

DuraSurf™ UV

Ultra High Molecular Weight Polyethylene

Crown Plastics

Message:

DuraSurf™ UV is a UHMW blend specifically designed to meet the rigors and harsh environments of the outdoors. Standard UHMW materials are not UV stable and can break down over time due to exposure. DuraSurf™ UV has the highest UV stability in the industry and can last up to 10 times longer in the outdoors than standard UHMW products. DuraSurf™ UV is available in a standard wear strip or can be supplied with an adhesive backing for easy installation. A wide range of adhesive systems are available designed to meet virtually any application.

AVAILABLE THICKNESS

.005" (.125 mm), .010" (.25 mm), .015"(.38 mm), .020" (.5 mm), .031" (.75 mm), .040" (1 mm), .050" (1.3 mm), .062" (1.57 mm), .080" (2 mm) .093" (2.35 mm), 100" (2.5 mm), .125" (3.17 mm)

AVAILABLE WIDTHS

All dimensions between 1/4" (6.35 mm) and 24" (610 mm)

UHMW PROPERTIES

- Excellent abrasion and wear resistance
- Very high impact strength
- Meets FDA and USDA guidelines
- No moisture absorption
- Self-lubricating - no need for oils or lubricants
- Excellent noise abatement properties
- Chemical resistance and corrosion resistant
- Maintains performance and properties at -30°C
- Meets ASTM-D-4020-81
- Low coefficient of friction

General Information			
Additive	UV Stabilizer		
Features	Good Abrasion Resistance		
	Good Chemical Resistance		
	Good Corrosion Resistance		
	Good UV Resistance		
	Good Wear Resistance		
	Good Weather Resistance		
	High Impact Resistance		
	Low Friction		
	Moisture Resistant		
	Noise Damping		
	Self Lubricating		
Uses	Wear Strip		
Agency Ratings	ASTM D 4020		
	FDA Unspecified Rating		
	USDA Unspecified Approval		
Forms	Preformed Parts		
Physical	Nominal Value	Unit	Test Method

Specific Gravity ¹	0.930	g/cm ³	ASTM D792
Crystallinity			ASTM D3417
762.0 µm	48	%	
1.52 mm	47	%	
3.18 mm	50	%	
Relative Viscosity			ASTM D4020
762.0 µm	230 to 350	cm ³ /g	
1.52 mm	230 to 350	cm ³ /g	
3.18 mm	230 to 350	cm ³ /g	
Static Decay			
762.0 µm	< 10	msec	
1.52 mm	< 10	msec	
3.18 mm	< 10	msec	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore D, 0.762 mm	65		
Shore D, 1.52 mm	65		
Shore D, 3.18 mm	65		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ASTM D638
0.762 mm	725	MPa	
1.52 mm	731	MPa	
3.18 mm	672	MPa	
Tensile Strength			ASTM D638
Yield, 0.762 mm	23.0	MPa	
Yield, 1.52 mm	20.0	MPa	
Yield, 3.18 mm	22.0	MPa	
Break, 0.762 mm	53.0	MPa	
Break, 1.52 mm	49.0	MPa	
Break, 3.18 mm	44.0	MPa	
Tensile Elongation			ASTM D638
Break, 0.762 mm	60	%	
Break, 1.52 mm	460	%	
Break, 3.18 mm	470	%	
Coefficient of Friction			ASTM D1894
vs. Itself - Dynamic ²	0.14		
vs. Itself - Dynamic ³	0.14		
vs. Itself - Dynamic ⁴	0.13		
vs. Itself - Static ⁵	0.16		
vs. Itself - Static ⁶	0.16		
vs. Itself - Static ⁷	0.16		
vs. Steel - Dynamic ⁸	0.050 to 0.080		

vs. Steel - Dynamic ⁹	0.050 to 0.10		
vs. Steel - Dynamic ¹⁰	0.10 to 0.22		
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ¹¹ (3.18 mm)	80	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Peak Melting Temperature			
-- ¹²	134	°C	
-- ¹³	136	°C	
CLTE - Flow			ASTM D696
-100 to -20°C, 3.18 mm	9.2E-4	cm/cm/°C	
20 to 100°C, 3.18 mm	1.5E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			ASTM D257
0.762 mm	1.0E+3	ohms	
1.52 mm	1.0E+3	ohms	
3.18 mm	1.0E+3	ohms	
Volume Resistivity			ASTM D257
0.762 mm	6.0E+7	ohms·cm	
1.52 mm	1.5E+7	ohms·cm	
3.18 mm	> 2.0E+7	ohms·cm	
Dielectric Strength (3.18 mm)	14	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
0.762 mm	2.48		
1.52 mm	2.45		
3.18 mm	2.54		
Dissipation Factor			ASTM D150
0.762 mm, 50 Hz	0.059		
0.762 mm, 10 kHz	0.11		
0.762 mm, 5 MHz	0.10		
1.52 mm, 50 Hz	0.021		
1.52 mm, 10 kHz	0.069		
1.52 mm, 5 MHz	0.23		
3.18 mm, 50 Hz	8.2E-3		
3.18 mm, 10 kHz	2.2E-3		
3.18 mm, 5 MHz	3.4E-3		
NOTE			
1.	0.125 inches		
2.	0.03 inches		
3.	0.125 inches		
4.	0.06 inches		
5.	0.03 inches		
6.	0.06 inches		

7.	0.125 inches
8.	Oil
9.	Water
10.	Dry
11.	5.0 mm Notch Depth
12.	0.125 inches
13.	0.03 inches

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