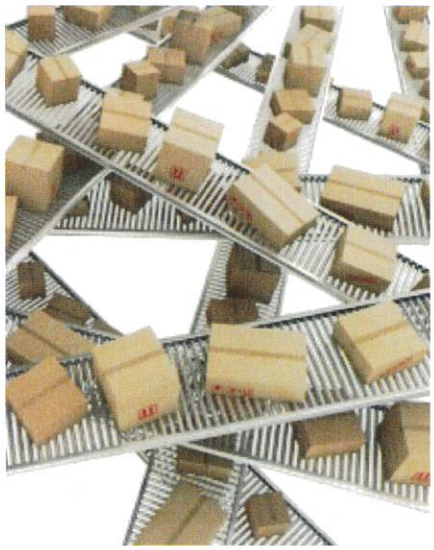
DuraSurf STS

by CROWN PLASTICS

DuraSurf ™ STS is a revolutionary product in that it not only possesses a **Silicone Treated Surface**, but is also available with an adhesive backing for easy installation. The very low coefficient of friction provides a lubricated surface that is virtually maintenance free. **DuraSurf ™ STS** is an ideal solution for many applications in the package handling industry such as chute linings, slider beds, slides, spirals and numerous other areas where packages can get lodged or damaged. DuraSurf STS also helps reduce jamming and keep packages moving smoothly to their ultimate destination. **DuraSurf ™ STS** is also static dissipative to prevents static shocks and potential damage to bar coding systems. **DuraSurf ™ STS** is uniquely available with an adhesive backing to provide easy installation and eliminate the need for mechanical fastening. Die cutting is also available for washers, bushings, wear pads and anti-friction surfaces.



Available Thicknesses:

.031" (.75 mm), .062" (1.57 mm), .093" (2.35 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 -30C
- Meets ASTM-D-4020-81
- Low coefficient of friction

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MECHANICAL PROPERTIES	ASTM Test	Units Metric (U.S.)	STS Thickness Gauges		
			.062"	.093"	.125"
Density	D792	gm/cc	.935	.930	.932
Tensile Strength @ Yield	D638	MPa(psi)	21.1	18.2	20.1
Tensile Strength @ Break	D638	MPa(psi)	26.4	19.0	23.4
Elongation @ Break	D638	%	156	92.4	92.0
Youngs "E" Modulus	D638	MPa(psi x 105)	558	542	715
Izod Impact Strength	D256 (1)	J/m(ft-lb/in notch)	*	*	328
Hardness Shore "D"	D2240	-	64	63	64
Water Absorbtion	D570	%	.01	.03	.02
Rel. Solution Viscocity	D4020	dl/gm	2.3-3.5	2.3-3.5	2.3-3.5
Coefficient of Friction	D1894-96	Static	.185	.185	.185
Coefficient of Friction	D1894-96	Dynamic	.109	.109	.109

(1) Izod Impact: Samples have 2(15° +/- 1/2°) notches on opposite sides to a depth of 5mm

THERMAL PROPERTIES	ASTM Test	Units Metric (U.S.)	STS Thickness Gauges		
			.062"	.093"	.125"
Coefficient of Linear Expansion					
20° to 100° C	D696	µm/m- °C	199	205	210
–20° to –100° C	D696	µm/m- °C	122	177	113

COMPARATIVE TEST - Coefficient of Friction of Cartons on Various Substrates w/ Galvanized Steel as Baseline for Performance*

Substrate	Coefficent	Difference	% Improvement
Galvanized	0.557	0	0%
Mild Steel	0.423	0.134	24%
UHMW	0.369	0.188	34%
STS	0.283	0.274	49%

Methodology: Static friction at varying angles of response

UHMW THERMAL PROPERTIES	ASTM Test	Units Metric (U.S.)	UHMW Thickness Gauges		
			.031"	.062"	.125"
Crystalline Melting Range	Polarizing	°C(°F)	136 (276)	134 (273)	134 (273)
Crystallinity	D3417-96	%	48	47	50

UHMW ELECTRICAL PROPERTIES	ASTM Test	Units Metric (U.S.)	UHMW Thickness Gauges		
(For Conductive Black Only)			.031"	.060"	.125"
Volume Resistivity	D257	Ohms/cm	5.9544×10^7	1.4516×10^7	$>2 \times 10^7$
Dielectric Strength	D150	Kv/cm(V/mil)	*	*	142
Dielectric Constant	D150		2.481	2.454	2.542
Surface Resistivity	D257	Ohms	10^3	10^3	10^3
Static Decay		Seconds	<.01	<.01	<.01
Dissipation Factor					
At 50Hz	D150		0.0594	0.0213	0.0082
At 10KHz	D150		0.1085	0.0690	0.0022
At 5MHz	D150		0.1035	0.2340	0.0034

CROWN™ PLASTICS

ADVANCED THERMOPLASTIC SOLUTIONS

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