

Aluminium 7050
STD AMS 4050



General properties:

Aluminium - zinc - magnesium - copper alloy, aerospace, whose main properties are top values of mechanical strength, both static and fatigue, low quench sensitivity (that allows reaching high strength also on thick sections), high fracture toughness, good resistance to SCC, very good machinability associated to fair dimensional stability.

Generally used in form of plate.

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Typical applications:

Critical parts, with complex shape, highly stressed both statically and in fatigue, specially for outdoor service. Fuselage frames and bulkheads where section thicknesses are 2 to 6 inches (50.8 to 152.40mm). Typical applications for alloy 7050 sheet including skins. The major usage is in plate applications requiring thicknesses over 2 inches (50.8mm) where 7050 has superior properties.

Physical properties:

Specific gravity 2.83 g/cm³ at 20 °C

Thermal conductivity at 20 °C: 157 W/m °C

Elastic modulus: 70700 Mpa

Elastic modulus (shear): 26800 Mpa

Poisson's ratio: 0.33

Min mechanical values at room temperature:

Temper	Thickness mm	Rm MPa	Rp02% MPa	A%
	6 - 38	508	439	160
T7451	38 - 50	508	439	160
	50 - 76	501	432	160
	76 - 101	494	425	155
	101 - 127	487	418	155

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions

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