TUFFAK®

PLASKOLITE

TUFFAK DG POLYCARBONATE SHEET

BUS DRIVER GARD

TUFFAK DG sheet is a hard-coated polycarbonate product designed for high optical quality and exceptional durability. The sheet is available in 0.236″ and 0.375″ thick with a specified direction of extrusion for proper installation. Manufactured to meet demanding bus glazing requirements, this product features abrasion resistance, chemical resistance, and long lasting performance. The high impact strength of this product provides excellent protection against vandalism and can help reduce driver assaults. The clarity of the glazing enables drivers to interact freely with passengers, while maintaining a high level of protection.

TUFFAK DG meets DOT/FMVSS 205/ ANSI Z26.1 Item AS-4, and is NHTSA approved for use as a protective driver partition. The product carries a seven (7) year Limited Product Warranty against breakage for flat vertical applications. The terms of the warranty are available upon request.

APPLICATIONS

Safety shielding for mass transit bus fleets

Typical Properties*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D792	–	1.2
Light Transmission, Clear @ 0.236″	ASTM D1003	%	86
Light Transmission, Clear @ 0.375″	ASTM D1003	%	84
Chemical Resistance	ANSI Z26.1	–	Pass
Taber Abrasion @ 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D1044	%	2
MECHANICAL			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Modulus of Elasticity	ASTM D638	psi	340,000
Flexural Strength	ASTM D790	psi	13,500
Compressive Strength	ASTM D695	psi	12,500
Izod Impact Strength, Notched @ 0.125″	ASTM D256	ft·lbs/in	16
Izod Impact Strength, Unnotched @ 0.125″	ASTM D256	ft·lbs/in	No Break
Instrumented Impact @ 0.125″	ASTM D3763	ft·lbs	47
Poisson's Ratio	ASTM E132	–	0.38
Rockwell Hardness	ASTM D785	–	M70/R118
THERMAL			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75×10^{-5}
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D648	°F	280
ELECTRICAL			
Dielectric Constant @ 10 Hz	ASTM D150	–	2.96
Dielectric Constant @ 60 Hz	ASTM D150	–	3.17
Volume Resistivity	ASTM D257	Ohm·cm	8.2×10^{16}
Dissipation Factor @ 60 Hz	ASTM D150	–	0.0009
Dissipation Factor @ 1 MHz	ASTM D150	–	0.01
Arc Resistance	–	–	–
Stainless Steel Strip Electrodes	ASTM D495	Seconds	10
Tungsten Electrodes	ASTM D495	Seconds	120
Dielectric Strength, in air @ 0.125 mils	ASTM D149	V/mil	380
FLAMMABILITY			
Flammability of Interior Materials	FMVSS 302	–	Pass

*Typical properties are not intended for specification purposes

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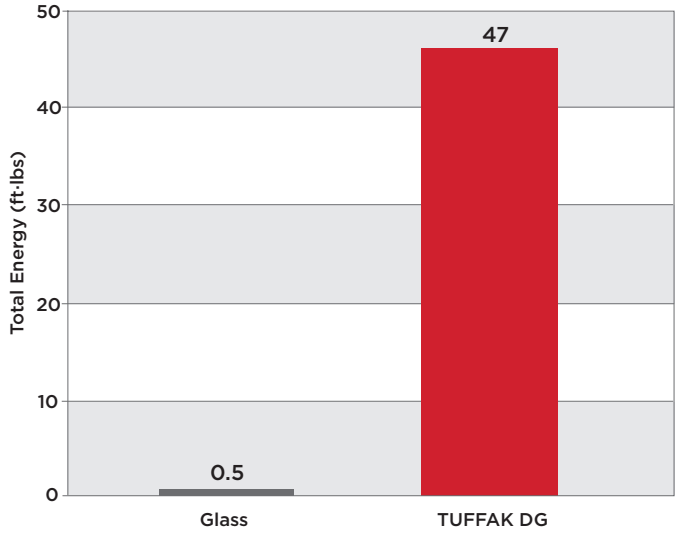
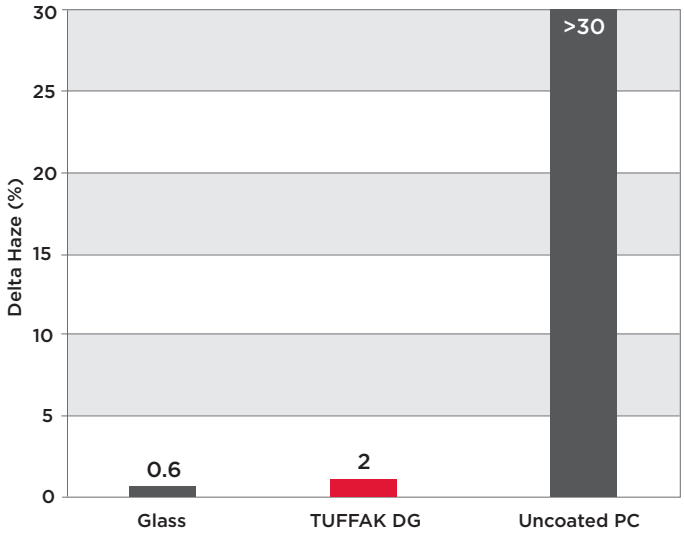
Impact Resistance*



*Instrumented Impact per ASTM D 3763, sample thickness is 0.125˝ nominal

Abrasion Resistance*



*Taber Abrasion per ASTM D 1044, 100 cycles using CS-10F wheels at 500 g load

Chemical Resistance*

Chemical Tested	Resistance Time
Acetone	>24 hrs
Ammonia (10% concentration)	>24 hrs
Antifreeze (50/50)	>24 hrs
Benzene	>24 hrs
Bleach (Clorox concentrated)	>24 hrs
Chloroform	>24 hrs
Denatured Alcohol	>24 hrs
Di (2-ethylhexyl) phthalate	>24 hrs
Diesel Oil	>24 hrs
Isopropyl Alcohol (IPA)	>24 hrs
Kerosene	>24 hrs
Methyl Alcohol	>24 hrs
Methyl Butyl Ketone	>24 hrs
Methyl Ethyl Ketone	>24 hrs
Methylene Chloride	>24 hrs
Naphthalene, 1-bromo-	>24 hrs
Potassium Hydroxide - Lye (10%)	>24 hrs
Sodium Hydroxide (10%)	>24 hrs
Toluene	>24 hrs
Turpentine	>24 hrs
Unleaded Gasoline (87 Octane)	>24 hrs
Vinegar	>24 hrs
Xylene	>24 hrs
Acids:	
Hydrochloric Acid (20%)	>24 hrs
Nitric Acid (20%)	>24 hrs
Sulfuric Acid (20%)	>24 hrs

*Tested in accordance to ASTM D 1308-02

Always keep hazardous chemicals away from uncoated edge of TUFFAK Polycarbonate Sheet

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.

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