

Quadrant EPP Techtron® PSGF PPS - Compression Molded 40% Glass Reinforced Polyphenylene Sulfide (ASTM Product Data Sheet)

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

Material Notes:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Techtron-PSGF-PPS-Compression-Molded-40-Glass-Reinforced-Polyphenylene-Sulfide-ASTM-Product-Data-Sheet.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.70 g/cc	1.70 g/cc	ASTM D792
Water Absorption	0.020 %	0.020 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.030 %	0.030 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	94	94	ASTM D785
Hardness, Rockwell R	125	125	ASTM D785
Hardness, Shore D	86	86	ASTM D2240
Tensile Strength	34.5 MPa	5000 psi	ASTM D638
Elongation at Break	1 %	1 %	ASTM D638
Tensile Modulus	5.03 GPa	730 ksi	ASTM D638
Flexural Strength	159 MPa	23000 psi	ASTM D790
Flexural Modulus	6.89 GPa	1000 ksi	ASTM D790
Compressive Strength	165 MPa	24000 psi	10% Def.; ASTM D695
Compressive Modulus	8.96 GPa	1300 ksi	ASTM D695
Izod Impact, Notched	0.534 J/cm	1.00 ft-lb/in	ASTM D256 Type A

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	25.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E831
	@Temperature -40.0 - 149 °C	@Temperature -40.0 - 300 °F	
Thermal Conductivity	0.303 W/m-K	2.10 BTU-in/hr-ft ² -°F	ASTM F433
Melting Point	282 °C	540 °F	Crystalline, Peak; ASTM D3418

Maximum Service Temperature, Air Thermal Properties	232 °C Metric	450 °F English	Long Term Comments
Deflection Temperature at 1.8 MPa (264 psi)	254 °C	490 °F	ASTM D648
Flammability, UL94	V-0	V-0	1/8 inch (Estimated Rating)

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	EOS/ESD S11.11
Dielectric Strength	15.2 kV/mm	385 kV/in	Short Term; ASTM D149

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
Canada AG	No	No	
FDA	No	No	
NSF	No	No	
USDA	No	No	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Acceptable	Acceptable	
Conductive / Static Dissipative	No	No	
Continuous Sunlight	Acceptable	Acceptable	
Hot Water / Steam	Acceptable	Acceptable	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	

<small>Ketones, Esters</small> Chemical Resistance Properties	<small>Acceptable</small> Metric	<small>Acceptable</small> English	Comments
Descriptive Properties	Value	Comments	
Machinability	7	1-10, 1=Easier to Machine	

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