

Overview of materials for Acetal Homopolymer, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Glass Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Homopolymer, Glass Fiber Reinforced". 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-Homopolymer-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.46 - 1.70 g/cc	0.0527 - 0.0614 lb/in ³	Average value: 1.54 g/cc Grade Count:27
Filler Content	15.0 - 40.0 %	15.0 - 40.0 %	Average value: 26.3 % Grade Count:4
Water Absorption	0.100 - 1.26 %	0.100 - 1.26 %	Average value: 0.684 % Grade Count:8
Moisture Absorption at Equilibrium	0.100 - 0.230 %	0.100 - 0.230 %	Average value: 0.180 % Grade Count:7
Linear Mold Shrinkage	0.00300 - 0.0180 cm/cm	0.00300 - 0.0180 in/in	Average value: 0.0102 cm/cm Grade Count:24
Linear Mold Shrinkage, Transverse	0.0100 - 0.0210 cm/cm	0.0100 - 0.0210 in/in	Average value: 0.0144 cm/cm Grade Count:14
Melt Flow	5.00 - 17.0 g/10 min	5.00 - 17.0 g/10 min	Average value: 9.67 g/10 min Grade Count:9

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	34.5 - 160 MPa	5000 - 23200 psi	Average value: 75.2 MPa Grade Count:26
Tensile Strength, Yield	60.0 - 80.0 MPa	8700 - 11600 psi	Average value: 68.9 MPa Grade Count:4
Elongation at Break	1.00 - 20.0 %	1.00 - 20.0 %	Average value: 5.26 % Grade Count:26
Elongation at Yield	1.90 - 8.00 %	1.90 - 8.00 %	Average value: 2.94 % Grade Count:4
Modulus of Elasticity	3.45 - 11.0 GPa	500 - 1600 ksi	Average value: 6.46 GPa Grade Count:25
Flexural Yield Strength	68.9 - 200 MPa	10000 - 29000 psi	Average value: 120 MPa Grade Count:19
Flexural Modulus	3.45 - 10.7 GPa	500 - 1550 ksi	Average value: 5.66 GPa Grade Count:22
Shear Modulus	>= 0.297 GPa @Temperature -50.0 -	>= 43.1 ksi @Temperature -58.0 -	Average value: 1.10 GPa Grade Count:1

Mechanical Properties	150 °C Metric	302 °F English	Comments
Izod Impact, Notched	0.374 - 4.21 J/cm	0.700 - 7.89 ft-lb/in	Average value: 0.930 J/cm Grade Count:19
Izod Impact, Unnotched	2.14 - 5.61 J/cm	4.00 - 10.5 ft-lb/in	Average value: 4.12 J/cm Grade Count:16
Izod Impact, Notched (ISO)	4.00 - 6.00 kJ/m ²	1.90 - 2.86 ft-lb/in ²	Average value: 4.83 kJ/m ² Grade Count:6
Izod Impact, Unnotched (ISO)	26.0 - 28.0 kJ/m ²	12.4 - 13.3 ft-lb/in ²	Average value: 26.8 kJ/m ² Grade Count:4
Charpy Impact Unnotched	5.00 - 6.00 J/cm ²	23.8 - 28.6 ft-lb/in ²	Average value: 5.36 J/cm ² Grade Count:5
	5.00 - 5.00 J/cm ² @Temperature -30.0 - - 30.0 °C	23.8 - 23.8 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 5.00 J/cm ² Grade Count:4
Charpy Impact, Notched	0.300 - 1.00 J/cm ²	1.43 - 4.76 ft-lb/in ²	Average value: 0.512 J/cm ² Grade Count:8
	0.300 - 1.00 J/cm ² @Temperature -30.0 - - 30.0 °C	1.43 - 4.76 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 0.480 J/cm ² Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	10.8 - 500 µm/m-°C	6.00 - 278 µin/in-°F	Average value: 97.0 µm/m-°C Grade Count:9
CTE, linear, Transverse to Flow	3.60 - 100 µm/m-°C	2.00 - 55.6 µin/in-°F	Average value: 63.6 µm/m-°C Grade Count:9
Melting Point	175 - 178 °C	347 - 352 °F	Average value: 178 °C Grade Count:7
Deflection Temperature at 0.46 MPa (66 psi)	162 - 176 °C	324 - 349 °F	Average value: 166 °C Grade Count:14
Deflection Temperature at 1.8 MPa (264 psi)	105 - 172 °C	221 - 342 °F	Average value: 149 °C Grade Count:24
Annealing Point	160 °C	320 °F	Average value: 160 °C Grade Count:4
Flammability, UL94	HB	HB	Grade Count:16
Flame Spread	44.0 - 53.0 mm/min	1.73 - 2.09 in/min	Average value: 48.0 mm/min Grade Count:4

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 - 1.00e+15 ohm-cm	1.00e+13 - 1.00e+15 ohm-cm	Average value: 2.62e+14 ohm-cm Grade Count:5
Dielectric Constant	3.70 - 3.90	3.70 - 3.90	Average value: 3.81 Grade Count:4

Processing Properties	Metric	English	Comments
Processing Temperature	177 - 210 °C	350 - 410 °F	Average value: 193 °C Grade Count:4
Melt Temperature	20.0 - 220 °C	68.0 - 428 °F	Average value: 203 °C Grade Count:10
Mold Temperature	79.4 - 107 °C	175 - 225 °F	Average value: 91.1 °C Grade Count:14
Drying Temperature	80.0 - 121 °C	176 - 250 °F	Average value: 96.4 °C Grade Count:10
Moisture Content	0.100 - 0.200 %	0.100 - 0.200 %	Average value: 0.170 % Grade Count:10
Dew Point	-31.7 °C	-25.0 °F	Average value: -31.7 °C Grade Count:4
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:8

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