

PEAK Werkstoff DISPAL S263 Aluminum Alloy, AlSi25Cu3Fe3Ni3MgCoTi, Condition T6

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.Property data for Heat Treatment Condition T6 (Quenching in water at RT).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-T6.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	>= 210	>= 210	HV30
Tensile Strength at Break	>= 190 MPa	>= 27600 psi	
	@Temperature 300 °C	@Temperature 572 °F	
	>= 290 MPa	>= 42100 psi	
	@Temperature 250 °C	@Temperature 482 °F	
	>= 481 MPa	>= 69800 psi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Tensile Strength, Yield	>= 119 MPa	>= 17300 psi	
	@Temperature 300 °C	@Temperature 572 °F	
	>= 238 MPa	>= 34500 psi	
	@Temperature 250 °C	@Temperature 482 °F	
	>= 478 MPa	>= 69300 psi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Elongation at Break	>= 0.13 %	>= 0.13 %	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	>= 1.0 %	>= 1.0 %	
	@Temperature 250 °C	@Temperature 482 °F	
	>= 2.7 %	>= 2.7 %	
	@Temperature 300 °C	@Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	73.0 GPa	10500 ksi	
	@Temperature 300 °C	@Temperature 572 °F	
	>= 81.0 GPa	>= 11700 ksi	
	@Temperature 250 °C	@Temperature 482 °F	
	>= 96.0 GPa	>= 13900 ksi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Poissons Ratio	0.286	0.286	Condition F
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.289	0.289	Condition F
	@Temperature 100 °C	@Temperature 212 °F	
	0.29	0.29	Condition F
	@Temperature 150 °C	@Temperature 302 °F	
	0.291	0.291	Condition F
	@Temperature 200 °C	@Temperature 392 °F	
	0.294	0.294	Condition F
	@Temperature 250 °C	@Temperature 482 °F	
	0.294	0.294	Condition F
	@Temperature 300 °C	@Temperature 572 °F	
Fatigue Strength	241.6 MPa	35040 psi	P50% rotary bending values for 5X10 ⁷ cycles
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	15.3 - 16.3 µm/m-°C	8.50 - 9.06 µin/in-°F	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
	16.1 - 17.1 µm/m-°C	8.94 - 9.50 µin/in-°F	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	17.0 - 18.0 µm/m-°C	9.44 - 10.0 µin/in-°F	
	@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 Properties	Metric	English	Comments
	@Temperature 400 °C	@Temperature 752 °F	
	99.20 W/m-K	688.4 BTU-in/hr-ft ² -°F	
	@Temperature 200 °C	@Temperature 392 °F	
	99.20 W/m-K	688.4 BTU-in/hr-ft ² -°F	
	@Temperature 300 °C	@Temperature 572 °F	
	99.60 W/m-K	691.2 BTU-in/hr-ft ² -°F	
	@Temperature 100 °C	@Temperature 212 °F	
	101.2 W/m-K	702.3 BTU-in/hr-ft ² -°F	
	@Temperature 30.0 °C	@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