

GEHR Plastics PEEK-30GF Polyetheretherketone, 30% Glass Fiber

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Glass Fiber Filled

Material Notes:

Polyether etherketone can be used at very high temperatures and it shows a good mechanical strength, toughness, hardness, flexural strength, and torsional strength. PEEK exhibits excellent chemical resistance, very good dielectric properties up to 260°C and a very good resistance to all kinds of radiation. Properties: very high mechanical strength, very high rigidity, very high thermal stability, very high creep resistance, very high dimensional stability, very high radiation resistance, very high hydrolysis resistance, relatively low notch impact strength, low resistance against acetone. Applications include bearing shells, piston rings, valve seats, gears, seals, aviation, cog-wheels, pump vanes, fittings, plug connectors, and wafer carriers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PEEK-30GF-Polyetheretherketone-30-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.49 g/cc	1.49 g/cc	ISO 1183
Water Absorption	0.10 %	0.10 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	103	103	
Hardness, Shore D	92	92	DIN 53505
Tensile Strength at Break	157 MPa	22800 psi	ISO 527
Tensile Strength, Yield	156 MPa	22600 psi	ISO 527
Elongation at Break	2.7 %	2.7 %	ISO 527
Elongation at Yield	3.0 %	3.0 %	ISO 527
Modulus of Elasticity	10.3 GPa	1490 ksi	ISO 527
Flexural Strength	250 MPa	36300 psi	3.5%; ISO 178
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.890 J/cm ²	4.24 ft-lb/in ²	ISO 179
Coefficient of Friction	0.42	0.42	DIN 53375

Thermal Properties	Metric	English	Comments
CTE, linear	22.0 Åµm/m-Å°C	12.2 Åµin/in-Å°F	DIN 53752
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	

Thermal Properties	Metric ^{1.8 W/m-K}	English ^{2.98 BTU-in/hr-ftÂ²-}	Comments
Maximum Service Temperature, Air	260 Â°C	500 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	340 Â°C	644 Â°F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	315 Â°C	599 Â°F	ISO 75
Vicat Softening Point	300 Â°C	572 Â°F	VST/B/50; ISO 306
Minimum Service Temperature, Air	-40.0 Â°C	-40.0 Â°F	
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	VDE 0303
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	VDE 0303
Dielectric Constant	3.3 @Frequency 1.00e+6 Hz	3.3 @Frequency 1.00e+6 Hz	DIN 53483
Dielectric Strength	175 kV/mm	4450 kV/in	VDE 0303
Dielectric Loss Index	0.0040 @Frequency 1.00e+6 Hz	0.0040 @Frequency 1.00e+6 Hz	DIN 53483

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

Descriptive Properties	Value	Comments
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