



# PROFESSIONAL PLASTICS

## DuraSurf™ STS

**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: chute linings, slider beds, slides, spirals and numerous other areas where packages can get lodged or damaged. **DuraSurf™ STS** also helps reduce jamming and keeps packages moving smoothly to their ultimate destination. **DuraSurf™ STS** is static dissipative to prevent 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 THICKNESS

.062" (1.57 mm), .093" (2.36 mm), .125" (3.17 mm), .250" (6.35 mm)

### AVAILABLE WIDTHS

All dimensions between 1/4" (6.35 mm) and 24" (610 mm)  
.250 thickness in sheets - 48" (121.9 cm) x 96" (243.8 cm),  
48" (121.9 cm) x 120" (304.8 cm), 60" (152.4 cm) x 120" (304.8 cm)

### UHMW PROPERTIES

- Excellent abrasion and wear resistance
- Very high impact strength
- 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
- Low coefficient of friction

# DuraSurf™ STS

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 <sup>(1)</sup>	J/m(ft-lb/in notch)	*	*	328
Hardness Shore "D"	D2240	-	64	63	64
Water Absorbtion	D570	%	.01	.03	.02
Rel. Solution Viscosity	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	Coefficient	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		
			.031"	.060"	.125"
<i>(For Conductive Black Only)</i>					
Volume Resistivity	D257	Ohms/cm	5.9544x10 <sup>7</sup>	1.4516x10 <sup>7</sup>	>2x10 <sup>7</sup>
Dielectric Strength	D150	Kv/cm(V/mil)	*	*	142
Dielectric Constant	D150		2.481	2.454	2.542
Surface Resistivity	D257	Ohms	10 <sup>3</sup>	10 <sup>3</sup>	10 <sup>3</sup>
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

**Order Online at:**

<https://www.professionalplastics.com/DuraSurf-STS>

Email [sales@proplas.com](mailto:sales@proplas.com)

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