

TUFFAK TX polycarbonate sheet

EXTENDED WEATHERABILITY TRANSPORTATION GLAZING

TUFFAK TX sheet is a hard-coated polycarbonate product designed to meet demanding transportation glazing applications. The sheet provides high impact performance at half the weight of the glass. The advanced hard coat technology provides extended outdoor weathering properties and significantly enhances abrasion and chemical resistance. TUFFAK TX meets DOT/ANSI Z26.1 Item AS-4 and is available in clear, as well as a variety of standard and custom tints.

APPLICATIONS

Truck cabs, automotive roofs, and other transportation glazing

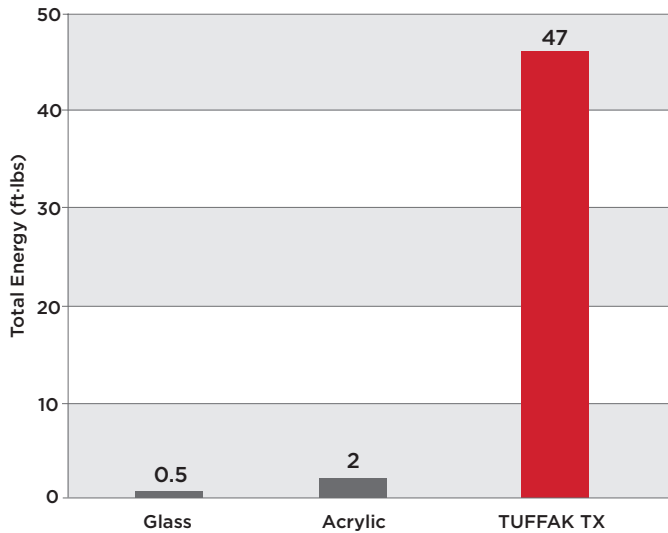
Typical Properties*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D 792	-	1.2
Light Transmission, Clear 0.250"	ASTM D 1003	%	84
Chemical Resistance	ASTM D 1308	-	Pass
Taber Abrasion, 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
MECHANICAL			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Tensile Modulus	ASTM D 638	psi	340,000
Flexural Strength	ASTM D 790	psi	13,500
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft-lbs/in	16
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft-lbs/in	No Break
Instrumented Impact @ 0.125"	ASTM D 3763	ft-lbs	47
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
FLAMMABILITY			
Horizontal Burn, AEB	ASTM D 635	in	<1
Ignition Temperature, Self	ASTM D 1929	°F	1022
Ignition Temperature, Flash	ASTM D 1929	°F	824

*Typical Properties are for reference only

TUFFAK TX polycarbonate sheet

Impact Resistance*



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

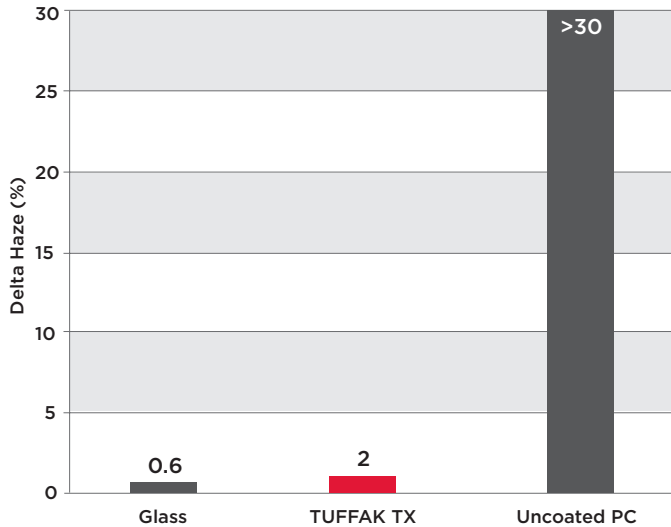
Chemical Resistance*

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

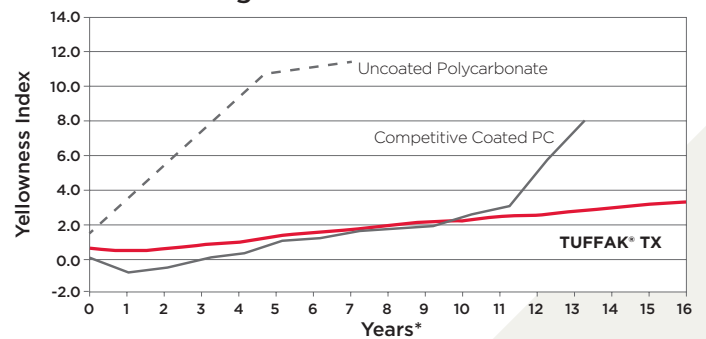
Always keep hazardous chemicals away from uncoated edge of Tuffak Polycarbonate Sheet

Abrasion Resistance*



*Taber Abrasion per ASTM D 1044, 100 cycles, CS-10F wheel

Weathering Behavior in Vertical Orientation



*Based upon Xenon WOM accelerated weathering for UV dose at mid-latitude location

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 determine the suitability of our materials and suggestions before adopting them on a commercial scale.