S38400	250
UNS S40300, UNS S40500, UNS S40900, UNS S41000, UNS S41400	251
UNS S41600	251 (Also see 143, 145, 146, 262)
UNS S41623, UNS S42000, UNS S42020, UNS S42200, UNS S42900	251
UNS S43000	251 (Also see 135, 262)
UNS S43020, UNS S43023, UNS S43100, UNS S43400, UNS S43600, UNS S44002, UNS S44003, UNS S44004, UNS S44020	251
UNS S44023	251 (Also see 262)
UNS S44200, UNS S44600, UNS S50100, UNS S50200	251
W-1	124-126, 261

(***Boldface*** grade is a CSW Stocked item)

NOTES

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CHICAGO CINCINNATI GREENSBORO PORTAGE

Web Site: www.centralsteel.com

FOR ACCURACY, SPECIFY BY DECIMAL — NOT BY GAGE

Non-Ferrous (Brown & Sharp)			Steel Sheets (Uncoated) Manufacturers Std.		GAGE no.	Strip & Tubing (Birmingham or Stubs)		Basic Steel Wire	
WEIGHT Lbs per Sq Ft 1100 6061 ALUMINUM	Gage Decimal	WEIGHT Lbs per Sq Ft Alloy 260 BRASS	Gage Decimal	WEIGHT Lbs per Sq Ft Sheet STEEL		Gage Decimal	WEIGHT Lbs per Sq Ft Steel STRIP	Gage Decimal	WEIGHT Lbs per 100 ft Steel WIRE
	.5800				000000			.4615	56.87
	.5165				00000	.500	20.40	.4305	49.48
	.4600				0000	.454	18.52	.3938	41.41
	.4096				000	.425	17.34	.3625	35.09
	.3648				00	.380	15.50	.3310	29.25
	.3249				0	.340	13.87	.3065	25.08
	.2893				1	.300	12.24	.2830	21.38
	.2576				2	.284	11.59	.2625	18.40
	.2294		.2391	10.00	3	.259	10.57	.2437	15.86
	.2043		.2242	9.375	4	.238	9.710	.2253	13.55
	.1819		.2092	8.750	5	.220	8.975	.2070	11.44
2.286	.1620	7.185	.1943	8.125	6	.203	8.281	.1920	9.84
2.036	.1443	6.400	.1793	7.500	7	.180	7.343	.1770	8.36
1.813	.1285	5.699	.1644	6.875	8	.165	6.731	.1620	7.01
1.614	.1144	5.074	.1495	6.250	9	.148	6.038	.1483	5.87
1.438	.1019	4.520	.1345	5.625	10	.134	5.467	.1350	4.87
1.280	.0907	4.023	.1196	5.000	11	.120	4.895	.1205	3.88
1.140	.0808	3.584	.1046	4.375	12	.109	4.447	.1055	2.97
1.016	.0720	3.193	.0897	3.750	13	.095	3.876	.0915	2.24
.905	.0641	2.843	.0747	3.125	14	.083	3.386	.0800	1.71
.806	.0571	2.532	.0673	2.813	15	.072	2.937	.0720	1.38
.717	.0508	2.253	.0598	2.500	16	.065	2.652	.0625	1.04
.639	.0453	2.009	.0538	2.250	17	.058	2.366	.0540	.78
.569	.0403	1.787	.0478	2.000	18	.049	1.999	.0475	.60
.507	.0359	1.592	.0418	1.750	19	.042	1.713	.0410	.45
.452	.0320	1.419	.0359	1.500	20	.035	1.428	.0348	.32
.402	.0285	1.264	.0329	1.375	21	.032	1.305	.0317	.27
.357	.0253	1.122	.0299	1.250	22	.028	1.142	.0286	.22
.319	.0226	1.002	.0269	1.125	23	.025	1.020	.0258	.18
.284	.0201	.892	.0239	1.000	24	.022	.898	.0230	.14
.253	.0179	.794	.0209	.875	25	.020	.816	.0204	.11
.224	.0159	.705	.0179	.750	26	.018	.734	.0181	.09
.200	.0142	.630	.0164	.688	27	.016	.653	.0173	.08
.178	.0126	.559	.0149	.625	28	.014	.571	.0162	.07
.160	.0113	.501	.0135	.563	29	.013	.530	.0150	.06
.141	.0100	.444	.0120	.500	30	.012	.490	.0140	.052
.126	.0089	.395	.0105	.438	31	.010	.408	.0132	.047
.113	.0080	.355	.0097	.406	32	.009	.367	.0128	.044
.100	.0071	.315	.0090	.375	33	.008	.326	.0118	.037
.089	.0063	.279	.0082	.344	34	.007	.286	.0104	.029
	.0056	.248	.0075	.313	35	.005	.204	.0095	.024
	.0050	.222	.0067	.281	36	.004	.163	.0090	.022
	.0045	.200	.0064	.266	37			.0085	.019
	.0040	.177	.0060	.250	38			.0080	.017

ALUMINUM - Sheet
BRASS - Sheet, Strip, Wire, Tube
BRONZE - Sheet, Strip, Wire
COPPER - Strip, Tube, Wire
NICKEL SILVER - Sheet, Wire

STEEL SHEETS - Flat or Coil, Hot Roller, Hot Rolled or Cold Rolled

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BANDS
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SRTIP - Steel, Stainless Steel
SPRING STEEL SHEET

BASIC STEEL WIRE - All finishes

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