Selection Guide to Aluminum Sheet and Plate (Ref. ASTM-B209)

ALLOY & TEMPER	DESCRIPTION	TYPICAL MECHANICAL PROPERTIES			DENSITY	COMPARATIVE COST (APPROXIMATE) 1100 = 100	
		Tensile, PSI	Yield, PSI	% Elong. In 2"	lbs./cu. in.	SHEETS	COILS
Non-Heat-Treatable Alloys							
1100–0	Pure aluminum (.99% min.) is highly resistant to attack by chemicals and rural, industrial and marine atmospheres. Easily worked and ductile enough for deep draws. For general use in applications where the essential qualities of aluminum will be beneficial.	13,000	5,000	35	.098	110	100
H14		18,000	17,000	9	.098	110	100
3003–0	The most widely used general purpose alloy. Stronger than 1100 but still readily formable. Excellent resistance to chemicals and weathering. Recommended for general use where the extra strength is required.	16,000	6,000	30	.099	110	100
H14		22,000	21,000	8	.099	110	100
5050–H34	Very similar to 3003 in physical properties and corrosion resistance though slightly lighter. Recommended for anodized applications for best match with extruded aluminum components.	28,000	24,000	8	.097	110	101
5052–0	A versatile alloy for applications requiring greater strength. Readily formed, very good corrosion resistance. Recommended for applications requiring high strength and formability.	28,000	13,000	25	.097	115	105
H32		33,000	28,000	12	.097	116	105
H34		38,000	31,000	10	.097	116	105
5086–H32	Recommended for welded assemblies requiring both welding efficiency and high joint strength. Good corrosion resistance. Typical applications include pressure vessels, marine super-structures and transportation equipment.	42,000	30,000	12	.096	144	–
H34		47,000	37,000	10	.096	139	–

Heat-Treatable Alloys							
2024–0	These are high-strength, heat-treatable alloys with nearly twice the strength of 5052 and fair corrosion resistance. Alclad 2024 provides improved corrosion resistance.	27,000	11,000	20	.100	149	117
T3		70,000	50,000	18	.100	159	153
Alclad 2024–0		26,000	11,000	20	.100	160	129
T3		65,000	45,000	18	.100	170	165
6061–0	This high-strength, heat-treatable alloy provides good formability and weldability and good corrosion resistance. Suitable for a wide variety of structural and architectural applications.	18,000	8,000	25	.098	120	105
T4		32,000	21,000	22	.098	140	132
T6		45,000	40,000	12	.098	142	133
7075–T6	This alloy is intended for aircraft applications requiring the highest strength. Alclad 7075 provides improved corrosion resistance.	76,000	68,000	11	.101	154	–
Alclad 7075–0		32,000	14,000	17	.101	180	–
T6							

For other aluminum alloys, tempers and sizes, consult your IPA member supplier for availability.

All of the above materials are furnished with mill finish unless otherwise specified. Aluminum is available in a variety of finishes including mechanical surface treatments produced by grinding, polishing, burnishing and sand blasting; chemical surface treatments produced by caustic etching, bonderizing, anodizing, phosphatizing and chemical polishing; and electrolytic oxide treatment, electroplating, painting, embossing and texturing.