

Quadrant EPP TIVAR® 1000 Black Virgin

Ultra High Molecular Weight Polyethylene

Quadrant Engineering Plastic Products

Message:

Quadrant EPP TIVAR® 1000 Black Virgin is an Ultra High Molecular Weight Polyethylene product. It is available in North America.

Characteristics include:

Flame Rated

High Molecular Weight

General Information			
Features	Ultra High Molecular Weight		
Appearance	Black		
Forms	Preformed Parts		
	Profiles		
	Rod		
	Sheet		
	Tubing		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.930	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)	67		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	827	MPa	ASTM D638
Tensile Strength (Ultimate)	40.0	MPa	ASTM D638
Tensile Elongation (Break)	250	%	ASTM D638
Flexural Modulus	758	MPa	ASTM D790
Flexural Strength (Yield)	24.1	MPa	ASTM D790
Compressive Modulus	552	MPa	ASTM D695
Compressive Strength (10% Strain,23°C)	20.7	MPa	ASTM D695
Shear Strength	33.1	MPa	ASTM D732
Coefficient of Friction (vs. Steel - Static)	0.12		Internal Method
Abrasion ¹	10		ASTM D4020
Maximum Use Temperature - Long Term, Air	82	°C	
Limiting Pressure Velocity ²	0.0701	MPa · m/s	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
Peak Crystallization Temperature (DSC)	135	°C	ASTM D3418
CLTE - Flow ³ (-40 to 149°C)	2.0E-4	cm/cm/°C	ASTM E831
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+11	ohms	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm, Estimated Rating)	HB		UL 94
NOTE			
1.	Sand Slurry; 1018 Steel = 100		
2.	4:1 safety factor		
3.	68°F		

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