

TUFFAK UV POLYCARBONATE SHEET

EXTENDED UV RESISTANCE

TUFFAK UV sheet is a transparent polycarbonate product with an advanced UV resistance technology that assures long lasting outdoor weathering performance in flat and curved glazing applications. It has higher impact resistance than acrylic and glass, and it can be cold-formed during installation. TUFFAK UV is produced with high optical quality and minimal distortion in clear, a range of standard tints, or can be custom matched to any color. TUFFAK UV has a ten (10) year Limited Product Warranty against breakage, yellowing, and loss of light transmission. The terms of the warranty are available upon request.

APPLICATIONS

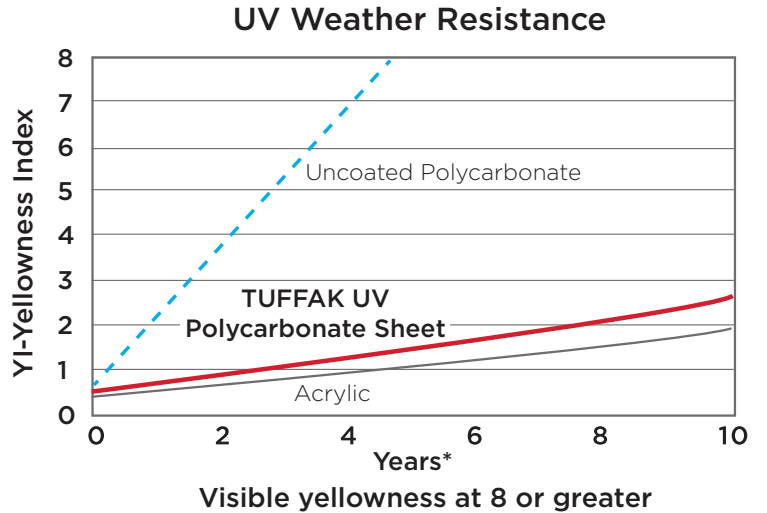
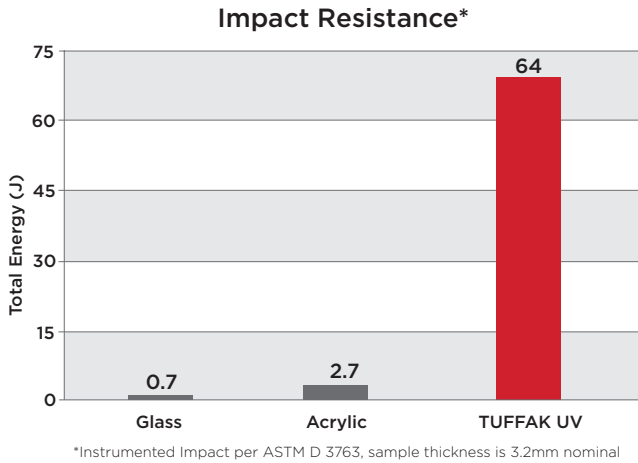
Awnings, skylights, barrel vaults, glazed archways, sloped, vertical, and curved glazing, recreational vehicles, SXS/UTV/LSV/Golf cart windshields

TYPICAL METRIC PROPERTIES*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D 792	-	1.2
Refractive Index	ASTM D 542	-	1.586
Light Transmission, Clear @ 3.0mm	ASTM D 1003	%	86
Light Transmission, I30 Gray @ 3.0mm	ASTM D 1003	%	50
Light Transmission, K09 Bronze @ 3.0mm	ASTM D 1003	%	50
Light Transmission, I35 Dark Gray @ 3.0mm	ASTM D 1003	%	18
Water Absorption, 24 hours	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
MECHANICAL			
Tensile Strength, Ultimate	ASTM D 638	MPa	66
Tensile Strength, Yield	ASTM D 638	MPa	62
Tensile Modulus	ASTM D 638	MPa	2340
Elongation	ASTM D 638	%	110
Flexural Strength	ASTM D 790	MPa	93
Flexural Modulus	ASTM D 790	MPa	2380
Compressive Strength	ASTM D 695	MPa	86
Compressive Modulus	ASTM D 695	MPa	2380
Izod Impact Strength, Notched @ 3.18mm	ASTM D 256	J/cm	8.5
Izod Impact Strength, Unnotched @ 3.18mm	ASTM D 256	J/cm	32 (no break)
Instrumented Impact @ 3.18mm	ASTM D 3763	J	64
Shear Strength, Ultimate	ASTM D 732	MPa	69
Shear Strength, Yield	ASTM D 732	MPa	41
Shear Modulus	ASTM D 732	MPa	786
Rockwell Hardness	ASTM D 785	-	M70 / R118
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	cm/cm/°C	6.8 x 10 ⁻⁵
Coefficient of Thermal Conductivity	ASTM C 177	cal cm/sec-cm ² -°C	0.0005
Heat Deflection Temperature @ 1.82 MPa	ASTM D 648	°C	132
Heat Deflection Temperature @ 0.46 MPa	ASTM D 648	°C	137
Brittleness Temperature	ASTM D 746	°C	-129
Shading Coefficient, Clear @ 6.0mm	NFRC 100-2010	-	0.97
Shading Coefficient, Gray or Bronze @ 6.0mm	NFRC 100-2010	-	0.77
U factor @ 6.0mm(summer, winter)	NFRC 100-2010	W/m ² -°C	4.83, 5.22
U factor @ 9.52mm (summer, winter)	NFRC 100-2010	W/m ² -°C	4.43, 4.83
ELECTRICAL			
Dielectric Constant @ 10 Hz	ASTM D 150	-	2.96
Dielectric Constant @ 60 Hz	ASTM D 150	-	3.17
Volume Resistivity	ASTM D 257	Ohm-cm	8.2 x 10 ¹⁶
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
Arc Resistance	-	-	-

*Typical properties are not intended for specification purposes

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Regulatory code compliance and certifications

ANSI Z97.1-2009, 2015: American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test, Class A, Unlimited

CPSC 16 CFR 1201 Category I and Category II: Safety Standard for Architectural Glazing Materials

Florida Building Code
High Velocity Hurricane Zone Classified
Miami-Dade NOA: NOA

ICC-ES Evaluation Report ESR-2728

UL 94: Flammability File #E87887

UL 972: Burglary Resistant Glazing Materials, UL File #BP2126

UL 746C: Suitability for Outdoor Use, UL File #E87887

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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PDS366_TUF_UV_Metric