

Quadrant EPP TIVAR® CleanStat™

Ultra High Molecular Weight Polyethylene

Quadrant Engineering Plastic Products

Message:

Tivar® CleanStat™ meets requirements of FDA regulation 21CFR177.1520, item 2.1 and 2.2, for articles intended for direct and indirect food contact usage and regulation 21CFR178.3297 governing pigments and food contact usage.

General Information			
Features	Acid Resistant		
	Alcohol Resistant		
	Alkali Resistant		
	ESD Protection		
	Food Contact Acceptable		
	Hydrocarbon Resistant		
	Machinable		
	Solvent Resistant		
	Ultra High Molecular Weight		
Agency Ratings	FDA 21 CFR 177.1520(c) 2.1		
	FDA 21 CFR 177.1520(c) 2.2		
	FDA 21 CFR 178.3297		
	USDA Unspecified Approval		
Forms	Preformed Parts		
	Profiles		
	Rod		
	Sheet		
	Tubing		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.940	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)	66		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	745	MPa	ASTM D638
Tensile Strength (Ultimate)	35.9	MPa	ASTM D638
Tensile Elongation (Break)	200	%	ASTM D638

Flexural Modulus	758	MPa	ASTM D790
Flexural Strength (Yield)	22.1	MPa	ASTM D790
Compressive Modulus	536	MPa	ASTM D695
Compressive Strength (10% Strain,23°C)	21.4	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
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+7 to 1.0E+10	ohms	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm, Estimated Rating)	HB		UL 94
NOTE			
1.	4:1 safety factor		
2.	68°F		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

