

# ALUMINUM SHEET/PLATES

## GUIDE TO SELECTION

**1100** (UNS A91100) is commercially pure aluminum (99.00% minimum). Excellent corrosion resistance, workability and weldability; high thermal conductivity. Tensile strength range 14,000 to 24,000 psi. Users include deep drawing, spinning, sheet metal work, decorative and architectural applications, air ducts, name plates, fan blades, etc. Conforms to Federal specification QQ-A-250/1 and ASTM B-209.

**3003** (UNS A93003) is alloyed with 1.2% manganese to provide a tensile strength range of 17,000 to 30,000 psi. Excellent workability, weldability and corrosion resistance. Used for drawing, spinning, fuel tanks, sheet metal work and other applications where slightly higher strength than 1100 is required. Conforms to Federal specification QQ-A-250/2 and ASTM B-209.

**5052** (UNS A95052) is alloyed with 2.5% magnesium. Tensile strength range 31,000 to 44,000 psi. Very good corrosion resistance, good workability, weldability and strength. Used for aircraft fuel tanks, storm shutters, refrigerator liners, utensils, electronic mounting plates and panels, fan blades, etc. Conforms to Federal specification QQ-A-250/8 and ASTM B-209.

**6061** (UNS A96061) is alloyed with 1.0% magnesium and .6% silicon. Tensile strength range 20,000 to 42,000 psi. Good formability, weldability and corrosion resistance. Used for engineering and structural applications, boats, furniture, transportation equipment, etc. Conforms to Federal specification QQ-A-250/11 and ASTM B-209.

**2024** (UNS A92024), is alloyed with 4.5% copper. Tensile strength range 30,000 to 63,000 psi. Fair weldability and corrosion resistance. Forming operations are limited. Used for high strength structural and aircraft applications. 2024 conforms to Federal specification QQ-A-250/4 and ASTM B-209.

**Cast Plate** (Aluminum Cast Machined Plate) is a general purpose cast tool and jig plate featuring many unique characteristics. It is a high-quality, accurately machined product that has received a thermal stress-relieving treatment to provide dimensional stability during machining.

**7075** (UNS A97075) is heavily alloyed with zinc with lesser amounts of magnesium, copper and chromium. One of the strongest of the aluminum alloys, its use parallels that of 2024 with 7075 selected when higher mechanical properties are desired. Forming operations are limited. All 7075 flat products conform to ASTM B-209; 7075 Bare conforms to Federal specification QQ-A-250/12.

# ALUMINUM SHEETS

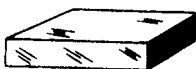


<i>Size in Inches</i>	<i>Lbs./Sq. Ft.</i>	3003-H14	6061-T6	2024-T351	5052-H32
.025 48 x 120	.36	X			
.032 48 x 96	.44	X			
48 x 120		X			X
48 x 144			X	X	
.040 48 x 96	.58	X			
48 x 120		X			X
48 x 144				X	
.050 48 x 96	.71	X			
48 x 120		X			X
48 x 144		X	X	X	X
.063 48 x 96	.91	X			X
48 x 120		X			X
48 x 144		X	X	X	X
.080 48 x 96	1.13	X			X
48 x 120		X			
48 x 144		X	X		
.090 48 x 96	1.28	X			X
48 x 120		X			X
48 x 144		X	X		
.100 48 x 144	1.42	X			X
.125 48 x 96	1.77	X			
48 x 120		X			
48 x 144		X	X	X	X
60 x 144			X		
.190 48 x 144	2.66	X	X	X	X

Looking for a specific material, grade, or size that's not listed in our Material Selection Guide?  
Call and inquire!

# ALUMINUM PLATES

We cut to your exact needs



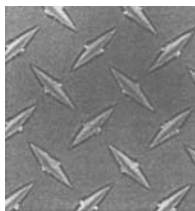
			2024-T351	6061-T651	Cast Plate
<i>Size in Inches</i>		<i>Lbs./Sq. Ft.</i>			
1/4	48 x 96	3.60			X
	48 x 144*		X	X	X
	60 x 144			X	X
5/16	48 x 144	4.49	X	X	X
3/8	48 x 96	5.40			X
	48 x 144**		X	X	X
	60 x 144			X	X
1/2	48 x 96	7.20			X
	48 x 144		X	X	X
	60 x 144			X	X
5/8	48 x 144	9.00	X	X	
	60 x 144			X	X
3/4	48 x 144	10.80	X	X	X
	60 x 144			X	X
7/8	48 x 144	12.60		X	
1	48 x 144	14.40	X	X	X
	60 x 144			X	X
1 1/4	48 x 144	18.90	X	X	X
	60 x 144				X
1 1/2	48 x 144	22.50	X	X	
	60 x 144				X
1 3/4	48 x 144	24.70		X	
2	48 x 144	29.70	X	X	X
	60 x 144				X
2 1/2	48 x 144	36.00		X	
	60 x 144				X
3	48 x 144	43.20	X	X	
4	48 x 144	57.60		X	
4 1/2	48 x 48	64.44		X	

\*Also available in 3003-H14.

\*\*Also available in 5052-H32

# ALUMINUM TREAD PLATE

6061-T651 and 3003-H22 Brite



Size in Inches		Lbs./Sq. Ft.	Type
1/8	48 x 192 Brite	1.95	3003-H22
	48 x 192	1.95	6061-T6
	60 x 192 Brite		3003-H22
3/16	48 x 192	2.80	6061-T6
	48 x 192 Brite	1.95	3003-H22
	60 x 192 Brite		3003-H22
1/4	48 x 192	3.70	6061-T6
	60 x 192		6061-T6

## ALUMINUM BAR GUIDE TO SELECTION

All bars are ordered to rigid specs for highest quality. When available, bars are ordered cold finished for improved machinability and stretch stress-relieved to provide optimum stability during machining or cutting operations.

**2011** (UNS A92011) *screw machine stock* is the best machining aluminum bar stock. Fine chips mean faster feeds and longer tool life. Machines to an excellent finish, has good strength, average formability. QQ-A-225/3 and ASTM-B-211.

**2024** (UNS A92024) *screw machine stock* is slightly more difficult to machine than 2011 or 2017, but has enough strength for aircraft fittings, bolts, and fastening devices. Conforms to QQ-A-225/6 and ASTM B-211.

**6061** (UNS A96061) is one of the most versatile screw machine alloys with good strength, workability, corrosion resistance and ease of joining. Less machinable than 2000 series. Cold finished rounds and hexes conform to QQ-A-225/8 and ASTM B-211. Extruded rounds, squares and rectangles to QQ-A-200/8 and ASTM B-221. Most extruded round items are specially ordered to restricted diameter tolerances for ready use in screw machines.

**7075** (UNSA97075) provides the greatest strength available in aluminum bar. Widely used in aircraft applications where light weight plus strength are required. Conforms to QQ-A-225/9 and ASTM B-211.

**6063** extruded (UNS96063) for architectural and ornamental applications. Highly corrosion resistant, with good formability, it is one of the most joinable alloys. Finish is pleasing and is the most suitable for anodizing. Conforms to QQ-A-200/9 and ASTM B-221.

## BAR COMPARISON GUIDE

<b>Alloy</b>	<b><i>in psi</i> Machinability</b>	<b>Typical Strength</b>		<b>Corrosion Resistance</b>
		<b>Ultimate</b>	<b>Yield</b>	
2011-T3	A++	55,000	43,000	C
6262-T9	A+	58,000	55,000	A
2017-T4,T451	A	62,000	40,000	C
2024-T4,T351	A	68,000	47,000	C
6061-T6,T651	B	45,000	40,000	A
7075-T6,T651	A	83,000	73,000	C
5086-H111	C	36,000	21,000	A
6063-T6	B-	35,000	31,000	A
6063-T5	C	27,000	21,000	A

## ALUMINUM ROUNDS

12 Ft. Lengths



<b>Size in Inches</b>	<b>Lbs./Ft.</b>	<b>2011-T3</b>	<b>2024-T351</b>	<b>6061-T651</b>
1/8	.01		X	X
3/16	.03		X	X
1/4	.06		X	X
5/16	.09	X		X
3/8	.13	X	X	X
7/16	.18	X		X
1/2	.23	X	X	X
5/8	.36		X	X
3/4	.52		X	X
7/8	.71	X	X	X
1	.92	X	X	X
1 1/8	1.16		X	X
1 1/4	1.44		X	X
1 3/8	1.74		X	X
1 1/2	2.07	X	X	X
1 5/8	2.43	X		X
1 3/4	2.82	X	X	X
1 7/8	3.24		X	X
2	3.69	X	X	X
2 1/4	4.67	X	X	X
2 3/8	5.20			X
2 1/2	5.76	X	X	X
2 3/4	6.97		X	X
3	8.30		X	X

# ALUMINUM ROUNDS

12 Ft. Lengths  
(Continued)



<i>Size in Inches</i>	<i>Lbs./Ft.</i>	2024-T351	6061-T651
3¼	9.74		X
3½	11.30	X	X
3¾	12.97		X
4	14.76	X	X
4½	18.68		X
5	23.06		X
5¼	25.43	X	
5½	27.99		X
6	33.21		X
6½	38.98		X
7	45.21		X
8	59.05		X
10⅛	98.47		X
12⅛	138.56		X

# ALUMINUM SQUARE

12 Ft. Lengths



<i>Size in Inches</i>	<i>Lbs./Ft.</i>	2024-T351	6061-T651
¼	.07		X
⅜	.17	X	X
½	.29	X	X
⅝	.46		X
¾	.66	X	X
1	1.20	X	X
1¼	1.83		X
1½	2.64		X
1¾	3.72		X
2	4.80		X
2½	7.35		X
3	10.80		X
3½	14.90		X
4	19.40		X
5	29.38		X
6	42.33		X

Looking for a specific material, grade, or size that's not listed in our Material Selection Guide? Call and inquire!

# ALUMINUM RECTANGULAR BARS 12 Ft. Lengths



Size in Inches			Lbs./Ft.	2024-T351	6061-T651
1/8	x	1/2*	.17		X
		3/4	.11	X	X
		1	.18	X	X
		1 1/4	.18		X
		1 1/2	.23	X	X
		2	.29	X	X
		2 1/2	.38		X
		3	.45		X
3/16	x	1/2	.11		X
		3/4	.17		X
		1	.22	X	X
		1 1/4	.28		X
		1 1/2	.33		X
		2	.44		X
		2 1/2	.56		X
		3	.67		X
1/4	x	1/2	.15	X	X
		3/4	.22	X	X
		1	.29		X
		1 1/4	.37		X
		1 1/2	.44	X	X
		1 3/4	.52		X
		2	.59	X	X
		2 1/2	.73		X
		3	.88	X	X
		4	1.17		X
3/8	x	1/2	.22	X	X
		3/4	.33	X	X
		1	.44		X
		1 1/4	.55		X
		1 1/2	.66	X	X
		1 3/4	.77		X
		2	.88		X
		2 1/2	1.10		X
		3	1.32		X
		4	1.76		X
1/2	x	3/4	.44	X	X
		1	.59	X	X
		1 1/4	.73		X
		1 1/2	.88	X	X

\* Also available in 6063-T52

# ALUMINUM RECTANGULAR

## BARS 12 Ft. Lengths

(Continued)



<i>Size in Inches</i>			<i>Lbs./Ft.</i>	2024-T351	6061-T651
1/2	x	1 3/4	1.02		X
		2	1.17	X	X
3/4	x	2 1/2	1.46		X
		3	1.76	X	X
		4	2.34	X	X
		5	2.93		X
		6	3.52	X	X
5/8	x	8	4.71		X
		1	.73		X
		1 1/4	.92		X
		1 1/2	1.10		X
		2	1.46		X
		4	2.92		X
		1	.88	X	X
3/4	x	1 1/4	1.10		X
		1 1/2	1.32	X	X
		2	1.76	X	X
		2 1/2	2.20		X
		3	2.53	X	X
		4	3.52		X
		5	4.29		X
		6	5.28		X
1	x	1 1/4	1.46		X
		1 1/2	1.76	X	X
		2	2.35	X	X
		2 1/2	2.73	X	X
		3	3.52	X	X
		3 1/2	4.11		X
		4	4.70	X	X
		5	5.87		X
1 1/4	x	1 1/2	2.20		X
		2	2.93		X
		3	4.41		X
		4	6.08		X
1 1/2	x	2	3.52		X
		2 1/2	4.40		X
		3	5.28		X
		4	7.04		X
		5	8.83		X
2	x	6	10.80		X
		3	7.04		X
		4	9.39	X	X
2 1/2	x	4	12.20		X
		3	14.09		X
3	x	5	17.62		X
		6	21.14		X



# ALUMINUM STRUCTURAL ANGLES

25 Ft. - 6061-T6



<i>Size in Inches</i>					<i>Lbs./Ft.</i>
3/4	x	3/4	x	1/8	.20
1	x	1	x	1/8	.28
1	x	1	x	3/16	.40
1	x	1	x	1/4	.51
1 1/4	x	1 1/4	x	1/8	.35
1 1/4	x	1 1/4	x	3/16	.51
1 1/4	x	1 1/4	x	1/4	.66
1 1/2	x	1 1/2	x	1/8	.43
1 1/2	x	1 1/2	x	3/16	.62
1 1/2	x	1 1/2	x	1/4	.81
2	x	1 1/2	x	1/4	.96
2	x	2	x	1/8	.57
2	x	2	x	3/16	.84
2	x	2	x	1/4	1.11
2	x	2	x	3/8	2.05
2 1/2	x	2 1/2	x	3/16	1.07
2 1/2	x	2 1/2	x	1/4	1.40
2 1/2	x	2 1/2	x	3/8	2.05
3	x	2	x	1/4	1.40
3	x	3	x	1/4	1.68
3	x	3	x	3/8	2.47
3	x	3	x	1/2	3.41
3 1/2	x	3 1/2	x	3/8	2.93
4	x	3	x	1/4	1.99
4	x	4	x	1/4	2.28
5	x	3	x	3/8	3.35
8	x	8	x	1/2	9.14

# AMERICAN STANDARD ALUMINUM CHANNEL

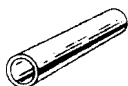
25 Ft. 6061-T6



<i>Size in Inches</i>					<i>Lbs./Ft.</i>
		<i>Thick</i>		<i>Flange</i>	
3	x	.170	x	1.41	1.420
3	x	.258	x	1.50	1.730
4	x	.180	x	1.58	1.850
4	x	.320	x	1.72	2.500
5	x	.190	x	1.75	2.320
5	x	.325	x	1.89	3.110
6	x	.200	x	1.92	2.830
8	x	.250	x	2.29	4.250
10	x	.526	x	2.89	8.640

# ALUMINUM DRAWN TUBING

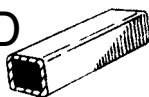
12 Ft. 6061-T6



<i>Size in Inches</i>			<i>Lbs./Ft.</i>
.750 O.D.	x	.065 wall	.160
.750 O.D.	x	.125 wall seamless	.289
1.000 O.D.	x	.125 wall	.404
1.500 O.D.	x	.065 wall	.344
2.000 O.D.	x	.125 wall	.870
3.000 O.D.	x	.250 wall	2.600

# ALUMINUM EXTRUDED TUBING

21 Ft. 1 In. - 6063-T52



<i>Size in Inches</i>				<i>Lbs./Ft.</i>	
3/4	x	3/4	x	.062 wall	.214
3/4	x	3/4	x	.125 wall	.376
1	x	1	x	.062 wall	.280
1	x	1	x	.125 wall	.526
1 1/4	x	1 1/4	x	.125 wall	.676
1 1/2	x	1 1/2	x	.125 wall	.825
1 3/4	x	1 3/4	x	.125 wall	.974
2	x	2	x	.125 wall	1.112
3	x	3	x	.125 wall	1.720
4	x	4	x	.125 wall	2.320
1/2	x	1	x	.125 wall	.375
3/4	x	1 1/2	x	.125 wall	.604
1	x	2	x	.125 wall	.824
1 1/2	x	2	x	.125 wall	.971
2	x	3	x	.125 wall	1.410

# ALUMINUM PIPE

20 Ft. 6061-T6



<i>Size in Inches</i>	<i>Schedule 40</i>	<i>Schedule 80</i>
1.00	X	X
1.50	X	

Aluminum I Beams, Tees, and Custom Extrusions are also available.