

Zinc AC43A (Zinc Alloy 2; Zn-4Al-2.5Cu-0.04Mg; Number 2 Die Casting Alloy; Zamak 2), Die Cast

Categories: [Metal](#); [Nonferrous Metal](#); [Zinc Alloy](#)

Material Notes: Recommended Casting Temperature 395-425°C

Key Words: UNS Z35540 (ingot); UNS Z35541 (Casting); SAE 921; ASTM AC43A; Zamac2

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	6.60 g/cc	0.238 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	100	100	500 kg load; 10 mm hardened steel ball
Hardness, Knoop	125	125	Estimated from Brinell Value
Hardness, Rockwell A	41.5	41.5	Estimated from Brinell Value
Hardness, Rockwell B	63	63	Estimated from Brinell Value
Hardness, Vickers	112	112	Estimated from Brinell Value
Tensile Strength, Ultimate	358 MPa	51900 psi	
Elongation at Break	7.0 %	7.0 %	in 5 cm
Compressive Strength	641 MPa	93000 psi	
Fatigue Strength	59.0 MPa @# of Cycles 5.00e+8	8560 psi @# of Cycles 5.00e+8	Reverse Bend
Shear Strength	317 MPa	46000 psi	
Charpy Impact, Unnotched	47.0 J @Thickness 6.35 mm	34.7 ft-lb @Thickness 0.250 in	square bar

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000690 ohm-cm	0.00000690 ohm-cm	

Thermal Properties	Metric	English	Comments
CTE, linear	27.8 µm/m-°C @Temperature 20.0 °C	15.4 µin/in-°F @Temperature 68.0 °F	
Specific Heat Capacity	0.419 J/g-°C	0.100 BTU/lb-°F	
Thermal Conductivity	105 W/m-K	729 BTU-in/hr-ft ² -°F	
Melting Point	379 - 390 °C	714 - 734 °F	
Solidus	379 °C	714 °F	
Liquidus	390 °C	734 °F	

Processing Properties	Metric	English	Comments
Casting Temperature	395 - 425 °C	743 - 797 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	3.5 - 4.3 %	3.5 - 4.3 %	Casting
	3.9 - 4.3 %	3.9 - 4.3 %	Ingot form
Cadmium, Cd	<= 0.0030 %	<= 0.0030 %	Ingot form
	<= 0.0040 %	<= 0.0040 %	Casting
Copper, Cu	2.5 - 3.0 %	2.5 - 3.0 %	Casting
	2.6 - 2.9 %	2.6 - 2.9 %	Ingot form
Iron, Fe	<= 0.075 %	<= 0.075 %	Ingot form
	<= 0.10 %	<= 0.10 %	Casting
Lead, Pb	<= 0.0040 %	<= 0.0040 %	Ingot form
	<= 0.0050 %	<= 0.0050 %	Casting
Magnesium, Mg	0.020 - 0.050 %	0.020 - 0.050 %	Casting
	0.025 - 0.050 %	0.025 - 0.050 %	Ingot form
Tin, Sn	<= 0.0020 %	<= 0.0020 %	Ingot form
	<= 0.0030 %	<= 0.0030 %	Casting
Zinc, Zn	92.666 - 93.475 %	92.666 - 93.475 %	As balance; Ingot per ASTM B 240
	92.538 - 93.98 %	92.538 - 93.98 %	As balance; Castings per ASTM B 86

[References](#) for this datasheet.

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.