Xometry

Manufacturing On Demand

Data Sheet: Zamak 5

(ZnAl4Cu1)

Alternative Designations

Standard	EN	ASTM	JIS	UNS
Designation	ZP0410	AC41A	ZDC1	Z35531

Details

The higher copper content gives Zamak 5 an improved strength but is less ductile than Zamak 3. This reduction in ductility can influence formability during operations like bending, riveting, or crimping. Zamak 5 can also be more readily plated or finished than Zamak 3.

Key Features

Excellent machinability • Improved strength • Low ductility •

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Chemical Composition

Element	Al	Cu	Mg	Fe	Pb	Cd	Sn	Zn
Percentage	3.5 – 4.3	0.75 – 1.25	0.03 – 0.08	0.1	0.005	0.004	0.003	bal

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	**228**	**328**	**7**	**91**

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Physical Properties

Property	Value
Density [g/cm³]	**6.6**
Module of elasticity [GPa]	**96**
Electrical conductivity [S/m]	**1.56e+7**
Coefficient of thermal expansion [K-1 · 10-6]	**27.4**
Thermal conductivity [W/m · K]	**109**
Specific heat capacity [J/kg · K]	**419**

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.