PEAK Werkstoff DISPAL S263 Aluminum Alloy, AlSi25Cu3Fe3Ni3MgCoTi, Condition F

Category : Metal , Nonferrous Metal , Aluminum Alloy

Material Notes:

Excellent properties:abrasive stabilityhigh stiffness (E-modulus)resistance even at high temperaturesgood grindabilityPEAK DISPAL materials allow the manufacturing of pistons for highest operational demands.Information provided by PEAK Werkstoff GmbH

Order this product through the following link:
http://www.lookpolymers.com/polymer_PEAK-Werkstoff-DISPAL-S263-Aluminum-Alloy-AlSi25Cu3Fe3Ni3MgCoTi-Condition-F.php

Physical Properties	Metric	English	Comments
Density	2.622 - 2.898 g/cc	0.09473 - 0.1047 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	>= 140	>= 140	HV30
Tensile Strength at Break	>= 268 MPa @Temperature 200 °C	>= 38900 psi @Temperature 392 °F	
	>= 362 MPa @Temperature 20.0 °C	>= 52500 psi @Temperature 68.0 °F	
Tensile Strength, Yield	>= 183 MPa @Temperature 200 °C	>= 26500 psi @Temperature 392 °F	
	>= 223 MPa @Temperature 20.0 °C	>= 32300 psi @Temperature 68.0 °F	
Elongation at Break	>= 1.2 % @Temperature 20.0 °C	>= 1.2 % @Temperature 68.0 °F	
	>= 1.9 % @Temperature 200 °C	>= 1.9 % @Temperature 392 °F	
Modulus of Elasticity	>= 80.0 GPa @Temperature 200 °C	>= 11600 ksi @Temperature 392 °F	
	>= 92.0 GPa @Temperature 20.0 °C	>= 13300 ksi @Temperature 68.0 °F	
Poissons Ratio	0.286 @Temperature 20.0 °C	0.286 @Temperature 68.0 °F	
	0.289	0.289	

Mechanical Properties	Metric	English	Comments
	@Temperature 100 °C	@Temperature 212 °F	
	0.29 @Temperature 150 °C	0.29 @Temperature 302 °F	
	0.291 @Temperature 200 °C	0.291 @Temperature 392 °F	
	0.294 @Temperature 250 °C	0.294 @Temperature 482 °F	
	0.294 @Temperature 300 °C	0.294 @Temperature 572 °F	
Fatigue Strength	101.5 MPa @Temperature 150 °C	14720 psi @Temperature 302 °F	P50% rotary bending values for 5X10⁷ cycles
Shear Modulus	35.0 GPa @Temperature 300 °C	5080 ksi @Temperature 572 °F	
	36.0 GPa @Temperature 250 °C	5220 ksi @Temperature 482 °F	
	37.0 GPa @Temperature 200 °C	5370 ksi @Temperature 392 °F	
	38.0 GPa @Temperature 150 °C	5510 ksi @Temperature 302 °F	
	38.0 GPa @Temperature 100 °C	5510 ksi @Temperature 212 °F	
	40.0 GPa @Temperature 20.0 °C	5800 ksi @Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	15.3 - 16.3 µm/m-°C @Temperature 20.0 - 100 °C	8.50 - 9.06 µin/in-°F @Temperature 68.0 - 212 °F	
	16.1 - 17.1 µm/m-°C @Temperature 20.0 - 200 °C	8.94 - 9.50 µin/in-°F @Temperature 68.0 - 392 °F	
	17.0 - 18.0 µm/m-°C	9.44 - 10.0 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
Specific Heat Capacity	0.840 - 0.880 J/g-°C	0.201 - 0.210 BTU/lb-°F	
Thermal Conductivity	95.30 W/m-K @Temperature 400 °C	661.4 BTU-in/hr-ft²-°F @Temperature 752 °F	
	99.20 W/m-K @Temperature 200 °C	688.4 BTU-in/hr-ft²-°F @Temperature 392 °F	
	99.20 W/m-K @Temperature 300 °C	688.4 BTU-in/hr-ft²-°F @Temperature 572 °F	
	99.60 W/m-K @Temperature 100 °C	691.2 BTU-in/hr-ft²-°F @Temperature 212 °F	
	101.2 W/m-K @Temperature 30.0 °C	702.3 BTU-in/hr-ft²-°F @Temperature 86.0 °F	
Melting Point	528 - 784 °C	982 - 1440 °F	
Solidus	528.1 - 534.1 °C	982.6 - 993.4 °F	
Liquidus	784.2 - 790.2 °C	1444 - 1454 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	63 %	63 %	As Balance
Cobalt, Co	1.0 %	1.0 %	
Copper, Cu	3.0 %	3.0 %	
Iron, Fe	3.0 %	3.0 %	
Magnesium, Mg	1.0 %	1.0 %	
Nickel, Ni	3.0 %	3.0 %	
Silicon, Si	25 %	25 %	
Titanium, Ti	1.0 %	1.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000910 - 0.0000100 ohm-cm	0.00000910 - 0.0000100 ohm-cm	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China