Xometry

Datasheet ▸

Magnesium AZ91D

Alternative Designations

UNS M11916, EN 1753 MC 21120, ASTM B 94,SAE J465

Key Features

Corrosion resistance • Thermal conductivity • Impact resistance • High ductility

Description

Magnesium AZ91D is a lightweight and high-strength magnesium alloy known for its excellent corrosion resistance and impressive thermal conductivity. With a composition primarily consisting of magnesium, aluminium, and zinc, it is an ideal choice for applications requiring both durability and reduced weight, making it suitable for aerospace and automotive components.

Mechanical Properties

Yield strength	150 MPa
Tensile strength	230 MPa
Elongation at break	3%
Hardness	63

Physical Properties

Density	1.81 g/cm³
Thermal conductivity	72.7 W/m · K
Specific heat capacity	1.047 J/kg· K

Chemical Composition

Al	8.3 - 9.7%	N	-
Bi	-	Nb	-
C	-	Ni	0.0020%
Cd	-	O	-
Co	-	P	-
Cr	-	Pb	-
Cu	0.030%	S	-
Fe	0.0050%	Si	0.10%
H	-	Sn	-
Mg	90%	Ti	-
Mn	0.13%	V	-
Mo	-	Zn	0.35 - 1.0%