

Overview of materials for Acetal Copolymer, Silicone Filled

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Silicone Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Copolymer, Silicone 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-Acetal-Copolymer-Silicone-Filled.php

Physical Properties	Metric	English	Comments
Density	1.29 - 1.62 g/cc	0.0466 - 0.0585 lb/in ³	Average value: 1.41 g/cc Grade Count:17
Filler Content	2.00 - 4.00 %	2.00 - 4.00 %	Average value: 2.40 % Grade Count:5
Water Absorption	0.0500 - 0.270 %	0.0500 - 0.270 %	Average value: 0.185 % Grade Count:6
Linear Mold Shrinkage	0.00400 - 0.0350 cm/cm	0.00400 - 0.0350 in/in	Average value: 0.0215 cm/cm Grade Count:15
Linear Mold Shrinkage, Transverse	0.0100 - 0.0300 cm/cm	0.0100 - 0.0300 in/in	Average value: 0.0198 cm/cm Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	79.0 - 82.0	79.0 - 82.0	Average value: 80.0 Grade Count:3
Tensile Strength, Ultimate	38.0 - 110 MPa	5510 - 16000 psi	Average value: 54.5 MPa Grade Count:12
Tensile Strength, Yield	39.0 - 62.0 MPa	5660 - 8990 psi	Average value: 49.7 MPa Grade Count:6
Elongation at Break	2.50 - 90.0 %	2.50 - 90.0 %	Average value: 25.1 % Grade Count:14
Elongation at Yield	6.00 - 24.8 %	6.00 - 24.8 %	Average value: 14.2 % Grade Count:4
Modulus of Elasticity	2.07 - 3.21 GPa	300 - 466 ksi	Average value: 2.60 GPa Grade Count:10
Flexural Yield Strength	48.0 - 172 MPa	6960 - 24900 psi	Average value: 76.4 MPa Grade Count:15
Flexural Modulus	1.70 - 7.60 GPa	247 - 1100 ksi	Average value: 2.66 GPa Grade Count:15
Izod Impact, Notched	0.440 - 0.961 J/cm	0.824 - 1.80 ft-lb/in	Average value: 0.714 J/cm Grade Count:13
	0.500 - 0.500 J/cm @Temperature -29.0 - -	0.937 - 0.937 ft-lb/in @Temperature -20.2 - -	Average value: 0.500 J/cm Grade Count:1

Mechanical Properties	29.0 °C Metric	20.2 °F English	Comments
Izod Impact, Unnotched	11.7 - 5340 J/cm	22.0 - 10000 ft-lb/in	Average value: 13.4 J/cm Grade Count:7
Izod Impact, Notched (ISO)	6.00 - 9.00 kJ/m ²	2.86 - 4.28 ft-lb/in ²	Average value: 7.00 kJ/m ² Grade Count:3
Izod Impact, Unnotched (ISO)	52.0 - 83.0 kJ/m ²	24.7 - 39.5 ft-lb/in ²	Average value: 62.3 kJ/m ² Grade Count:3
Coefficient of Friction	0.200 - 0.410	0.200 - 0.410	Average value: 0.270 Grade Count:3
Coefficient of Friction, Static	0.100 - 0.300	0.100 - 0.300	Average value: 0.167 Grade Count:3
K (wear) Factor	2.01 - 220 x 10 ⁻⁸ mm ³ /N-M	1.00 - 109 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Average value: 74.5 x 10 ⁻⁸ mm ³ /N-M Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 - 234 µm/m-°C	50.0 - 130 µin/in-°F	Average value: 128 µm/m-°C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	152 - 166 °C	305 - 331 °F	Average value: 161 °C Grade Count:5
Deflection Temperature at 1.8 MPa (264 psi)	71.0 - 145 °C	160 - 293 °F	Average value: 102 °C Grade Count:14
Flammability, UL94	HB	HB	Grade Count:10

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 1.00e+16 ohm-cm	1.00e+14 - 1.00e+16 ohm-cm	Average value: 4.42e+15 ohm-cm Grade Count:5
Dielectric Strength	17.7 - 19.7 kV/mm	450 - 500 kV/in	Average value: 18.2 kV/mm Grade Count:4

Processing Properties	Metric	English	Comments
Melt Temperature	182 - 230 °C	360 - 446 °F	Average value: 202 °C Grade Count:8
Mold Temperature	48.9 - 120 °C	120 - 248 °F	Average value: 89.4 °C Grade Count:8
Drying Temperature	82.2 - 121 °C	180 - 250 °F	Average value: 116 °C Grade Count:7
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:6
Dew Point	-31.7 °C	-25.0 °F	Average value: -31.7 °C Grade Count:6
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:6

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