

Aluminium 3.3211

(Al-MgSiCu)

Alternative Designations

Standard	EN	ANSI/AA	UNS	JIS	AFNOR	UNE
Designation	EN-AW6061	AA6061	A96061	A6061	A-GSUC	L-3420

Details

This alloy contains magnesium and silicon as its major alloying elements with trace amounts of copper. With a tensile strength of 180Mpa, this is a high strength alloy and is very suitable for highly loaded structures such as scaffolds, rail coaches, machine and aerospace parts.

Key Features

High strength • Good weldability

Chemical Composition

Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
Percentage	0.4 – 0.8	0.7	0.15 – 0.40	0.15	0.8 – 1.2	0.04 – 0.35	0.25	0.15

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	110	180	15	65



Physical Properties

Property	Value
Density [g/cm ³]	2.7
Module of elasticity [GPa]	70
Electrical conductivity [m/Ω · mm ²]	22 – 30
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	23
Thermal conductivity [W/m · K]	170 – 200
Specific heat capacity [J/kg · K]	897

