

AZ91

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.

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Mechanical Properties

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

Physical Properties

Density	1.81 g/cm ³
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%