Data Sheet

Zamak 2

Alternative Designations

ASTM AC43A, ZnAl4Cu3

Key Features

High Strength • Hardness • Machinability

Description

Compared to the other members of the Zamak family of metals, Zamak 2 is the highest in terms of tensile strength, hardness and creep resistance. It gains strength and hardness after ageing for the long term. Some of its outstanding casting qualities are damping capacity and vibration attenuation. However, it gets brittle and shrinks with time. It is used in the production of short-run injection moulding dies.

Mechanical Properties

Yield strength	283 MPa
Tensile strength	359 MPa
Elongation at break	7%
Hardness	100
Module of elasticity	85.5 GPa

Physical Properties

Density	6.6 g/cm³
Electrical conductivity	1.46E+07 m/Ω · mm²
Coefficient of thermal expansion	27.7 K-1 · 10-6
Thermal conductivity	104 W/m · K
Specific heat capacity	419 J/kg · K

Chemical Composition

Al	3.7 – 4.3%	N	-
Bi	-	Nb	-
C	-	Ni	-
Cd	0.003 – 0.004%	O	-
Co	-	P	-
Cr	-	Pb	0.004 – 0.005%
Cu	2.6 – 3.3%	S	-
Fe	0.05 – 0.035%	Si	-
H	-	Sn	0.0015 – 0.002%
Mg	0.02 – 0.06%	Ti	-
Mn	-	V	-
Mo	-	Zn	Rest is Zn

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.