

ALUMINUM COMMON GRADE 6063 WITH T4 TEMPER

Physical Properties	Metric	English
Density	2.70 g/cc	0.0975 lb/in ^Å 3
Mechanical Properties	Metric	English
Hardness, Brinell	46	46
Hardness, Knoop		
Hardness, Vickers		
Ultimate Tensile Strength	172 MPa	25.0 ksi
Tensile Yield Strength	89.6 MPa	13.0 ksi
Elongation at Break	22.00%	22.00%
Modulus of Elasticity	68.9 GPa	10000 ksi
Poissons Ratio	0.33	0.33
Fatigue Strength		
Machinability	50.00%	50.00%
Shear Modulus	25.8 GPa	3740 ksi
Shear Strength	110 MPa	16000 psi
Electrical Properties	Metric	English
Electrical Resistivity	0.00000330 ohm-cm	0.00000330 ohm-cm
Thermal Properties	Metric	English
CTE, linear 68Å°F	23.4 Åµm/m-Å°C	13.0 Åµin/in-Å°F
CTE, linear 250Å°C	25.6 Åµm/m-Å°C	14.2 Åµin/in-Å°F
Specific Heat Capacity	0.900 J/g-Å°C	0.215 BTU/lb-Å°F
Thermal Conductivity	200 W/m-K	1390 BTU-in/hr-ftÅ²-Å°F
Melting Point	616 - 654 Å°C	1140 - 1210 Å°F
Solidus	616 Å°C	1140 Å°F
Liquidus	654 Å°C	1210 Å°F
Processing Properties	Metric	English
Solution Temperature	521 Å°C	970 Å°F
Aging Temperature	177 Å°C	350 Å°F
Material Components	Metric	English
Aluminum, Al	<=97.5%	<=97.5%
Chromium, Cr	<=0.100%	<=0.100%
Copper, Cu	<=0.100%	<=0.100%
Iron, Fe	<=0.350%	<=0.350
Magnesium, Mg	0.450 - 0.900%	0.450 - 0.900%
Manganese, Mn	<=0.100%	<=0.100%
Other, each	<=0.0500%	<= 0.0500 %
Other, total	<= 0.150 %	<= 0.150 %
Silicon, Si	0.200 - 0.600%	0.200 - 0.600%
Titanium, Ti	<=0.100%	<=0.100%
Zinc, Zn	<=0.100%	<=0.100%

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