

GEHR Plastics PMMA Acrylic

Category : Polymer , Thermoplastic , Acrylic (PMMA)

Material Notes:

Polymethylmethacrylate is refractory and shows a good mechanical strength, tensile strength and hardness. PMMA is also scratch resistant and easy to polish. It shows good temperature resistance and UV-stability. The operating temperature of PMMA ranges from -40Â°C to approximately 70Â°C. Properties: very high mechanical strength and hardness high mechanical rigidity excellent transparency easy to polish good thermal stability good insulation properties low water absorption excellent weather resistance possible stress problems low chemical resistance brittle Applications: Display Advertisement food industry conduit pipe for milk tubes for lampshand rails automotive parts

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PMMA-Acrylic.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ISO 1183
Water Absorption	0.30 %	0.30 %	ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	72.0 MPa	10400 psi	ISO 527
Elongation at Break	4.5 %	4.5 %	ISO 527
Modulus of Elasticity	3.30 GPa	479 ksi	ISO 527
Flexural Strength	105 MPa	15200 psi	3.5%; ISO 178
Charpy Impact Unnotched	1.20 J/cmÂ²	5.71 ft-lb/inÂ²	ISO 179
Charpy Impact, Notched	0.200 J/cmÂ²	0.952 ft-lb/inÂ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 Âµm/m-Â°C @Temperature 20.0 Â°C	38.9 Âµin/in-Â°F @Temperature 68.0 Â°F	DIN 53752
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ftÂ²-Â°F	DIN 52612
Maximum Service Temperature, Air	70.0 Â°C	158 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	90.0 Â°C	194 Â°F	ISO 75
Vicat Softening Point	102 Â°C	216 Â°F	VST/B/50; ISO 306
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	VDE 0303
Surface Resistivity per Square	$\geq 1.00\text{e}+13$ ohm	$\geq 1.00\text{e}+13$ ohm	VDE 0303
Dielectric Constant	2.7	2.7	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	VDE 0303
Dielectric Loss Index	0.020	0.020	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	≥ 600 V	≥ 600 V	CTI; IEC 60112

Descriptive Properties	Value	Comments
Acid Resistance	yes	
Aromatic Resistance	no	
Bondability	yes	
CKW Resistance	limited	
Color	Clear	
Hydrocarbonate Resistance	yes	
Hydroxide Resistance	yes	
Ketone Resistance	limited	
Physiological indifference according	yes	
Resistance Against Hot Water	limited	
UV Stabilization	yes	

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