

GEHR Plastics PPSU Polyphenylenesulfone

Category : Polymer , Thermoplastic , Polyphenylsulfone (PPSU)

Material Notes:

Polyphenylenesulfone is an amorphous material, with improved impact and hydrolysis resistance compared to PSU. The usual operating temperature is approximately 180°C. The extremely high notched impact strength remains also after a heat aging. Properties high strength and rigidity very high impact strength very good dimensional stability very high chemical resistance high resistance to all kinds of radiation repeated sterilization lower chemical resistance than comparable semi-crystalline materials Applications include parts for microwave ovens, blow dryers, parts for humidifiers, food industry, pump wheels, insulators, and medical industry.

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PPSU-Polyphenylenesulfone.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ISO 1183
Water Absorption	0.40 %	0.40 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	
Hardness, Shore D	86	86	DIN 53505
Tensile Strength, Yield	70.0 MPa	10200 psi	ISO 527
Elongation at Break	>= 50 %	>= 50 %	ISO 527
Elongation at Yield	7.2 %	7.2 %	ISO 527
Modulus of Elasticity	2.34 GPa	339 ksi	ISO 527
Flexural Strength	105 MPa	15200 psi	3.5%; ISO 178

Thermal Properties	Metric	English	Comments
CTE, linear	56.0 µm/m-°C @Temperature 20.0 °C	31.1 µin/in-°F @Temperature 68.0 °F	DIN 53752
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft²-°F	DIN 52612
Maximum Service Temperature, Air	180 °C	356 °F	
Deflection Temperature at 0.46 MPa (66 psi)	214 °C	417 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	207 °C	405 °F	ISO 75

Thermal Properties <small>Temperature, Air</small>	Metric <small>°C</small>	English <small>°F</small>	Comments
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	VDE 0303
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	VDE 0303
Dielectric Constant	3.4	3.4	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	15.0 kV/mm	381 kV/in	VDE 0303
Dielectric Loss Index	0.0080	0.0080	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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

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