

DuraSurf™ ETA

Ultra High Molecular Weight Polyethylene

Crown Plastics

Message:

Crown Plastics standard line of Easy-To-Applly wear strips and adhesive backed tapes. Each tape product offers excellent abrasion resistance, low coefficient of friction, high impact strength and high performance properties people have come to expect from UHMW. By providing this exceptional material with an adhesive backing, installation time and costs are significantly reduced. No need for bolts or fasteners, no need to countersink. As a matter of fact, DuraSurf™ ETA also reduces scrap by 75%. When a standard 1/4" thick sheet of UHMW is installed using the traditional mechanical fastening method, 3/16" of the material is lost to the bolt head. This leaves only a 1/16" usable wear surface. You can achieve the same result with a 1/16" DuraSurf™ ETA tape product and eliminate 80% of the time and cost associated with traditional installation methods. Crown Plastics offers a wide range of both rubber and acrylic based adhesive systems to meet virtually any application requirement.

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	
Features	Good Abrasion Resistance
	Good Chemical Resistance
	Good Corrosion Resistance
	Good Wear Resistance
	High Impact Resistance
	Low Friction
	Moisture Resistant
	Noise Damping
	Self Lubricating
Uses	Adhesives
	Tape
	Weatherstripping
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	2.39		
1.52 mm	2.29		
3.18 mm	2.28		
Dissipation Factor			ASTM D150
0.762 mm, 10 kHz	-1.0E-3		
0.762 mm, 5 MHz	-1.0E-3		
1.52 mm, 10 kHz	-2.0E-3		
1.52 mm, 5 MHz	-1.0E-3		
3.18 mm, 10 kHz	0.0		
3.18 mm, 5 MHz	1.0E-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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