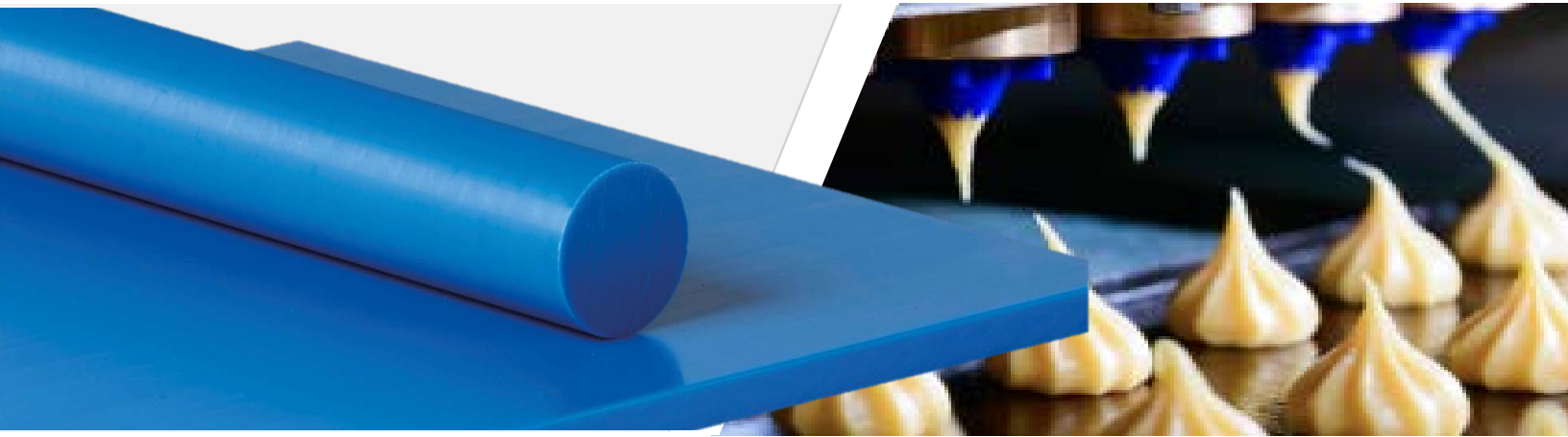


TIVAR[®] 1000 UHMW-PE

Blue, FDA Compliant UHMW-PE solution for Food Processing and Handling challenges



Key Benefits

- Meets FDA, USDA, and 3-A Dairy Sanitation guidelines for Food Processing and Handling.
- Exceptional chemical, corrosion, and wear resistance.
- Non-toxic, low-friction surface.
- Outstanding noise abatement.
- Available in a wide array of colors, on a Made to Order (MTO) basis.

Availability

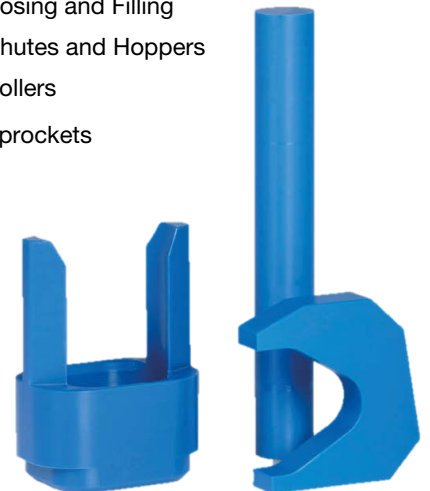
- Stock Plate
 - .375" x 48" x 120"
 - .5" x 48" x 120"
 - .75" x 48" x 120"
 - 1" x 48" x 120"
 - 1.5x 48" x 120"
 - 2 x 48" x 120"

Common Applications

- Augers
- Belt Guides
- Bearing Elements
- Bushings
- Dosing and Filling
- Chutes and Hoppers
- Rollers
- Sprockets

Competitive Advantage

- Because TIVAR[®] 1000 UHMW-PE is resistant to chemical attacks, it can withstand frequent wash downs with aggressive chlorine solutions that are common in the Food Processing industry. These corrosive cleaning agents typically damage other materials, but are no match for TIVAR[®] 1000 UHMW-PE components.



Data Sheet

	Metric		Imperial		
	Test Method ISO	Typical Average Value	Test Method ASTM ⁽³⁾	Typical Average Value	
Mechanical Properties	Density (Specific Gravity @ 73°F)	ISO 1183-1	g/cm ³	ASTM D792	0.930 g/cc
	Tensile Strength @ 65°C (150°F)	ISO 527-1/-2	MPa	ASTM D638	400 psi
	Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	ASTM D638	80,000 psi
	Tensile Elongation (at break) @ 23°C (73°F)	ISO 527-1/-2	%	ASTM D638	300%
	Flexural Strength @ 23°C (73°F)	ISO 178	MPa	ASTM D790	3,500 psi
	Flexural Modulus of Elasticity @ 23°C (73°F)	ISO 178	MPa	ASTM D790	8,700 psi
	Shear Strength @ 23°C (73°F)	N/A	N/A	ASTM D732	4,800 psi
	Compressive Stress / Strength @ 23°C (73°F)	ISO 604	MPa (1 / 2 / 5% Normal Strain)	ASTM D695	3,000 psi (10% Deformation)
	Compressive Modulus of Elasticity @ 23°C (73°F)	-	-	ASTM D695	80,000 psi
	Hardness, Rockwell, Scale as Noted @ 23°C (73°F)	-	-	-	-
	Hardness, Durometer, Shore "D" Scale	ISO 868	-	ASTM D2240	D66
	Charpy impact strength, Unnotched @ 23°C (73°F)	ISO 179-1/1eU	kJ/m ²	N/A	N/A
	Charpy impact strength, Notched @ 23°C (73°F)	ISO 179-1/1eA	kJ/m ²	ASTM D256 Type "A"	NB
	Coefficient of Friction – (Dry vs. Steel) Dynamic	ISO 7148-2	-	MCAM TM 55007	0.12
Limiting PV with 4:1 safety factor applied	-	-	MCAM TM 55007	3000 psi-ft/min	
Wear Factor	ISO 7148-2	µm/km	MCAM TM 55010	in. ³ min/ft. lbs. hr.	
Thermal Prop.	Coefficient of Linear Thermal Expansion 23-6 °C (-40°F to 300°F)	-	m/(m.K)	ASTM E831	110 µin/in-°F
	Heat Deflection Temperature @ 1.8 MPa (264 psi)	ISO 75 -1/-2	°C	ASTM D648	116 °F
	Tg-Glass Transition (amorphous)	ISO 11357-1/-2		ASTM D3418	
	Melting Point (crystalline) peak	ISO 11357-1/-3	°C	ASTM D3418	275 °F
	Maximum Service Temperature, Air	-	°C	Long Term	180 °F
	Thermal Conductivity	-	W/(K.m)	-	2.84 BTU-in/hr-ft ² -°F
Electrical Prop.	Dielectric Strength (Short Term)	-	-	ASTM D149	2300 kV/in
	Surface Resistivity per Square	ANSI/ESD STM 11.11	ohm/sq	ASTM D257	>= 1.00e+15 ohm
	Dielectric Constant	-		ASTM D150	2.3 @Frequency 1e+6 Hz
	Dissipation Factor	IEC 60250		ASTM D150	0.00050 @Frequency 1e+6 Hz
	Flammability ⁽¹⁾	UL 94	HB 3 mm thickness	UL 94	HB @Thickness 0.125 in
Other	Water Absorption Immersion, 24 Hours	ISO 62	%	ASTM D570 ⁽²⁾	<= 0.010 %
	Water Absorption Immersion, Saturation	-	%	ASTM D570 ⁽²⁾	<= 0.010 %

(3) Data represents our estimated maximum long-term service temperature based on practical field experience. (1) Estimated rating based on available data. The UL-94 Test is a laboratory test and does not relate to actual fire hazard. Contact us for specific UL "Yellow Card" recognition number. (2) Specimens: 1/8" thick x 2" diameter or square. (3) The ASTM data that is presented in the data sheet above is preliminary data, and is subject to change as more data is gathered.

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