

Quadrant EPP Quadrant PSU Estruded Unfilled Polysulfone (ASTM Product Data Sheet)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Quadrant-PSU-Estruded-Unfilled-Polysulfone-ASTM-Product-Data-Sheet.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.60 %	0.60 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	82	82	ASTM D785
Hardness, Rockwell R	128	128	ASTM D785
Hardness, Shore D	80	80	ASTM D2240
Tensile Strength	70.3 MPa	10200 psi	ASTM D638
Elongation at Break	30 %	30 %	ASTM D638
Tensile Modulus	2.69 GPa	390 ksi	ASTM D638
Flexural Strength	103 MPa	15000 psi	ASTM D790
Flexural Modulus	2.76 GPa	400 ksi	ASTM D790
Compressive Strength	89.6 MPa	13000 psi	10% Def.; ASTM D695
Compressive Modulus	2.59 GPa	375 ksi	ASTM D695
Shear Strength	62.1 MPa	9000 psi	ASTM D732
Izod Impact, Notched	0.694 J/cm	1.30 ft-lb/in	ASTM D256 Type A

Thermal Properties	Metric	English	Comments
CTE, linear	55.8 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	31.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E831
	@Temperature -40.0 - 149 $^{\circ}\text{C}$	@Temperature -40.0 - 300 $^{\circ}\text{F}$	
Thermal Conductivity	0.259 W/m-K	1.80 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ASTM F433
Maximum Service Temperature, Air	149 $^{\circ}\text{C}$	300 $^{\circ}\text{F}$	Long Term

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	171 °C	340 °F	ASTM D645
Glass Transition Temp, Tg	190 °C	374 °F	ASTM D3418
Flammability, UL94	HB	HB	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 Constant	3.14 @Frequency 1e+6 Hz	3.14 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	16.7 kV/mm	425 kV/in	Short Term; ASTM D149
Dissipation Factor	0.00080 @Frequency 1e+6 Hz	0.00080 @Frequency 1e+6 Hz	ASTM D150

Compliance Properties	Metric	English	Comments
3A-Dairy	Yes	Yes	
Canada AG	No	No	
FDA	Yes	Yes	
NSF	Yes	Yes	STD 61
USDA	Yes	Yes	
USP Class VI	Yes	Yes	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Unacceptable	Unacceptable	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Unacceptable	Unacceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Unacceptable	Unacceptable	
Conductive / Static Dissipative	No	No	
Continuous Sunlight	Limited	Limited	

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

Descriptive Properties	Value	Comments
Color	Natural	
Machinability	3	1-10, 1=Easier to Machine

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