

Quadrant EPP Quadrant PPSU LSG PPSU, Extruded, Unfilled, Polyphenylsulfone (ASTM Product Data Sheet)

Category : Polymer , Thermoplastic , Polyphenylsulfone (PPSU)

Material Notes:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Quadrant-PPSU-LSG-PPSU-Extruded-Unfilled-Polyphenylsulfone-ASTM-Product-Data-Sheet.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Water Absorption	0.37 %	0.37 %	24 hour immersion; ASTM D570
	1.1 %	1.1 %	saturation; ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80	80	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Hardness, Shore D	80	80	ASTM D2240
Tensile Strength	75.8 MPa	11000 psi	ASTM D638
Elongation at Break	30 %	30 %	ASTM D638
Tensile Modulus	2.34 GPa	339 ksi	ASTM D638
Flexural Strength	107 MPa	15500 psi	ASTM D790
Flexural Modulus	2.38 GPa	345 ksi	ASTM D790
Compressive Yield Strength	92.4 MPa	13400 psi	10% deformation; ASTM D695
Compressive Modulus	1.93 GPa	280 ksi	ASTM D695
Shear Strength	62.1 MPa	9000 psi	ASTM D732
Izod Impact, Notched	1.33 J/cm	2.50 ft-lb/in	ASTM D256
K (wear) Factor	$\geq 2010 \times 10^{-8} \text{ mm}^3/\text{N-M}$	$\geq 1000 \times 10^{-10} \text{ in}^3/\text{min/ft-lb-hr}$	QTM 55010

Thermal Properties	Metric	English	Comments
CTE, linear	55.8 $\mu\text{m}/\text{m}^\circ\text{C}$	31.0 $\mu\text{in}/\text{in}^\circ\text{F}$	ASTM E831
	@Temperature -40.0 - 149 $^\circ\text{C}$	@Temperature -40.0 - 300 $^\circ\text{F}$	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	149 °C	300 °F	
Deflection Temperature at 1.8 MPa (264 psi)	207 °C	405 °F	ASTM D648
Glass Transition Temp, Tg	220 °C	428 °F	ASTM D3418
Flammability, UL94	V-0	V-0	
	@Thickness 3.10 mm	@Thickness 0.122 in	

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	EOS/ESD S11.11
Dielectric Constant	3.44	3.44	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	14.2 kV/mm	360 kV/in	ASTM D149
Dissipation Factor	0.0017	0.0017	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Limited	Limited	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Unacceptable	Unacceptable	

Chemical Resistance Properties	Metric	English	Comments
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Acceptable	Acceptable	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Limited	Limited	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Unacceptable	Unacceptable	

Descriptive Properties	Value	Comments
Color	black	

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