Aluminum Information

Soft, lightweight, corrosion-resistant alloy conducts both heat and electricity; available in a number of types to suit a variety of applications.

ALUMINUM TEMPERS

H14 (1/2 Hard)
Material is strain-hardened only (without additional thermal treatment) to a half-hard temper.

H32 (1/4 Hard)
Material is strain-hardened and mechanical properties are stabilized with supplementary thermal treatment to a quarter-hard temper.

T3
Material is solution heat treated, cold worked, and naturally aged to a substantially stable temper.

T351
Aluminum is treated and aged the same as T3 and then stretch-stress relieved.

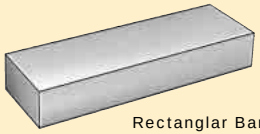
T4
Material is solution heat treated and naturally aged to a substantially stable condition.

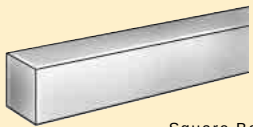
T6
Aluminum is solution heat treated and then artificially aged.

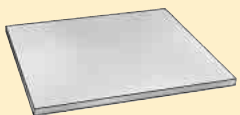
T651
Material is solution heat treated, artificially aged, and then stretch-stress relieved. Specifically refers to plates and cold-finished bars and rods.

T6511
Extruded aluminum is solution heat treated, artificially aged, and then stretch-stress relieved.

T7351
Aluminum is solution heat treated, overaged and stabilized, and then stretch-stress relieved.

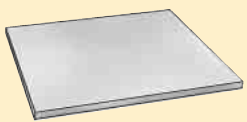

Rectanglar Bar


Square Bar



Plate


Cylindrical Rod


Precision Ground Blank


90° Angle

ALUMINUM COMPARISON CHART

Material	Tensile Strength* (psi)	Yield Strength* (psi)	Hardness* (BHN)	Corrosion Resistance	Wear Resistance	Formability	Machinability†	Weldability
Alloy 2011	55,000	43,000	95	Poor	Fair	Fair	Excellent	Not Recommended
Alloy 2024	68,000	47,000	120	Poor	Good	Fair	Good	Fair
Alloy 3003	22,000	21,000	40	Excellent	Not Recommended	Good	Poor	Good
Alloy 5052	33,000	28,000	60	Excellent	Not Recommended	Good	Poor	Good
Alloy 6061	45,000	40,000	95	Good	Fair	Fair	Fair	Good
Alloy 7075	83,000	73,000	150	Fair	Good	Poor	Good	Not Recommended

(*) Typical levels @ 1" diameter. (†) Compared to alloy 2011, which is the highest-machinable aluminum.