

PEAK Werkstoff DISPAL S232 Aluminum Alloy, AlSi17Fe4Cu3Mg, Condition T6

Category : Metal , Nonferrous Metal , Aluminum Alloy

Material Notes:

Heat Treatment Condition T6 (Quench in water at RT). 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-S232-Aluminum-Alloy-AlSi17Fe4Cu3Mg-Condition-T6.php

Physical Properties	Metric	English	Comments
Density	2.651 - 2.930 g/cc	0.09576 - 0.1058 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	>= 175	>= 175	HV30
Tensile Strength at Break	>= 490 MPa	>= 71100 psi	
Tensile Strength, Yield	>= 448 MPa	>= 65000 psi	
Elongation at Break	>= 0.60 %	>= 0.60 %	
Modulus of Elasticity	>= 88.0 GPa	>= 12800 ksi	
	>= 76.0 GPa @Temperature 200 °C	>= 11000 ksi @Temperature 392 °F	Condition T6x (Quench in water at RT)
	>= 80.0 GPa @Temperature 150 °C	>= 11600 ksi @Temperature 302 °F	Condition T6x (Quench in water at RT)
	>= 88.0 GPa @Temperature 20.0 °C	>= 12800 ksi @Temperature 68.0 °F	Condition T6x (Quench in water at RT)
Poissons Ratio	0.332 @Temperature 20.0 °C	0.332 @Temperature 68.0 °F	Condition T6x (Quench in water at RT)
	0.334 @Temperature 100 °C	0.334 @Temperature 212 °F	Condition T6x (Quench in water at RT)
	0.337 @Temperature 150 °C	0.337 @Temperature 302 °F	Condition T6x (Quench in water at RT)
	0.339 @Temperature 200 °C	0.339 @Temperature 392 °F	Condition T6x (Quench in water at RT)

Mechanical Properties	0.342 Metric	0.342 English	Comments T6x (Quench in water at RT)
	@Temperature 250 °C	@Temperature 482 °F	
	0.343	0.343	Condition T6x (Quench in water at RT)
	@Temperature 300 °C	@Temperature 572 °F	
Fatigue Strength	225.4 MPa	32690 psi	Condition T6x (Quench in water at RT)
Shear Modulus	31.0 GPa	4500 ksi	Condition T6x (Quench in water at RT)
	@Temperature 300 °C	@Temperature 572 °F	
	31.0 GPa	4500 ksi	Condition T6x (Quench in water at RT)
	@Temperature 250 °C	@Temperature 482 °F	
	32.0 GPa	4640 ksi	Condition T6x (Quench in water at RT)
	@Temperature 200 °C	@Temperature 392 °F	
	33.0 GPa	4790 ksi	Condition T6x (Quench in water at RT)
	@Temperature 150 °C	@Temperature 302 °F	
	34.0 GPa	4930 ksi	Condition T6x (Quench in water at RT)
	@Temperature 100 °C	@Temperature 212 °F	
	35.0 GPa	5080 ksi	Condition T6x (Quench in water at RT)
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	17.9 - 18.9 $\mu\text{m}/\text{m}\cdot\text{°C}$	9.94 - 10.5 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
	18.5 - 19.5 $\mu\text{m}/\text{m}\cdot\text{°C}$	10.3 - 10.8 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	19.3 - 20.3 $\mu\text{m}/\text{m}\cdot\text{°C}$	10.7 - 11.3 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
Specific Heat Capacity	0.860 - 0.900 J/g-°C	0.206 - 0.215 BTU/lb-°F	
Thermal Conductivity	116.8 W/m-K	810.6 BTU-in/hr-ft ² -°F	
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	117.9 W/m-K	818.2 BTU-in/hr-ft ² -°F	

Thermal Properties	@Temperature 100 °C Metric	@Temperature 212 °F English	Comments
	122.1 W/m-K	847.4 BTU-in/hr-ft ² -°F	
	@Temperature 200 °C	@Temperature 392 °F	
	125.7 W/m-K	872.4 BTU-in/hr-ft ² -°F	
	@Temperature 400 °C	@Temperature 752 °F	
	131.7 W/m-K	914.0 BTU-in/hr-ft ² -°F	
	@Temperature 300 °C	@Temperature 572 °F	
Melting Point	516 - 738 °C	961 - 1360 °F	
Solidus	515.9 - 521.9 °C	960.6 - 971.4 °F	
Liquidus	731.5 - 737.5 °C	1349 - 1360 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	75 %	75 %	As Balance
Copper, Cu	3.0 %	3.0 %	
Iron, Fe	4.0 %	4.0 %	
Magnesium, Mg	1.0 %	1.0 %	
Silicon, Si	17 %	17 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000750 - 0.00000810 ohm-cm	0.00000750 - 0.00000810 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