

## Overview of materials for Acetal Copolymer, Carbon Fiber Filled

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Carbon Fiber Filled

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Copolymer, Carbon Fiber 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-Carbon-Fiber-Filled.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Acetal-Copolymer-Carbon-Fiber-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.42 - 1.63 g/cc	0.0513 - 0.0589 lb/in <sup>3</sup>	Average value: 1.48 g/cc Grade Count:77
Filler Content	10.0 - 40.0 %	10.0 - 40.0 %	Average value: 19.1 % Grade Count:16
Water Absorption	0.100 - 1.00 %	0.100 - 1.00 %	Average value: 0.177 % Grade Count:35
Moisture Absorption at Equilibrium	0.100 - 0.800 %	0.100 - 0.800 %	Average value: 0.234 % Grade Count:10
Additive Loading	15.0 - 20.0 %	15.0 - 20.0 %	Average value: 16.7 % Grade Count:6
Linear Mold Shrinkage	0.000500 - 0.0234 cm/cm	0.000500 - 0.0234 in/in	Average value: 0.00528 cm/cm Grade Count:69
Linear Mold Shrinkage, Transverse	0.00600 - 0.0300 cm/cm	0.00600 - 0.0300 in/in	Average value: 0.0143 cm/cm Grade Count:12
Melt Flow	2.86 - 29.6 g/10 min	2.86 - 29.6 g/10 min	Average value: 13.2 g/10 min Grade Count:20

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85.0 - 95.0	85.0 - 95.0	Average value: 88.3 Grade Count:4
Tensile Strength, Ultimate	48.0 - 152 MPa	6960 - 22000 psi	Average value: 102 MPa Grade Count:73
Tensile Strength, Yield	75.8 - 127 MPa	11000 - 18400 psi	Average value: 107 MPa Grade Count:11
Elongation at Break	1.00 - 25.0 %	1.00 - 25.0 %	Average value: 2.65 % Grade Count:51
Elongation at Yield	0.800 - 5.00 %	0.800 - 5.00 %	Average value: 2.06 % Grade Count:32
Modulus of Elasticity	5.60 - 23.4 GPa	812 - 3400 ksi	Average value: 11.9 GPa Grade Count:66
Flexural Yield Strength	65.0 - 234 MPa	9430 - 34000 psi	Average value: 146 MPa Grade Count:71

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	0.320 - 4.50 J/cm	0.599 - 8.43 ft-lb/in	Average value: 0.658 J/cm Grade Count:44
Izod Impact, Unnotched	1.60 - 6.94 J/cm	3.00 - 13.0 ft-lb/in	Average value: 3.72 J/cm Grade Count:36
Izod Impact, Notched (ISO)	4.00 - 6.50 kJ/m <sup>2</sup>	1.90 - 3.09 ft-lb/in <sup>2</sup>	Average value: 5.22 kJ/m <sup>2</sup> Grade Count:9
Izod Impact, Unnotched (ISO)	25.0 - 31.0 kJ/m <sup>2</sup>	11.9 - 14.8 ft-lb/in <sup>2</sup>	Average value: 27.0 kJ/m <sup>2</sup> Grade Count:7
Charpy Impact Unnotched	1.50 - 1000 J/cm <sup>2</sup>	7.14 - 4760 ft-lb/in <sup>2</sup>	Average value: 2.42 J/cm <sup>2</sup> Grade Count:24
Charpy Impact, Notched	0.300 - 0.500 J/cm <sup>2</sup>	1.43 - 2.38 ft-lb/in <sup>2</sup>	Average value: 0.435 J/cm <sup>2</sup> Grade Count:10
Coefficient of Friction	0.140 - 0.380	0.140 - 0.380	Average value: 0.215 Grade Count:16
Coefficient of Friction, Static	0.100 - 0.310	0.100 - 0.310	Average value: 0.126 Grade Count:12
K (wear) Factor	127 - 179 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M	63.0 - 89.0 x 10 <sup>-10</sup> in <sup>3</sup> -min/ft-lb-hr	Average value: 148 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 - 79.2 μm/m-°C	5.56 - 44.0 μin/in-°F	Average value: 54.9 μm/m-°C Grade Count:23
CTE, linear, Transverse to Flow	27.0 - 100 μm/m-°C	15.0 - 55.6 μin/in-°F	Average value: 51.2 μm/m-°C Grade Count:10
Thermal Conductivity	0.400 - 0.600 W/m-K	2.78 - 4.16 BTU-in/hr-ft <sup>2</sup> -°F	Average value: 0.450 W/m-K Grade Count:5
Melting Point	166 - 167 °C	331 - 333 °F	Average value: 166 °C Grade Count:5
Maximum Service Temperature, Air	100 - 120 °C	212 - 248 °F	Average value: 110 °C Grade Count:24
Deflection Temperature at 0.46 MPa (66 psi)	160 - 171 °C	320 - 340 °F	Average value: 163 °C Grade Count:21
Deflection Temperature at 1.8 MPa (264 psi)	130 - 173 °C	266 - 343 °F	Average value: 157 °C Grade Count:57
Vicat Softening Point	155 - 165 °C	311 - 329 °F	Average value: 161 °C Grade Count:12
Flammability, UL94	HB	HB	Grade Count:43

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 - 1.00e+6 ohm-cm	1.00 - 1.00e+6 ohm-cm	Average value: 270000 ohm-cm Grade Count:35
Surface Resistance	1.00 - 1.00e+14 ohm	1.00 - 1.00e+14 ohm	Average value: 1.28e+12 ohm Grade Count:43

Electrical Properties	Metric	English	Comments
Insulation Resistance	10.0 - 1.00e+11 ohm	10.0 - 1.00e+11 ohm	Average value: 4.63e+9 ohm Grade Count:24
Static Decay	0.100 - 2.00 sec	0.100 - 2.00 sec	Average value: 1.32 sec Grade Count:5

Processing Properties	Metric	English	Comments
Processing Temperature	177 - 230 °C	350 - 446 °F	Average value: 199 °C Grade Count:29
Nozzle Temperature	175 - 220 °C	347 - 428 °F	Average value: 189 °C Grade Count:26
Melt Temperature	170 - 220 °C	338 - 428 °F	Average value: 193 °C Grade Count:50
Mold Temperature	60.0 - 120 °C	140 - 248 °F	Average value: 95.9 °C Grade Count:55
Drying Temperature	75.0 - 121 °C	167 - 250 °F	Average value: 104 °C Grade Count:50
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:22
Dew Point	-31.7 °C	-25.0 °F	Average value: -31.7 °C Grade Count:22
Injection Pressure	39.2 - 118 MPa	5690 - 17100 psi	Average value: 85.3 MPa Grade Count:29

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China