



Aluminum

Aluminum I Beams 6061-T6 AS

Size	Length	WT / FT	WT / Length
3 x 2.33 x 0.17	25'	1.963	49.08
4 x 2.66 x 0.19	25'	2.644	66.10
6 x 3.33 x 0.23	25'	4.302	107.55



Aluminum Channel 6061-T6 AA

Size	Length	WT / FT	WT / Length
2 x 1 x 0.130	25'	0.577	14.43
2 x 1-1/4 x 0.170	25'	1.071	26.77
6 x 2-1/2 x 0.170	25'	2.834	70.85
10 x 3-1/2 x 0.25	25'	6.136	153.40



Aluminum Channel 6061-T6 AS

Size	Length	WT / FT	WT / Length
3 x 1.410 x 0.170	25'	1.417	35.42
4 x 1.580 x 0.180	25'	1.846	46.15
4 x 1.720 x 0.320	25'	2.504	62.60
5 x 1.750 x 0.190	25'	2.316	57.90
5 x 1.885 x 0.325	25'	3.108	77.70
6 x 1.945 x 0.225	25'	3.002	75.05
8 x 2.290 x 0.250	25'	4.252	106.30



Aluminum Angle 6061-T6

Size	Length	WT / FT	WT / Length
3/4 x 3/4 x 1/8	25'	0.201	5.03
1 x 1 x 1/8	25'	0.275	6.88
1 x 1 x 3/16	25'	0.400	10.00
1 x 1 x 1/4	25'	0.514	12.85
1-1/4 x 1-1/4 x 1/8	25'	0.343	8.57
1-1/4 x 1-1/4 x 3/16	25'	0.510	12.75
1-1/4 x 1-1/4 x 1/4	25'	0.656	16.40
1-1/2 x 1-1/2 x 1/8	25'	0.423	10.57
1-1/2 x 1-1/2 x 3/16	25'	0.619	15.47
1-1/2 x 1-1/2 x 1/4	25'	0.809	20.23



Aluminum Angle 6061-T6

Size	Length	WT / FT	WT / Length
1-3/4 x 1-3/4 x 1/8	25'	0.497	12.43
1-3/4 x 1-3/4 x 3/16	25'	0.731	18.27
1-3/4 x 1-3/4 x 1/4	25'	0.956	23.90
2 x 2 x 1/8	25'	0.577	14.43
2 x 2 x 3/16	25'	0.850	21.25
2 x 2 x 1/4	25'	1.110	27.75
2 x 2 x 3/8	25'	1.606	40.15
2-1/2 x 2-1/2 x 1/4	25'	1.404	35.10
2-1/2 x 2-1/2 x 3/8	25'	2.047	51.17
3 x 2 x 3/16	25'	1.071	26.77
3 x 2 x 1/4	25'	1.403	35.08
3 x 3 x 1/4	25'	1.684	42.10
3 x 3 x 3/8	25'	2.474	61.85
3-1/2 x 3-1/2 x 1/4	25'	1.989	49.73
3-1/2 x 3-1/2 x 3/8	25'	2.926	73.15
4 x 4 x 1/4	25'	2.283	57.08
4 x 4 x 3/8	25'	3.366	84.15

I Beams – The edges of the flanges of I beams are tapered in for added strength. They generally are not used for structural purposes, but instead are used for hoists and cranes.

6061 – Very corrosion resistant – strength, formability and machinability are still good.

Aluminum



Aluminum Rounds 6061-T6

Size	Length	WT / FT	WT / Length
1/8"	12'	0.014	0.17
1/4"	12'	0.058	0.70
5/16"	12'	0.090	1.08
3/8"	12'	0.130	1.56
1/2"	12'	0.231	2.77
5/8"	12'	0.361	4.33
7/8"	12'	0.707	8.48
3/4"	12'	0.520	6.24
1"	12'	0.924	11.09
1-1/4"	12'	1.443	17.32
1-3/8"	12'	1.746	20.95
1-1/2"	12'	2.078	24.94
1-3/4"	12'	2.829	33.95
2"	12'	3.695	44.34
2-1/2"	12'	5.773	69.28
2-3/4"	12'	6.985	83.82
3"	12'	8.313	99.76
3-1/2"	12'	11.315	135.78



Aluminum Square 6061-T6

Size	Length	WT / FT	WT / Length
1/2"	12'	0.294	3.53
3/4"	12'	0.662	7.94
1"	12'	1.176	14.11
1-1/4"	12'	1.838	22.06
1-1/2"	12'	2.646	31.75
2"	12'	4.704	56.45



Aluminum Square Tube 6063-T52

Size	Length	WT / FT	WT / Length
3/4 x 3/4 x 0.062	21'1"	0.199	4.20
3/4 x 3/4 x 0.125	21'1"	0.364	7.67
1 x 1 x 0.062	21'1"	0.271	5.71
1 x 1 x 0.125	21'1"	0.509	10.73
1-1/4 x 1-1/4 x 0.125	21'1"	0.655	13.81
1-1/2 x 1-1/2 x 0.125	21'1"	0.800	16.87
2 x 2 x 0.125	21'1"	1.091	23.00
3 x 3 x 0.125	21'1"	1.673	35.27
4 x 4 x 0.125	21'1"	2.255	47.54



Aluminum Rectangle Tube 6063-T52

Size	Length	WT / FT	WT / Length
1 x 2 x 0.125	21'1"	0.800	16.87
1-1/2 x 2 x 0.125	21'1"	0.946	19.94
2 x 3 x 0.125	21'1"	1.382	29.14
2 x 4 x 0.125	21'1"	1.673	35.27



Aluminum Expanded Metal Flattened

Style	Length	WT / FT	WT / Length
3/4" 0.125	48 x 96	0.656	20.99



Aluminum Expanded Metal Standard

Style	Length	WT / FT	WT / Length
1-1/2" 0.125	48 x 96	0.430	13.76

6063 – Highly corrosion resistant with good weldability and machinability. Excellent finish and is suitable for anodizing. Commonly used for architectural and ornamental applications. Conforms to ASTM B-211 and QQ-A200/9.

Aluminum



Aluminum Flats 6061-T6

Size	Length	WT / FT	WT / Length
1/8 x 3/4	12'	0.109	1.31
1/8 x 1	12'	0.146	1.75
1/8 x 1-1/2	12'	0.221	2.65
1/8 x 2	12'	0.294	3.53
3/16 x 1	12'	0.221	2.65
3/16 x 1-1/4	12'	0.276	3.31
3/16 x 1-1/2	12'	0.331	3.97
3/16 x 2	12'	0.441	5.29
3/16 x 3	12'	0.662	7.94
3/16 x 4	12'	0.882	10.58
1/4 x 1/2	12'	0.147	1.76
1/4 x 3/4	12'	0.221	2.65
1/4 x 1	12'	0.294	3.53
1/4 x 1-1/4	12'	0.368	4.42
1/4 x 1-1/2	12'	0.441	5.29
1-1/4 x 2	12'	0.588	7.06
1/4 x 2-1/2	12'	0.735	8.82
1/4 x 3	12'	0.882	10.58
1/4 x 4	12'	1.176	14.11
1/4 x 5	12'	1.470	17.64
1/4 x 6	12'	1.764	21.17
5/16 x 1-1/2	12'	0.551	6.61
3/8 x 1	12'	0.441	5.29
3/8 x 1-1/4	12'	0.551	6.61
3/8 x 1-1/2	12'	0.662	7.94
3/8 x 2	12'	0.882	10.58
3/8 x 2-1/2	12'	1.103	13.24
3/8 x 3	12'	1.323	15.88
3/8 x 4	12'	1.764	21.17
3/8 x 6	12'	2.646	31.75



Aluminum Flats 6061-T6

Size	Length	WT / FT	WT / Length
1/2 x 3/4	12'	0.441	5.29
1/2 x 1	12'	0.588	7.06
1/2 x 1-1/2	12'	0.882	10.58
1/2 x 2	12'	1.176	14.11
1/2 x 2-1/2	12'	1.470	17.64
1/2 x 3	12'	1.764	21.17
1/2 x 3-1/2	12'	2.056	24.67
1/2 x 4	12'	2.352	28.22
1/2 x 4-1/2	12'	2.640	31.68
1/2 x 5	12'	2.940	35.28
1/2 x 6	12'	3.528	42.34
5/8 x 1	12'	0.735	8.82
3/4 x 1	12'	0.882	10.58
3/4 x 1-1/2	12'	1.323	15.88
3/4 x 2	12'	1.764	21.17
3/4 x 2-1/2	12'	2.205	26.46
3/4 x 3	12'	2.646	31.75
3/4 x 4	12'	3.528	42.34
3/4 x 5	12'	4.406	52.87
1 x 1-1/4	12'	1.470	17.64
1 x 1-1/2	12'	1.764	21.17
1 x 2	12'	2.352	28.22
1 x 3	12'	3.528	42.34
1 x 4	12'	4.704	56.45
1 x 6	12'	7.056	84.67
1-1/2 x 2	12'	3.528	42.34

Aluminum Pipe



Sch. 40 6061-T6

Size	Length	O.D.	I.D.	Wall	WT / FT	WT / Bar
		In Inches	In Inches	Thickness		
3/8"	12'	0.675	0.493	0.091	0.196	2.35
1/2"	20'	0.840	0.622	0.109	0.294	5.88
3/4"	20'	1.050	0.824	0.113	0.391	7.82
1"	20'	1.315	1.049	0.133	0.581	11.62
1-1/4"	20'	1.660	1.380	0.140	0.786	15.72
1-1/2"	20'	1.900	1.610	0.145	0.940	18.80
2"	20'	2.375	2.067	0.154	1.264	25.28



Sch. 10 6063-T6

Size	Length	O.D.	I.D.	Wall	WT / FT	WT / Bar
		In Inches	In Inches	Thickness		
3"	20'	3.500	3.260	0.120	1.483	29.66
4"	20'	4.500	4.260	0.120	1.922	38.44

Aluminum Alloy Descriptions

Sheet and Plate Typical Temper Designations

F = As Fabricated O = Annealed H = Strained Hardened

The letter H is always followed by two digits. The first digit indicates the particular method used to obtain the temper. Examples are as follows:

- H1 = Strained hardened only.
- H2 = Strained hardened, then partially annealed.
- H3 = Strained hardened, then stabilized.

The temper is indicated by the second digit. Examples include:

- H x 2 = 1/4 Hard
- H x 4 = 1/2 Hard
- H x 6 = 3/4 Hard
- H x 8 = Full hard
- H x 9 = Extra Hard

T = Heat treated.

T5 = Artificially aged only.

T6 = Solution heat treated, then artificially aged.

T651 = Solution heat treated, stretcher stress relieved, artificially aged.

Aluminum Mechanical Properties

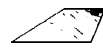
		<u>Tensile (psi)</u>	<u>Yield (psi)</u>
3003		16,000	6,000
3003	H14	22,000	21,000
5052	H32	33,000	28,000
6061	T6	45,000	40,000
6061	T651	45,000	40,000
6063	T5	27,000	21,000

Aluminum



Aluminum Plates 5052-H32

Decimal	Size	WT / FT	WT / Sheet
0.250	48 x 96	3.492	111.74
0.250	48 x 120	3.492	139.68
0.250	48 x 144	3.492	167.62
0.250	60 x 120	3.492	174.60
0.250	60 x 144	3.492	209.52
0.375	48 X 144	5.238	251.42



Aluminum Sheets 3003-H14

Decimal	Size	WT / SQ FT	WT / Sheet
0.025	48 x 120	0.356	14.24
0.032	48 x 96	0.456	14.59
0.032	48 x 120	0.456	18.24
0.040	48 x 120	0.570	22.80
0.050	48 x 96	0.713	22.82
0.050	48 x 120	0.713	28.52
0.0625	48 x 96	0.898	28.74
0.0625	48 x 120	0.898	35.92
0.0625	60 x 96	0.898	35.92
0.0625	60 x 120	0.898	44.90
0.080	48 x 96	1.141	36.51
0.080	48 x 120	1.141	45.64
0.080	60 x 120	1.141	57.05
0.090	48 x 96	1.283	41.06
0.090	48 x 120	1.283	51.32
0.100	48 x 96	1.426	45.63
0.100	48 x 120	1.426	57.04
0.125	48 x 120	1.782	71.28
0.125	60 x 120	1.782	89.10
0.125	60 x 144	1.782	106.92
0.190	48 x 120	2.709	108.36
0.190	60 x 120	2.709	135.45



Aluminum Plates 6061-T651

Decimal	Size	WT / FT	WT / Sheet
0.250	48-1/2 x 144-1/2	3.528	171.70
0.250	60 x 144	3.528	211.68
0.375	48-1/2 x 144-1/2	5.292	257.55
0.500	48-1/2 x 144-1/2	7.056	343.40

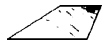


Aluminum Sheets 5052-H32

Decimal	Size	WT / SQ FT	WT / Sheet
0.0320	48 x 120	0.447	14.30
0.0625	48 x 96	0.880	28.16
0.090	48 x 120	1.257	50.28
0.100	48 x 120	1.397	55.88
0.125	48 x 96	1.746	55.87
0.125	48 x 120	1.746	69.84
0.125	48 x 144	1.746	83.81
0.125	60 x 120	1.746	87.30
0.125	60 x 144	1.746	104.76
0.190	36 x 120	2.654	79.62
0.190	48 x 120	2.654	106.16
0.190	60 x 120	2.654	132.70

Non-Heat Treatable Alloys – Grade 3003 – This alloy is the most commonly used of all. It is commercially pure aluminum with 1.2% manganese added which provides a tensile strength range of 17,000 psi to 30,000 psi. The workability and corrosion resistance of this non-heat-treatable alloy are excellent. It may be welded, brazed, deep drawn, or spun. Some of its common uses are for kitchen equipment and utensils, siding, awnings, chemical equipment and storage tanks. Conforms to ASTM-B209.

Grade 5052 – This grade is the highest strength alloy of the more ordinary non-heat-treatable grades. It has a higher fatigue strength than most aluminum alloys. It can withstand marine atmospheres and salt water corrosion especially well. Its workability is excellent and can be drawn or formed into elaborate shapes. Tensile strength range of 31,000 psi to 44,000 psi is higher than grade 3003 and is alloyed with 2.5% magnesium. Some common uses are aircraft modules, home appliances, and high-strength kitchen utensils. Conforms to ASTM-B209.



Aluminum Plates 3003-H14

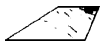
Decimal	Size	WT / SQ FT	WT / Sheet
0.250	48 x 96	3.564	114.05
0.250	48 x 120	3.564	142.56



Aluminum Sheet Color/Painted

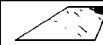
White on White GPSH14

Decimal	Size	WT / SQ FT	WT / Sheet
0.040	48 x 96	0.585	18.72
0.040	48 x 120	0.585	23.40
0.040	49 x 144	0.585	28.66



White / Black Coat GPSH14BL

Decimal	Size	WT / SQ FT	WT / Sheet
0.040	48 x 96	0.585	18.72
0.040	48 X 144	0.585	28.08



Bronze GPSH14B

Decimal	Size	WT / SQ FT	WT / Sheet
0.040	48 X 96	0.585	18.72
0.040	48 X 120	0.585	23.40

Aluminum Diamond Tread Plate



3003 H22 Bright Finish

Decimal	Size	WT / SQ FT	WT / Sheet
0.0625	48 X 96	1.009	32.29
0.1000	48 X 192	1.570	100.48
0.125	48 X 96	1.925	61.60
0.125	48 X 120	1.925	77.00
0.125	48 X 192	1.925	123.20
0.125	60 X 96	1.925	77.00
0.125	60 X 192	1.925	154.00
0.1875	48 X 96	2.823	90.34
0.1875	48 X 120	2.823	112.92
0.1875	48 X 192	2.823	180.67
0.1875	60 X 144	2.823	169.38
0.1875	60 X 192	2.823	225.84



Aluminum Diamond Tread Plate

6061 T6 Mill Finish

Decimal	Size	WT / SQ FT	WT / Sheet
0.250	48 x 96	3.669	117.41
0.250	48 x 192	3.669	234.82
0.250	60 x 96	3.669	146.76
0.250	60 x 192	3.669	293.52
0.375	48 x 96	5.443	174.18
0.375	48 x 192	5.443	348.35

Heat-Treatable Alloys

Grade 6061 – This is the most adaptable of the heat-treatable aluminum alloys. 6061 is mostly used for structural applications. It has the majority of the good properties of aluminum and it extends a wide span of mechanical characteristics and corrosion resistance. It is weldable by all methods. Some common uses are truck frames, boat trailers and machine parts. Conforms to ASTM-B209.