Quadrant EPP TIVAR® Extrended Wear

Ultra High Molecular Weight Polyethylene

Quadrant Engineering Plastic Products

Message:

Quadrant EPP TIVAR® Extrended Wear is an Ultra High Molecular Weight Polyethylene product filled with glass fiber. It is available in North America. Characteristics include: Flame Rated Chemical Resistant Crosslinkable High Molecular Weight

General Information					
Filler / Reinforcement	Glass Fiber				
Features	Acid Resistant				
	Alcohol Resistant				
	Alkali Resistant				
	Crosslinkable				
	Hydrocarbon Resistant				
	Machinable				
	Solvent Resistant				
	Ultra High Molecular Weig	ht			
Forms	Preformed Parts				
FOINIS	Profiles				
	Rod				
	Sheet				
	Tubing				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	0.960	g/cm ³	ASTM D792		
Water Absorption			ASTM D570		
24 hr	< 0.010	%			
Saturation	< 0.010	%			
Hardness	Nominal Value	Unit	Test Method		
Durometer Hardness (Shore D)	68		ASTM D2240		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Modulus	703	MPa	ASTM D638		
Tensile Strength (Ultimate)	38.6	MPa	ASTM D638		
Tensile Elongation (Break)	300	%	ASTM D638		
Flexural Modulus	752	MPa	ASTM D790		
Flexural Strength (Yield)	22.8	MPa	ASTM D790		
Compressive Modulus	648	MPa	ASTM D695		

Compressive Strength (10% Strain,23°C)	20.7	MPa	ASTM D695
Coefficient of Friction (vs. Steel - Static)	0.12		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
	0.41		
Thermal Conductivity	0.41	W/m/K	
Electrical	Nominal Value	W/m/K Unit	Test Method
·			Test Method ASTM D257
Electrical	Nominal Value	Unit	
Electrical Surface Resistivity	Nominal Value > 1.0E+10	Unit ohms	ASTM D257
Electrical Surface Resistivity Dielectric Strength ³	Nominal Value > 1.0E+10 91	Unit ohms	ASTM D257 ASTM D149
Electrical Surface Resistivity Dielectric Strength ³ Dielectric Constant (1 MHz)	Nominal Value > 1.0E+10 91 2.30	Unit ohms	ASTM D257 ASTM D149 ASTM D150
Electrical Surface Resistivity Dielectric Strength ³ Dielectric Constant (1 MHz) Dissipation Factor (1 MHz)	Nominal Value > 1.0E+10 91 2.30 5.0E-4	Unit ohms kV/mm	ASTM D257 ASTM D149 ASTM D150 ASTM D150
ElectricalSurface ResistivityDielectric Strength 3Dielectric Constant (1 MHz)Dissipation Factor (1 MHz)Flammability	Nominal Value > 1.0E+10 91 2.30 5.0E-4 Nominal Value	Unit ohms kV/mm	ASTM D257 ASTM D149 ASTM D150 ASTM D150 Test Method
Electrical Surface Resistivity Dielectric Strength ³ Dielectric Constant (1 MHz) Dissipation Factor (1 MHz) Flammability Flame Rating (3.18 mm, Estimated Rating)	Nominal Value > 1.0E+10 91 2.30 5.0E-4 Nominal Value	Unit ohms kV/mm	ASTM D257 ASTM D149 ASTM D150 ASTM D150 Test Method
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