

Aluminium Alloy 5083

Alternative Designations

Standard	EN	ANSI/AA	UNS	JIS	SIS	UNE
Designation	AW-5083	AA5083	A95083	A5083	4140	L-3321

Details

This is a rolled plate with moderate strength. However, at temperatures above 70°C, there is a risk of stress corrosion cracking. It has good resistance to corrosion with good machinability. It is widely used in the capital goods industry.

Key Features

Moderate strength • Good machinability

Chemical Composition

Element	Al	Mg	Mn	Cr	Si	Fe	Cu	Others
Percentage	Balance	4 – 4.9	0.4 – 1	0.05 – 0.25	0.4	0.4	0.1	0.15

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	200	275 - 350	14	75

Physical Properties

Property	Value
Density [g/cm ³]	2.66
Module of elasticity [GPa]	72
Electrical conductivity [m/Ω · mm ²]	16 - 19
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	25
Thermal conductivity [W/m · K]	120
Specific heat capacity [J/kg · K]	900