

Overview of materials for Epoxy, Cast, Metal Filled

Category : Polymer , Thermoset , Epoxy , Epoxy, Cast, Metal Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Epoxy, Cast, Aluminum Filled". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Overview-of-materials-for-Epoxy-Cast-Metal-Filled.php

Physical Properties	Metric	English	Comments
Density	0.959 - 3.12 g/cc	0.0346 - 0.113 lb/in ³	Average value: 1.94 g/cc Grade Count:17
Water Absorption	0.0300 - 0.450 %	0.0300 - 0.450 %	Average value: 0.162 % Grade Count:5
Porosity	15.0 - 16.0 %	15.0 - 16.0 %	Average value: 15.7 % Grade Count:3
Viscosity	3000 - 160000 cP	3000 - 160000 cP	Average value: 42400 cP Grade Count:7
Pore Size	12.7 - 15.2 microns	0.500 - 0.600 mil	Average value: 13.5 microns Grade Count:3
Linear Mold Shrinkage	0.00100 - 0.00400 cm/cm	0.00100 - 0.00400 in/in	Average value: 0.00240 cm/cm Grade Count:5

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	81.0 - 95.0	81.0 - 95.0	Average value: 86.5 Grade Count:22
Tensile Strength, Ultimate	0.159 - 59.6 MPa	23.0 - 8650 psi	Average value: 26.7 MPa Grade Count:20
Tensile Strength, Yield	6.89 - 20.7 MPa	1000 - 3000 psi	Average value: 16.5 MPa Grade Count:5
Elongation at Break	0.000 - 130 %	0.000 - 130 %	Average value: 19.6 % Grade Count:7
Modulus of Elasticity	4.14 - 8.27 GPa	600 - 1200 ksi	Average value: 6.18 GPa Grade Count:6
Flexural Yield Strength	3.45 - 56.0 MPa	500 - 8130 psi	Average value: 31.0 MPa Grade Count:16
Flexural Modulus	9.00 - 10.8 GPa	1310 - 1570 ksi	Average value: 9.67 GPa Grade Count:3
Compressive Yield Strength	41.4 - 89.6 MPa	6000 - 13000 psi	Average value: 73.1 MPa Grade Count:18
Compressive Modulus	3.45 - 5.17 GPa	500 - 750 ksi	Average value: 4.41 GPa Grade Count:5

Mechanical Properties	Metric	English	Comments
	31.0 MPa	4500 psi	Average value: 20.6 MPa Grade Count:17
	1.70 - 31.0 MPa	247 - 4500 psi	Average value: 14.2 MPa Grade Count:5
	@Temperature -55.0 - 177 °C	@Temperature -67.0 - 351 °F	
Adhesive Bond Strength	6.89 - 42.1 MPa	1000 - 6100 psi	Average value: 19.1 MPa Grade Count:7
	19.3053 - 27.9238 MPa	2800.00 - 4050.01 psi	Average value: 23.6 MPa Grade Count:1
	@Temperature -54.4 - 82.2 °C	@Temperature -66.0 - 180 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	31.0 - 53.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	17.2 - 29.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 41.3 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:7
	30.06 - 111 $\mu\text{m}/\text{m}\cdot\text{°C}$	16.70 - 61.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 76.9 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:8
	@Temperature 25.0 - 125 °C	@Temperature 77.0 - 257 °F	
Thermal Conductivity	0.724 - 1.28 W/m-K	5.02 - 8.88 BTU-in/hr-ft ² -°F	Average value: 1.08 W/m-K Grade Count:6
	19.0 - 20.5 W/m-K	132 - 142 BTU-in/hr-ft ² -°F	Average value: 19.5 W/m-K Grade Count:3
	@Temperature 100 - 100 °C	@Temperature 212 - 212 °F	
Maximum Service Temperature, Air	108 - 210 °C	226 - 410 °F	Average value: 145 °C Grade Count:10
Minimum Service Temperature, Air	-60.0 - -20.0 °C	-76.0 - -4.00 °F	Average value: -46.0 °C Grade Count:5
Glass Transition Temp, Tg	55.0 - 132 °C	131 - 270 °F	Average value: 92.8 °C Grade Count:6

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Average value: 1.00e+15 ohm-cm Grade Count:5
Dielectric Constant	4.90 - 21.4	4.90 - 21.4	Average value: 7.90 Grade Count:6
Dielectric Strength	3.94 - 15.7 kV/mm	100 - 400 kV/in	Average value: 13.1 kV/mm Grade Count:6

Processing Properties	Metric	English	Comments
Processing Temperature	21.1 - 260 °C	70.0 - 500 °F	Average value: 133 °C Grade Count:7
Cure Time	480 - 1440 min	8.00 - 24.0 hour	Average value: 880 min Grade Count:3

Processing Properties	30.0 - 720 min Metric	0.500 - 12.0 hour English	Comments Average value: 284 min Grade
	@Temperature 45.0 - 150 °C	@Temperature 113 - 302 °F	Count:11
Pot Life	30.0 - 100000 min	30.0 - 100000 min	Average value: 5460 min Grade Count:19

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