

## TUFFAK BG polycarbonate sheet

### BUS GLAZING

TUFFAK BG sheet is a hard-coated polycarbonate product designed for exceptional durability. Manufactured to meet demanding bus glazing requirements, this product features abrasion resistance, chemical resistance, and long lasting outdoor weathering performance. The high impact strength of this product provides excellent protection against vandalism, reducing unplanned maintenance and repair. TUFFAK BG meets DOT/FMVSS 205/ANSI Z26.1 Item AS-4 and is available in clear as well as a variety of standard and custom tints.

### APPLICATIONS

Bus windows

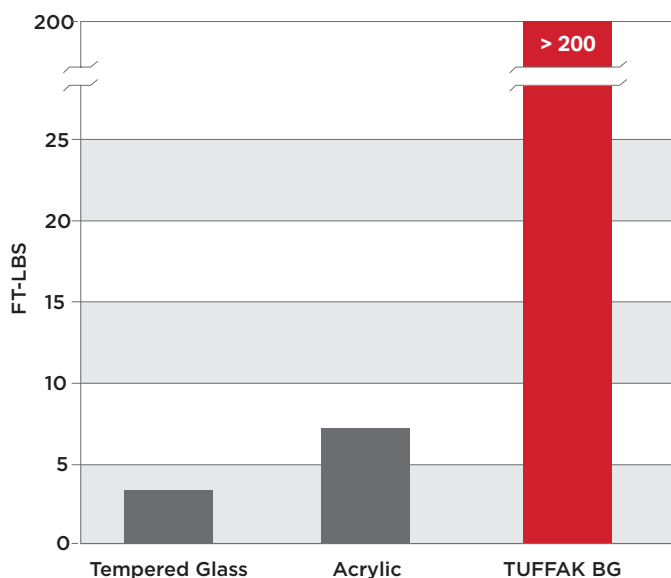
### Typical Properties\*

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	-	1.2
Light Transmission, Clear @ 0.236"	ASTM D 1003	%	84
Chemical Resistance	ANSI Z26.1	-	Pass
Taber Abrasion @ 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Flexural Strength	ASTM D 790	psi	13,500
Compressive Strength	ASTM D 695	psi	12,500
Modulus of Elasticity	ASTM D 638	psi	340,000
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
Poisson's Ratio	ASTM E 132	-	0.38
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
<b>FLAMMABILITY</b>			
Flammability of Interior Materials	FMVSS 302	-	Pass

\*Typical properties are not intended for specification purposes

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## Impact Resistance



1/4" Thick Sheet - Steel Dart 1" Diameter Tip

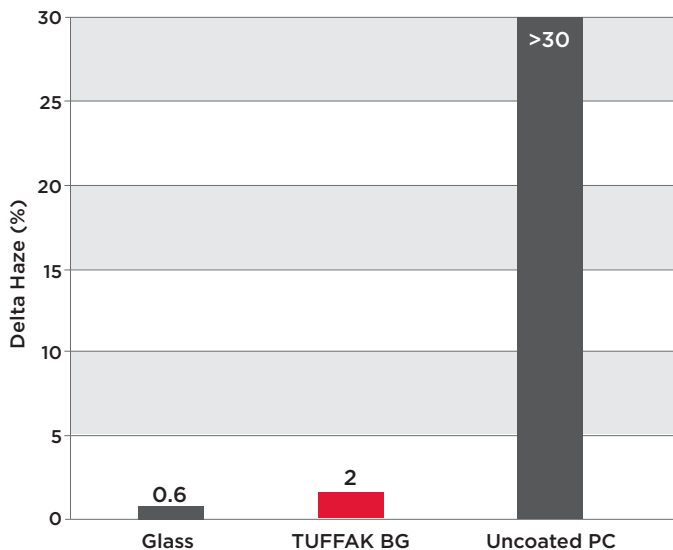
## Chemical Resistance\*

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
<b>Acids:</b>	
Hydrochloric Acid (20%)	>24 hrs
Nitric Acid (20%)	>24 hrs
Sulfuric Acid (20%)	>24 hrs

\*Tested in accordance to ASTM D 1308-02

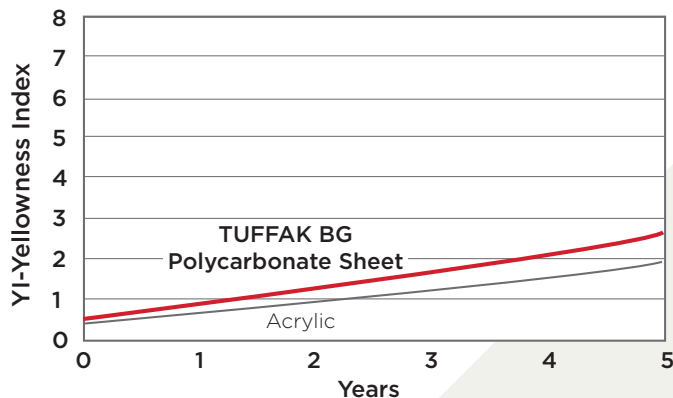
Always keep hazardous chemicals away from uncoated edge of Tuffak Polycarbonate Sheet

## Abrasion Resistance\*



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

## UV Weather Resistance



Visible yellowness at 8 or greater

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.