Quadrant EPP TIVAR® Oil Filled

Ultra High Molecular Weight Polyethylene

Quadrant Engineering Plastic Products

Message:

Quadrant EPP TIVAR® Oil Filled is an Ultra High Molecular Weight Polyethylene product. It is available in North America. Typical application: Food Contact Applications.

Characteristics include:

Flame Rated

Chemical Resistant

High Molecular Weight

Lubricated

General Information					
Additive	Perfluoropolyether Oil Lubricant				
Features	Acid Resistant				
	Alcohol Resistant				
	Alkali Resistant				
	Hydrocarbon Resistant				
	Lubricated				
	Machinable				
	Solvent Resistant				
	Ultra High Molecular Wei	ght			
Agency Ratings	FDA Unspecified Rating				
Forms	Preformed Parts				
	Profiles				
	Rod				
	Sheet				
	Tubing				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	0.935	g/cm³	ASTM D792		
Water Absorption			ASTM D570		

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Water Absorption			ASTM D570
24 hr	< 0.010	%	
Saturation	< 0.010	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	64		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	524	MPa	ASTM D638
Tensile Strength (Ultimate)	40.0	MPa	ASTM D638
Tensile Elongation (Break)	280	%	ASTM D638
Flexural Modulus	441	MPa	ASTM D790

Flexural Strength (Yield)	22.1	MPa	ASTM D790
Compressive Modulus	290	MPa	ASTM D695
Compressive Strength (10% Strain,23°C)	18.6	MPa	ASTM D695
Coefficient of Friction (vs. Steel - Static)	0.14		Internal Method
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	No Break		ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	46.7	°C	ASTM D648
Maximum Use Temperature - Long Term, Air	82	°C	
Limiting Pressure Velocity ¹	0.0701	MPa·m/s	Internal Method
Peak Crystallization Temperature (DSC)	135	°C	ASTM D3418
CLTE - Flow ² (-40 to 149°C)	3.4E-4	cm/cm/°C	ASTM E831
Thermal Conductivity	0.41	W/m/K	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	ASTM D257
Dielectric Strength ³	91	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	2.30		ASTM D150
Dissipation Factor (1 MHz)	5.0E-4		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm, Estimated Rating)	НВ		UL 94
NOTE			
1.	4:1 safety factor		
2.	68°F		
3.	Method A (Short-Time)		

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