

TUFFAK GP PRISMATIC POLYCARBONATE SHEET

PRISMATIC TEXTURED

TUFFAK GP Prismatic sheet is a translucent, UV stabilized, polycarbonate product with a prismatic texture on one side. This prismatic pattern has been optimized for light diffusion and light transmission, making it an excellent choice for most conventional lighting applications. The textured product features outstanding impact strength, high temperature resistance, superior dimensional stability, and is easy to fabricate. TUFFAK GP Prismatic sheet is offered with a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

APPLICATIONS

Lighting lenses and covers

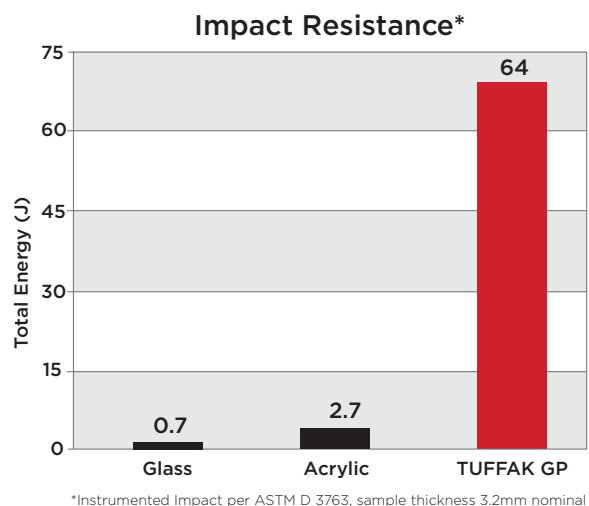
TYPICAL METRIC PROPERTIES*

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	%	92
Water Absorption, 24 hours @ 23°C	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
MECHANICAL**			
Tensile Strength, Break	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 @ 3.2mm	ASTM D 256	J/cm	8.5
Izod Impact Strength, Unnotched @ 3.2mm	ASTM D 256	J/cm	32 (no break)
Instrumented Impact @ 3.2mm	ASTM D 3763	J	64
Shear Strength, Break	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	6.8×10^{-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
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	8.2×10^{16}
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
Arc Resistance	-	-	-
Stainless Steel Strip Electrodes	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air @ 3.2mm	ASTM D 149	V/mm	15000
FLAMMABILITY			
Horizontal Burn, AEB	ASTM D 635	cm	<2.54
Ignition Temperature, Self	ASTM D 1929	°C	577
Ignition Temperature, Flash	ASTM D 1929	°C	466
Flame Class @ 1.52mm	UL 94	-	HB

*Typical properties are not intended for specification purposes.

**Some properties characterized using non-textured sheet.

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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
IBC 2606.4, Class CC1 >= 60 mils
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*

*TUFFAK GP products have limited weathering properties, for more information contact your Plaskolite representative.

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.