

Quadrant EPP Fluorosint® HPV PTFE + additives, bearing grade, compression moulded (ISO Data)

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE

Material Notes:

FDA compliant Fluorosint HPV is a high performance Fluorosint bearing grade, optimized for high pressure-velocity capabilities and very low wear. Fluorosint HPV was developed for bearing applications where other, low-tech PTFE formulations exhibit premature wear or simply cannot perform. FDA compliance gives food and pharmaceutical equipment manufacturers new design options and all benefit from its excellent load bearing and wear characteristics. High maximum allowable service temperature in air (260°C continuously) Excellent chemical and hydrolysis resistance Outstanding UV- and weather resistance Physiologically inert (suitable for food contact, except Fluorosint 500, Fluorosint MT-01) Inherent low flammability Good electrical insulating properties

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Fluorosint-HPV-PTFE-additives-bearing-grade-compression-moulded-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	2.06 g/cc	0.0744 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.10 - 0.20 %	0.10 - 0.20 %	50% RH
Water Absorption at Saturation	0.50 - 1.0 %	0.50 - 1.0 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	45	45	ISO 2039-2
Hardness, Shore D	64	64	
Ball Indentation Hardness	45.0 MPa	6530 psi	ISO 2039-1
Tensile Strength	10.0 MPa	1450 psi	at Yield; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	ISO 527-1/-2
Elongation at Yield	6.0 %	6.0 %	ISO 527-1/-2
Tensile Modulus	1.20 GPa	174 ksi	ISO 527-1/-2
Flexural Strength	18.0 MPa	2610 psi	
Compressive Strength	10.0 MPa	1450 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	14.5 MPa	2100 psi	ISO 604
	@Strain 2 %	@Strain 2 %	
	19.0 MPa	2760 psi	ISO 604
	@Strain 5 %	@Strain 5 %	

Mechanical Properties	Metric	English	Comments
K Factor (ISO)	2.9 µin/km	2.9 µin/km	
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179-1/1eU
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.20 - 0.30	0.20 - 0.30	
Limiting Pressure Velocity	0.250 MPa-m/sec	7140 psi-ft/min	at 1 m/s unlubricated
	0.400 MPa-m/sec	11400 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	75.0 µm/m-°C	41.7 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Melting Point	327 °C	621 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	260 °C	500 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	
Oxygen Index	>= 95 %	>= 95 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
European Food 1935/2004	No	No	
FDA	Yes	Yes	
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) Chemical Resistance Properties	Unacceptable Metric	Unacceptable English	Comments
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Acceptable	Acceptable	
Continuous Sunlight	Acceptable	Acceptable	
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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