

## GEHR Plastics PPS-40GF Polyphenylene Sulfide, 40% Glass Fiber

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 40% Glass Fiber Filler

### Material Notes:

The linear polyphenylsulfide belongs to the semi-crystalline materials and offers a very high mechanical capacity, thermal and chemical resistance distinguished at the same time, high dimensional stability, and creep strength. The LOI belongs to the highest of polymers. By the reinforcement with glass polymers strength is achieved, which is comparable with light metal. PPS closes the gap between the technical synthetics and PEEK with its strength and economy. Properties very high strength and rigidity high hardness high thermal stability high dimensional stability very high chemical resistance every good insulating properties high weather resistance high resistance to hydrolysis Applications include components in machine-making, pump parts, fan parts, impellers, parts in the fuel and automotive sector.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_GEHR-Plastics-PPS-40GF-Polyphenylene-Sulfide-40-Glass-Fiber.php](http://www.lookpolymers.com/polymer_GEHR-Plastics-PPS-40GF-Polyphenylene-Sulfide-40-Glass-Fiber.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.65 g/cc	1.65 g/cc	ISO 1183

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	
Ball Indentation Hardness	322 MPa	46700 psi	ISO 2039
Tensile Strength at Break	185 MPa	26800 psi	ISO 527
Elongation at Break	1.9 %	1.9 %	ISO 527
Modulus of Elasticity	14.0 GPa	2030 ksi	ISO 527
Flexural Strength	285 MPa	41300 psi	3.5%; ISO 178
Charpy Impact Unnotched	5.30 J/cm <sup>2</sup>	25.2 ft-lb/in <sup>2</sup>	ISO 179
Charpy Impact, Notched	1.00 J/cm <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	ISO 179
Coefficient of Friction	0.40	0.40	DIN 53375

Thermal Properties	Metric	English	Comments
CTE, linear	48.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 $\text{Å}^\circ\text{C}$	26.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 $\text{Å}^\circ\text{F}$	DIN 53752
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft <sup>2</sup> - $\text{Å}^\circ\text{F}$	DIN 52612
Maximum Service Temperature, Air	240 $\text{Å}^\circ\text{C}$	464 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa	260 $\text{Å}^\circ\text{C}$	500 $\text{Å}^\circ\text{F}$	

(264 psi) Thermal Properties	Metric	English	ISO 75 Comments
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{13}$ ohm-cm	$\geq 1.00 \times 10^{13}$ ohm-cm	VDE 0303
Surface Resistivity per Square	$\geq 1.00 \times 10^{15}$ ohm	$\geq 1.00 \times 10^{15}$ ohm	VDE 0303
Dielectric Constant	4.1	4.1	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	28.0 kV/mm	711 kV/in	VDE 0303
Dielectric Loss Index	0.0020	0.0020	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	125 V	125 V	CTI; IEC 60112

Descriptive Properties	Value	Comments
Acid Resistance	yes	
Aromatic Resistance	limited	
Bondability	yes	
CKW Resistance	yes	
Color	Black	
Hydrocarbonate Resistance	yes	
Hydroxide Resistance	limited	
Ketone Resistance	limited	
Physiological indifference according	yes	
Resistance Against Hot Water	limited	
UV Stabilization	yes	

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