

Quadrant EPP Symalit® 1000 PFA unfilled, lining industries (ISO Data)

Category : Polymer , Thermoplastic , Fluoropolymer , PFA

Material Notes:

Symalit 1000 PFA is made from a fluoropolymer resin that is a copolymer of tetrafluoroethylene and perfluorovinylether. It exhibits good mechanical properties combined with excellent electrical properties and outstanding chemical and heat resistance Almost unlimited resistance to chemicals Widest service temperature range from - 190 °C up to + 260 °C (- 310 °F up to + 500 °F) Very low permeation values Excellent stress cracking resistance Very low leach-out values for high purity applications Excellent abrasion resistance Excellent ageing stability Resistance to UV-, β- and gamma -rays High dielectric and piezoelectric values Clear (translucent)

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Symalit-1000-PFA-unfilled-lining-industries-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	2.14 g/cc	0.0773 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.010 %	0.010 %	50% RH
Water Absorption at Saturation	<= 0.030 %	<= 0.030 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	70	70	ISO 2039-2
Hardness, Shore D	57	57	
Ball Indentation Hardness	35.0 MPa	5080 psi	ISO 2039-1
Tensile Strength	15.0 MPa	2180 psi	at Yield; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	ISO 527-1/-2
Elongation at Yield	50 %	50 %	ISO 527-1/-2
Tensile Modulus	0.575 GPa	83.4 ksi	ISO 527-1/-2
Flexural Strength	18.5 MPa	2680 psi	
Compressive Strength	5.50 MPa	798 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	10.0 MPa	1450 psi	
	@Strain 2 %	@Strain 2 %	ISO 604
	16.0 MPa	2320 psi	ISO 604
	@Strain 5 %	@Strain 5 %	
K Factor (ISO)	1450 μm/km	1450 μm/km	

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	7.50 J/cm ²	35.7 ft-lb/in ²	Partial Break; ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.25 - 0.35	0.25 - 0.35	

Thermal Properties	Metric	English	Comments
CTE, linear	135 µm/m-°C	75.0 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	
Melting Point	305 °C	581 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	250 °C	482 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	40.0 °C	104 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	
Oxygen Index	>= 95 %	>= 95 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+14 ohm-cm	>= 1.0e+14 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093
Dielectric Constant	2.1	2.1	IEC 60250
	@Frequency >=100000 Hz	@Frequency >=100000 Hz	
Dielectric Strength	35.0 kV/mm	889 kV/in	
Dissipation Factor	<= 0.00050	<= 0.00050	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
European Food 1935/2004	No	No	
FDA	Yes	Yes	only natural
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Acceptable	Acceptable	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Unacceptable	Unacceptable	
Alkalies, Weak	Limited	Limited	
Chlorinated Solvents	Limited	Limited	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Acceptable	Acceptable	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Unacceptable	Unacceptable	

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