Data Sheet

Aluminium 6082 / 3.2315 / Al-Si1Mg

Alternative Designations

EN-AW6082 | Al-Si1Mg (ISO) | AA6082 (ANSI/AA) | H30 (BS) | A-SGM0,7 (AFNOR) | L-3453 (UNE) | A96082 (UNIS) | 4212 (SIS)

Key Features

Good thermal conductivity • Good weldability • High stress corrosion cracking resistance

Description

Aluminium 6082 is made up of a number of elements, including magnesium, silicon, iron, manganese, and chromium. This combination of elements gives the alloy its unique set of properties. Typically formed by rolling and extrusion, this alloy has medium strength with very good weldability and thermal conductivity. It has high-stress corrosion cracking resistance. It has a tensile strength that ranges from 205 – 310 MPa. It is heavily employed in offshore construction and containers.

Mechanical Properties

Yield strength	110 – 260 MPa
Tensile strength	205 – 310 MPa
Elongation at break	6 – 15%
Hardness	65 – 95
Module of elasticity	70 GPa

Physical Properties

Density	2.7 g/cm³
Electrical conductivity	24 – 32 m/Ω · mm²
Coefficient of thermal expansion	23.4 K-1 · 10-6
Thermal conductivity	170 – 220 W/m · K
Specific heat capacity	896 J/kg · K

Chemical Composition

Al	Rest is Al	N	-
Bi	-	Nb	-
C	-	Ni	-
Cd	-	O	-
Co	-	P	-
Cr	0.25%	Pb	-
Cu	0.1%	S	-
Fe	0.5%	Si	0.7 – 1.3%
H	-	Sn	-
Mg	0.6 – 1.2%	Ti	0.1%
Mn	0.40 – 1.0%	V	-
Mo	-	Zn	0.2%

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.