

Overview of materials for Acetal Copolymer, Steel Filled

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

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.45 - 3.74 g/cc	0.0524 - 0.135 lb/in ³	Average value: 1.70 g/cc Grade Count:17
Water Absorption	0.200 - 0.540 %	0.200 - 0.540 %	Average value: 0.264 % Grade Count:7
Additive Loading	10.0 - 20.0 %	10.0 - 20.0 %	Average value: 14.3 % Grade Count:3
Linear Mold Shrinkage	0.00400 - 0.0320 cm/cm	0.00400 - 0.0320 in/in	Average value: 0.0199 cm/cm Grade Count:15
Linear Mold Shrinkage, Transverse	0.0200 - 0.0300 cm/cm	0.0200 - 0.0300 in/in	Average value: 0.0249 cm/cm Grade Count:3
Melt Flow	5.00 - 9.00 g/10 min	5.00 - 9.00 g/10 min	Average value: 7.92 g/10 min Grade Count:6

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	100	100	Average value: 100 Grade Count:5
Tensile Strength, Ultimate	40.0 - 82.0 MPa	5800 - 11900 psi	Average value: 52.2 MPa Grade Count:8
Tensile Strength, Yield	40.0 - 82.0 MPa	5800 - 11900 psi	Average value: 53.2 MPa Grade Count:11
Elongation at Break	1.40 - 40.0 %	1.40 - 40.0 %	Average value: 20.2 % Grade Count:14
Elongation at Yield	1.40 - 9.50 %	1.40 - 9.50 %	Average value: 7.43 % Grade Count:5
Modulus of Elasticity	2.00 - 7.90 GPa	290 - 1150 ksi	Average value: 3.22 GPa Grade Count:11
Flexural Yield Strength	42.0 - 116 MPa	6090 - 16800 psi	Average value: 79.5 MPa Grade Count:15
Flexural Modulus	1.80 - 8.20 GPa	261 - 1190 ksi	Average value: 3.18 GPa Grade Count:16
Izod Impact, Notched	0.374 - 0.801 J/cm	0.700 - 1.50 ft-lb/in	Average value: 0.587 J/cm Grade Count:12

Mechanical Properties	Metric	English	Comments
	1.87 - 8.81 J/cm	2.50 - 16.5 ft-lb/in	Average value: 5.96 J/cm Grade Count:9
Izod Impact, Notched (ISO)	5.00 - 7.00 kJ/m ²	2.38 - 3.33 ft-lb/in ²	Average value: 5.75 kJ/m ² Grade Count:4
Izod Impact, Unnotched (ISO)	20.0 - 60.0 kJ/m ²	9.52 - 28.6 ft-lb/in ²	Average value: 39.8 kJ/m ² Grade Count:4
Charpy Impact, Notched	0.440 - 0.440 J/cm ² @Temperature -30.0 - -30.0 °C	2.09 - 2.09 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 0.440 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
CTE, linear	21.6 - 119 µm/m-°C	12.0 - 66.1 µin/in-°F	Average value: 54.1 µm/m-°C Grade Count:7
Deflection Temperature at 0.46 MPa (66 psi)	150 - 160 °C	302 - 320 °F	Average value: 156 °C Grade Count:8
Deflection Temperature at 1.8 MPa (264 psi)	84.0 - 159 °C	183 - 318 °F	Average value: 105 °C Grade Count:15

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.100 - 1.00e+14 ohm-cm	0.100 - 1.00e+14 ohm-cm	Average value: 4.62e+13 ohm-cm Grade Count:13
Surface Resistance	48.0 - 1.00e+13 ohm	48.0 - 1.00e+13 ohm	Average value: 7.69e+11 ohm Grade Count:11
Static Decay	0.500 sec	0.500 sec	Average value: 0.500 sec Grade Count:4

Processing Properties	Metric	English	Comments
Melt Temperature	175 - 218 °C	347 - 425 °F	Average value: 199 °C Grade Count:6
Mold Temperature	70.0 - 107 °C	158 - 225 °F	Average value: 90.6 °C Grade Count:6
Drying Temperature	80.0 - 121 °C	176 - 250 °F	Average value: 109 °C Grade Count:6
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:5
Dew Point	-28.9 °C	-20.0 °F	Average value: -28.9 °C Grade Count:5
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:5

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