Xometry

Manufacturing On Demand

Data Sheet: Aluminium 1706

(AlSiMG)

Alternative Designations

Standard	EN	ANSI/AA	UNS	SIS
Designation	EN - 1706	-	-	-

Details

This material has excellent strength at elevated temperatures (about 200°C). It has good resistance to corrosion and can be polished easily. It has good workability and good heat crack resistance. The fatigue strength is excellent at 110N/mm^2. The material has good weldability and is widely applied in parts for vehicles, machines and aircrafts. It has a tensile strength of 290MPa at room temperature.

Key Features

Excellent strength • Good heat crack resistance

Chemical Composition

Element	Al	Si	Mg	Fe	Mn	Ti	Zn	Cu
Percentage	91.3	6.5 – 7.5	0.25 – 0.45	0.19	0.1	0.08 – 0.25	0.07	0.05

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	190 - 210	230 - 290	2 - 4	75 - 90

Xometry

Manufacturing On Demand

Physical Properties

Property	Value
Density [g/cm³]	**2.65**
Module of elasticity [GPa]	**73**
Electrical conductivity [m/Ω · mm²]	**2.1**
Coefficient of thermal expansion [K-1 · 10-6]	**2.2**
Thermal conductivity [W/m · K]	**160 - 180**
Specific heat capacity [J/kg · K]	**920**

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.