

## Overview of materials for Acetal Copolymer, PTFE Filled

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

### Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.35 - 1.85 g/cc	0.0488 - 0.0668 lb/in <sup>3</sup>	Average value: 1.48 g/cc Grade Count:108
Filler Content	2.00 - 20.0 %	2.00 - 20.0 %	Average value: 11.3 % Grade Count:25
Water Absorption	0.0300 - 0.300 %	0.0300 - 0.300 %	Average value: 0.166 % Grade Count:51
Moisture Absorption at Equilibrium	0.100 - 0.330 %	0.100 - 0.330 %	Average value: 0.200 % Grade Count:6
Water Absorption at Saturation	0.220 - 0.720 %	0.220 - 0.720 %	Average value: 0.530 % Grade Count:3
Additive Loading	5.00 - 20.0 %	5.00 - 20.0 %	Average value: 12.7 % Grade Count:3
Linear Mold Shrinkage	0.00480 - 0.0400 cm/cm	0.00480 - 0.0400 in/in	Average value: 0.0197 cm/cm Grade Count:97
Linear Mold Shrinkage, Transverse	0.0107 - 0.0290 cm/cm	0.0107 - 0.0290 in/in	Average value: 0.0170 cm/cm Grade Count:12
Melt Flow	5.00 - 58.4 g/10 min	5.00 - 58.4 g/10 min	Average value: 16.9 g/10 min Grade Count:14

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	60.0 - 84.0	60.0 - 84.0	Average value: 79.4 Grade Count:8
Hardness, Rockwell R	70.0 - 110	70.0 - 110	Average value: 95.6 Grade Count:21
Tensile Strength, Ultimate	31.0 - 127 MPa	4500 - 18400 psi	Average value: 51.3 MPa Grade Count:78
Tensile Strength, Yield	41.4 - 127 MPa	6000 - 18400 psi	Average value: 62.7 MPa Grade Count:37
Elongation at Break	1.00 - 47.0 %	1.00 - 47.0 %	Average value: 11.5 % Grade Count:78
Elongation at Yield	1.80 - 25.0 %	1.80 - 25.0 %	Average value: 11.1 % Grade Count:27
Modulus of Elasticity	0.965 - 15.9 GPa	140 - 2300 ksi	Average value: 3.01 GPa Grade Count:75

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	36.3 - 186 MPa	5300 - 27000 psi	Average value: 77.2 MPa Grade Count:99
Flexural Modulus	1.24 - 13.1 GPa	180 - 1900 ksi	Average value: 2.86 GPa Grade Count:96
Izod Impact, Notched	0.290 - 0.961 J/cm	0.543 - 1.80 ft-lb/in	Average value: 0.565 J/cm Grade Count:80
Izod Impact, Unnotched	3.47 - 5340 J/cm	6.50 - 10000 ft-lb/in	Average value: 6.69 J/cm Grade Count:47
Izod Impact, Notched (ISO)	3.50 - 7.00 kJ/m <sup>2</sup>	1.67 - 3.33 ft-lb/in <sup>2</sup>	Average value: 4.79 kJ/m <sup>2</sup> Grade Count:14
	6.00 - 6.00 kJ/m <sup>2</sup> @Temperature -30.0 - - 30.0 °C	2.86 - 2.86 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 22.0 °F	Average value: 6.00 kJ/m <sup>2</sup> Grade Count:1
Izod Impact, Unnotched (ISO)	25.0 - 45.2 kJ/m <sup>2</sup>	11.9 - 21.5 ft-lb/in <sup>2</sup>	Average value: 35.8 kJ/m <sup>2</sup> Grade Count:6
Charpy Impact Unnotched	3.50 - 8.30 J/cm <sup>2</sup>	16.7 - 39.5 ft-lb/in <sup>2</sup>	Average value: 5.57 J/cm <sup>2</sup> Grade Count:19
	3.20 - 8.00 J/cm <sup>2</sup> @Temperature -30.0 - - 30.0 °C	15.2 - 38.1 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 22.0 °F	Average value: 5.07 J/cm <sup>2</sup> Grade Count:9
Charpy Impact, Notched	0.300 - 1.20 J/cm <sup>2</sup>	1.43 - 5.71 ft-lb/in <sup>2</sup>	Average value: 0.609 J/cm <sup>2</sup> Grade Count:19
	0.250 - 1.10 J/cm <sup>2</sup> @Temperature -30.0 - - 30.0 °C	1.19 - 5.24 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 22.0 °F	Average value: 0.629 J/cm <sup>2</sup> Grade Count:7
Falling Dart Impact	3.90 - 6.40 J	2.88 - 4.72 ft-lb	Average value: 5.57 J Grade Count:3
Coefficient of Friction	0.0700 - 0.460	0.0700 - 0.460	Average value: 0.190 Grade Count:23
Coefficient of Friction, Static	0.0600 - 0.500	0.0600 - 0.500	Average value: 0.123 Grade Count:21
K (wear) Factor	1.80 - 399 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M	0.894 - 198 x 10 <sup>-10</sup> in <sup>3</sup> -min/ft-lb-hr	Average value: 99.3 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M Grade Count:10
Limiting Pressure Velocity	0.420 - 0.440 MPa-m/sec	12000 - 12600 psi-ft/min	Average value: 0.433 MPa-m/sec Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	43.2 - 120 µm/m-°C	24.0 - 66.7 µin/in-°F	Average value: 83.3 µm/m-°C Grade Count:27
CTE, linear, Transverse to Flow	34.0 - 110 µm/m-°C	18.9 - 61.1 µin/in-°F	Average value: 62.4 µm/m-°C Grade Count:3
Specific Heat Capacity	1.48 J/g-°C	0.354 BTU/lb-°F	Average value: 1.48 J/g-°C Grade Count:3

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.2400 - 0.310 W/m-K	0.215 - 2.15 BTU-in/hr-ft <sup>2</sup> -°F	Average value: 0.203 W/m-K Grade Count:8
Melting Point	162 - 167 °C	324 - 333 °F	Average value: 166 °C Grade Count:11
Maximum Service Temperature, Air	100 - 150 °C	212 - 302 °F	Average value: 111 °C Grade Count:16
Deflection Temperature at 0.46 MPa (66 psi)	120 - 168 °C	248 - 335 °F	Average value: 156 °C Grade Count:37
Deflection Temperature at 1.8 MPa (264 psi)	85.0 - 163 °C	185 - 325 °F	Average value: 113 °C Grade Count:90
Vicat Softening Point	130 - 160 °C	266 - 320 °F	Average value: 148 °C Grade Count:20
Flammability, UL94	HB - V-2	HB - V-2	Grade Count:67

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1000 - 1.00e+17 ohm-cm	1000 - 1.00e+17 ohm-cm	Average value: 6.43e+15 ohm-cm Grade Count:43
Surface Resistance	1.00e+6 - 1.00e+16 ohm	1.00e+6 - 1.00e+16 ohm	Average value: 1.70e+15 ohm Grade Count:20
Insulation Resistance	1.00e+12 ohm	1.00e+12 ohm	Average value: 1.00e+12 ohm Grade Count:14
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:6
Dielectric Constant	3.25 - 3.80	3.25 - 3.80	Average value: 3.59 Grade Count:6
Dielectric Strength	17.7 - 33.0 kV/mm	450 - 838 kV/in	Average value: 19.8 kV/mm Grade Count:21
Dissipation Factor	0.000400 - 0.0105	0.000400 - 0.0105	Average value: 0.00665 Grade Count:5
Comparative Tracking Index	600 V	600 V	Average value: 600 V Grade Count:5

Processing Properties	Metric	English	Comments
Processing Temperature	177 - 230 °C	350 - 446 °F	Average value: 199 °C Grade Count:24
Nozzle Temperature	175 - 200 °C	347 - 392 °F	Average value: 188 °C Grade Count:14
Melt Temperature	175 - 218 °C	347 - 425 °F	Average value: 194 °C Grade Count:62
Mold Temperature	38.0 - 121 °C	100 - 250 °F	Average value: 92.1 °C Grade Count:72
Drying Temperature	71.0 - 121 °C	160 - 250 °F	Average value: 104 °C Grade Count:62
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:32

Processing Properties	Metric	English	Comments
-----------------------	--------	---------	----------

## 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