

Quadrant EPP Ertacetal® H-TF POM-H, PTFE-filled, extruded (ISO Data)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, PTFE-Filled

Material Notes:

Ertacetal H-TF is a DELRIN® AF Blend, a combination of TEFLON® fibres evenly dispersed in a DELRIN acetal resin. Much of the strength that is inherent in Ertacetal H is retained. Some properties change due to the addition of TEFLON fibre which is softer, less stiff and slipperier than virgin acetal resin. Compared with Ertacetal C and H, this material offers superior sliding properties. Bearings made of Ertacetal H-TF show low friction, long wear and are essentially free of stick-slip behaviour. High mechanical strength, stiffness and hardness Excellent resilience Good creep resistance High impact strength, even at low temperatures Very good dimensional stability (low water absorption) Good sliding properties and wear resistance Excellent machinability Good electrical insulating and dielectric properties Physiologically inert (most grades are suitable for food contact) Not self-extinguishing

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Ertacetal-H-TF-POM-H-PTFE-filled-extruded-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.17 %	0.17 %	50% RH
Water Absorption at Saturation	0.72 %	0.72 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	84	84	ISO 2039-2
Hardness, Shore D	79	79	
Ball Indentation Hardness	140 MPa	20300 psi	ISO 2039-1
Tensile Strength	55.0 MPa	7980 psi	at Yield; ISO 527-1/-2
Elongation at Break	10 %	10 %	ISO 527-1/-2
Tensile Modulus	3.10 GPa	450 ksi	ISO 527-1/-2
Compressive Strength	26.0 MPa	3770 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	44.0 MPa	6380 psi	
	@Strain 2 %	@Strain 2 %	ISO 604
	77.0 MPa	11200 psi	ISO 604
	@Strain 5 %	@Strain 5 %	
K Factor (ISO)	8.0 µm/km	8.0 µm/km	
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179-1/1eU

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.300 J/cm²	1.34 ft-lb/in²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.20 - 0.30	0.20 - 0.30	
Limiting Pressure Velocity	0.160 MPa-m/sec	4570 psi-ft/min	at 1 m/s unlubricated
	0.260 MPa-m/sec	7420 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	120 µm/m-°C @Temperature 23.0 - 100 °C	66.7 µin/in-°F @Temperature 73.4 - 212 °F	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft²-°F	
Melting Point	180 °C	356 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	90.0 °C	194 °F	Continuous; 20,000 h
	105 °C	221 °F	Continuous; 5,000 h
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	

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	3.6 @Frequency >=100000 Hz	3.6 @Frequency >=100000 Hz	IEC 60250
Dielectric Strength	20.0 kV/mm	508 kV/in	
Dissipation Factor	0.0030 @Frequency 100000 Hz	0.0030 @Frequency 100000 Hz	IEC 60250
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	No	No	

Compliance Properties	Metric	English	Comments
Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Unacceptable	Unacceptable	
Acids, Weak	Limited	Limited	
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	Limited	Limited	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

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