

Overview of materials for Acetal Homopolymer, Unreinforced, Impact Grade

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Unreinforced, Impact Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Acetal Homopolymer, Unreinforced, Impact Grade". 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-Unreinforced-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.26 - 1.42 g/cc	0.0455 - 0.0513 lb/in ³	Average value: 1.37 g/cc Grade Count:43
	1.14 - 1.16 g/cc @Temperature 200 - 215 °C	0.0412 - 0.0419 lb/in ³ @Temperature 392 - 419 °F	Average value: 1.15 g/cc Grade Count:6
Water Absorption	0.500 - 0.900 %	0.500 - 0.900 %	Average value: 0.784 % Grade Count:5
Moisture Absorption at Equilibrium	0.170 - 0.350 %	0.170 - 0.350 %	Average value: 0.246 % Grade Count:5
Water Absorption at Saturation	0.650 - 1.20 %	0.650 - 1.20 %	Average value: 0.837 % Grade Count:20
Linear Mold Shrinkage	0.0120 - 0.0220 cm/cm	0.0120 - 0.0220 in/in	Average value: 0.0176 cm/cm Grade Count:35
Linear Mold Shrinkage, Transverse	0.0110 - 0.0190 cm/cm	0.0110 - 0.0190 in/in	Average value: 0.0162 cm/cm Grade Count:26
Melt Flow	0.600 - 25.0 g/10 min	0.600 - 25.0 g/10 min	Average value: 7.14 g/10 min Grade Count:42

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	18.7 - 92.0	18.7 - 92.0	Average value: 64.4 Grade Count:9
Hardness, Rockwell R	103 - 120	103 - 120	Average value: 114 Grade Count:9
Tensile Strength, Ultimate	61.0 - 72.0 MPa	8850 - 10400 psi	Average value: 68.6 MPa Grade Count:10
Tensile Strength, Yield	30.0 - 70.0 MPa	4350 - 10200 psi	Average value: 47.9 MPa Grade Count:34
Elongation at Break	25.0 - 70.0 %	25.0 - 70.0 %	Average value: 46.0 % Grade Count:31
Elongation at Yield	7.00 - 33.0 %	7.00 - 33.0 %	Average value: 16.3 % Grade Count:34
Modulus of Elasticity	0.950 - 3.23 GPa	138 - 468 ksi	Average value: 2.11 GPa Grade Count:43

Mechanical Properties	Metric	English	Comments
	@Temperature -100 - 150 °C	@Temperature -148 - 302 °F	Average value: 2.53 GPa Grade Count:1
Flexural Yield Strength	34.0 - 60.0 MPa	4930 - 8700 psi	Average value: 51.1 MPa Grade Count:9
Flexural Modulus	0.950 - 3.05 GPa	138 - 442 ksi	Average value: 1.81 GPa Grade Count:28
Shear Modulus	0.369 - 1.04 GPa	53.5 - 151 ksi	Average value: 0.582 GPa Grade Count:4
	>= 0.0444 GPa	>= 6.44 ksi	Average value: 0.540 GPa Grade Count:4
	@Temperature -50.0 - 150 °C	@Temperature -58.0 - 302 °F	
Izod Impact, Notched (ISO)	8.00 - 90.0 kJ/m²	3.81 - 42.8 ft-lb/in²	Average value: 31.0 kJ/m² Grade Count:4
	8.00 - 20.0 kJ/m²	3.81 - 9.52 ft-lb/in²	Average value: 11.5 kJ/m² Grade Count:4
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	
Charpy Impact Unnotched	13.0 - 1000 J/cm²	61.9 - 4760 ft-lb/in²	Average value: 16.3 J/cm² Grade Count:29
	9.00 - 999.9 J/cm²	42.8 - 4759 ft-lb/in²	Average value: 18.8 J/cm² Grade Count:28
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Charpy Impact, Notched	0.650 - 10.0 J/cm²	3.09 - 47.6 ft-lb/in²	Average value: 2.30 J/cm² Grade Count:43
	0.550 - 2.00 J/cm²	2.62 - 9.52 ft-lb/in²	Average value: 0.974 J/cm² Grade Count:34
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Tensile Creep Modulus, 1 hour	1100 - 2300 MPa	160000 - 334000 psi	Average value: 1580 MPa Grade Count:9
Tensile Creep Modulus, 1000 hours	550 - 1200 MPa	79800 - 174000 psi	Average value: 867 MPa Grade Count:9

Thermal Properties	Metric	English	Comments
CTE, linear	100 - 130 µm/m-°C	55.6 - 72.2 µin/in-°F	Average value: 120 µm/m-°C Grade Count:28
CTE, linear, Transverse to Flow	110 - 140 µm/m-°C	61.1 - 77.8 µin/in-°F	Average value: 118 µm/m-°C Grade Count:19
Melting Point	165 - 178 °C	329 - 352 °F	Average value: 170 °C Grade Count:32
Deflection Temperature at 0.46 MPa (66 psi)	100 - 168 °C	212 - 334 °F	Average value: 144 °C Grade Count:29

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	104 °C	199 °F	Average value: 79.7 °C Grade Count:11
Annealing Point	160 °C	320 °F	Average value: 160 °C Grade Count:11
Flammability, UL94	HB	HB	Grade Count:19
Flame Spread	41.0 - 55.0 mm/min	1.61 - 2.17 in/min	Average value: 44.2 mm/min Grade Count:10

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+11 - 1.00e+15 ohm-cm	1.00e+11 - 1.00e+15 ohm-cm	Average value: 1.06e+14 ohm-cm Grade Count:11
Surface Resistance	1.00e+13 - 1.00e+15 ohm	1.00e+13 - 1.00e+15 ohm	Average value: 1.70e+14 ohm Grade Count:11
Dielectric Constant	3.40 - 4.40	3.40 - 4.40	Average value: 3.90 Grade Count:11
Dielectric Strength	28.0 kV/mm	711 kV/in	Average value: 28.0 kV/mm Grade Count:3
Dissipation Factor	0.00300 - 0.0200	0.00300 - 0.0200	Average value: 0.00918 Grade Count:9
Comparative Tracking Index	600 V	600 V	Average value: 600 V Grade Count:12

Processing Properties	Metric	English	Comments
Processing Temperature	60.0 - 200 °C	140 - 392 °F	Average value: 113 °C Grade Count:19
Die Temperature	180 - 200 °C	356 - 392 °F	Average value: 192 °C Grade Count:18
Melt Temperature	20.0 - 215 °C	68.0 - 419 °F	Average value: 184 °C Grade Count:30
Mold Temperature	40.0 - 80.0 °C	104 - 176 °F	Average value: 50.9 °C Grade Count:12
Drying Temperature	75.0 - 120 °C	167 - 248 °F	Average value: 87.9 °C Grade Count:31
Moisture Content	0.0500 - 0.150 %	0.0500 - 0.150 %	Average value: 0.0853 % Grade Count:17
Injection Pressure	60.0 - 120 MPa	8700 - 17400 psi	Average value: 90.0 MPa Grade Count:18

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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