

Overview of materials for Acetal Copolymer, 10% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, 10% Glass Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Copolymer, 10% Glass Fiber Reinforced". Specific grades with glass content between 5% and 14% are included. 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-10-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.20 - 1.58 g/cc	0.0434 - 0.0571 lb/in³	Average value: 1.47 g/cc Grade Count:47
Filler Content	5.00 - 10.0 %	5.00 - 10.0 %	Average value: 8.75 % Grade Count:8
Water Absorption	0.100 - 0.260 %	0.100 - 0.260 %	Average value: 0.211 % Grade Count:15
Moisture Absorption at Equilibrium	0.100 - 0.350 %	0.100 - 0.350 %	Average value: 0.245 % Grade Count:7
Water Absorption at Saturation	0.200 - 0.850 %	0.200 - 0.850 %	Average value: 0.690 % Grade Count:5
Linear Mold Shrinkage	0.00500 - 0.0300 cm/cm	0.00500 - 0.0300 in/in	Average value: 0.0112 cm/cm Grade Count:34
Linear Mold Shrinkage, Transverse	0.0100 - 0.0227 cm/cm	0.0100 - 0.0227 in/in	Average value: 0.0139 cm/cm Grade Count:9
Melt Flow	1.00 - 25.9 g/10 min	1.00 - 25.9 g/10 min	Average value: 11.0 g/10 min Grade Count:15

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	82.0 - 85.0	82.0 - 85.0	Average value: 84.0 Grade Count:3
Hardness, Rockwell R	80.0 - 110	80.0 - 110	Average value: 97.5 Grade Count:10
Ball Indentation Hardness	110 - 211 MPa	16000 - 30600 psi	Average value: 174 MPa Grade Count:3
Tensile Strength, Ultimate	44.8 - 110 MPa	6500 - 16000 psi	Average value: 74.2 MPa Grade Count:32
Tensile Strength, Yield	42.0 - 98.1 MPa	6090 - 14200 psi	Average value: 67.9 MPa Grade Count:17
Elongation at Break	1.50 - 20.0 %	1.50 - 20.0 %	Average value: 4.92 % Grade Count:43
Elongation at Yield	2.30 - 12.0 %	2.30 - 12.0 %	Average value: 6.52 % Grade Count:5

Mechanical Properties	Metric	English	Comments
	9.50 GPa	1330 ksi	Average value: 4.67 GPa Grade Count:29
Flexural Yield Strength	68.9 - 147 MPa	10000 - 21300 psi	Average value: 109 MPa Grade Count:35
Flexural Modulus	2.40 - 8.50 GPa	348 - 1230 ksi	Average value: 4.10 GPa Grade Count:40
Izod Impact, Notched	0.267 - 0.801 J/cm	0.500 - 1.50 ft-lb/in	Average value: 0.526 J/cm Grade Count:32
Izod Impact, Unnotched	3.47 - 8.01 J/cm	6.50 - 15.0 ft-lb/in	Average value: 5.06 J/cm Grade Count:16
Izod Impact, Notched (ISO)	3.00 - 6.20 kJ/m ²	1.43 - 2.95 ft-lb/in ²	Average value: 4.92 kJ/m ² Grade Count:13
	5.00 - 5.00 kJ/m ² @Temperature -30.0 - - 30.0 °C	2.38 - 2.38 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 5.00 kJ/m ² Grade Count:1
Izod Impact, Unnotched (ISO)	24.0 - 33.0 kJ/m ²	11.4 - 15.7 ft-lb/in ²	Average value: 28.4 kJ/m ² Grade Count:5
Charpy Impact Unnotched	3.00 - 6.00 J/cm ²	14.3 - 28.6 ft-lb/in ²	Average value: 4.80 J/cm ² Grade Count:5
	4.50 - 6.00 J/cm ² @Temperature -30.0 - - 30.0 °C	21.4 - 28.6 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 5.25 J/cm ² Grade Count:4
Charpy Impact, Notched	0.320 - 0.850 J/cm ²	1.52 - 4.05 ft-lb/in ²	Average value: 0.475 J/cm ² Grade Count:12
	0.320 - 0.650 J/cm ² @Temperature -30.0 - - 30.0 °C	1.52 - 3.09 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 0.443 J/cm ² Grade Count:4
Dart Drop, Total Energy	5.00 - 6.00 J	3.69 - 4.43 ft-lb	Average value: 5.33 J Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	30.0 - 110 µm/m-°C	16.7 - 61.1 µin/in-°F	Average value: 68.9 µm/m-°C Grade Count:12
CTE, linear, Transverse to Flow	80.0 - 120 µm/m-°C	44.4 - 66.7 µin/in-°F	Average value: 96.0 µm/m-°C Grade Count:5
Melting Point	162 - 185 °C	324 - 365 °F	Average value: 167 °C Grade Count:19
Deflection Temperature at 0.46 MPa (66 psi)	154 - 168 °C	310 - 335 °F	Average value: 163 °C Grade Count:17
Deflection Temperature at 1.8 MPa (264 psi)	89.0 - 177 °C	192 - 350 °F	Average value: 149 °C Grade Count:38
Vicat Softening Point	135 - 159 °C	275 - 318 °F	Average value: 150 °C Grade Count:3

Flammability: UL 94 Thermal Properties	HB Metric	HB English	Grade Count:24 Comments
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Electrical Properties	Metric	English	Comments
Electrical Resistivity	2000 - 1.00e+17 ohm-cm	2000 - 1.00e+17 ohm-cm	Average value: 5.67e+15 ohm-cm Grade Count:20
Surface Resistance	1000 - 1.00e+16 ohm	1000 - 1.00e+16 ohm	Average value: 2.33e+15 ohm Grade Count:13
Dielectric Constant	3.80 - 4.50	3.80 - 4.50	Average value: 4.13 Grade Count:6
Dielectric Strength	17.7 - 35.0 kV/mm	450 - 889 kV/in	Average value: 23.9 kV/mm Grade Count:12
Dissipation Factor	0.00300 - 0.0150	0.00300 - 0.0150	Average value: 0.00783 Grade Count:6
Comparative Tracking Index	500 - 600 V	500 - 600 V	Average value: 580 V Grade Count:5

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 - 230 °C	176 - 446 °F	Average value: 168 °C Grade Count:15
Die Temperature	190 - 210 °C	374 - 410 °F	Average value: 197 °C Grade Count:7
Melt Temperature	20.0 - 371 °C	68.0 - 700 °F	Average value: 184 °C Grade Count:16
Mold Temperature	60.0 - 149 °C	140 - 300 °F	Average value: 95.9 °C Grade Count:16
Drying Temperature	79.4 - 135 °C	175 - 275 °F	Average value: 103 °C Grade Count:16
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:7
Dew Point	-31.7 °C	-25.0 °F	Average value: -31.7 °C Grade Count:4
Injection Pressure	60.0 - 140 MPa	8700 - 20300 psi	Average value: 95.5 MPa Grade Count:18

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