

Hoogovens Hokotol Aluminum Alloy, 100 mm Thickness

Material Mechanical property data provided by Hoogovens Aluminium Walzprodukte; sample treatment not specified.

Key Words: Applications include molds for blow forming and injection molding for plastics; bolsters and force plates; high strength/low weight machine parts; and mechanical components with elevated mechanical properties. Poor weldability and corrosion resistance. Very good machinability. Hokotol Aluminum Alloy, 100 mm Thickness; Hoogovens Aluminium Walzprodukte
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Physical Properties	Metric	English	Comments
Density	<u>2.83</u> g/cc	<u>0.102</u> lb/in ³	
Mechanical Properties	Metric	English	Comments
Hardness, Brinell	180	180	
Hardness, Knoop	232	232	Estimated from Brinell
Hardness, Rockwell A	59	59	Estimated from Brinell
Hardness, Rockwell B	96	96	Estimated from Brinell
Hardness, Vickers	217	217	Estimated from Brinell
Tensile Strength, Ultimate	<u>575</u> MPa	<u>83400</u> psi	Typical
Tensile Strength, Yield	<u>532</u> MPa	<u>77200</u> psi	Typical
Elongation at Break	7.80 %	7.80 %	Typical
Modulus of Elasticity	<u>71.0</u> GPa	<u>10300</u> ksi	
Machinability	90 %	90 %	
Shear Strength	<u>340</u> MPa	<u>49300</u> psi	Calculated
Electrical Properties	Metric	English	Comments
Electrical Resistivity	<u>0.00000430</u> ohm-cm	<u>0.00000430</u> ohm-cm	
Thermal Properties	Metric	English	Comments
CTE, linear	<u>23.5</u> µm/m-°C @Temperature 20.0 - 100 °C	<u>13.1</u> µin/in-°F @Temperature 68.0 - 212 °F	
Thermal Conductivity	<u>154</u> W/m-K	<u>1070</u> BTU-in/hr-ft ² -°F	
Component Elements Properties	Metric	English	Comments
Aluminum, Al	90.0 %	90.0 %	
Chromium, Cr	<= 0.10 %	<= 0.10 %	
Copper, Cu	0.60 - 1.50 %	0.60 - 1.50 %	
Iron, Fe	<= 0.30 %	<= 0.30 %	
Magnesium, Mg	1.80 - 2.60 %	1.80 - 2.60 %	
Manganese, Mn	<= 0.15 %	<= 0.15 %	
Other, total	<= 0.15 %	<= 0.15 %	
Silicon, Si	<= 0.20 %	<= 0.20 %	
Titanium, Ti	<= 0.060 %	<= 0.060 %	
Zinc, Zn	5.70 - 7.60 %	5.70 - 7.60 %	
Zirconium, Zr	0.080 - 0.25 %	0.080 - 0.25 %	

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. This data is for reference only, and is not intended for engineer or design. Please consult a Clinton aluminum authorized representative.



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