

TUFFAK DX-NR POLYCARBONATE SHEET

POLYCARBONATE DIFFUSER SHEET FOR OUTDOOR LED LIGHTING

TUFFAK DX-NR is a translucent polycarbonate product specifically designed for use as a lighting lens in outdoor applications. The diffuser technology helps to provide uniform luminance and ensures elimination of LED hot spots while maintaining high light transmission. The advanced UV resistance technology provides long lasting weathering performance and the non-reflective texture built into the UV resistant side of the sheet, enhances its aesthetics.

When compared to other light diffusing products such as glass and acrylic, TUFFAK DX-NR has superior impact strength and toughness. Its higher flammability resistance and wider service temperature provide an additional advantage over acrylic diffusers.

Regulatory code compliance and certifications

UL 94: Flammability File #E87887

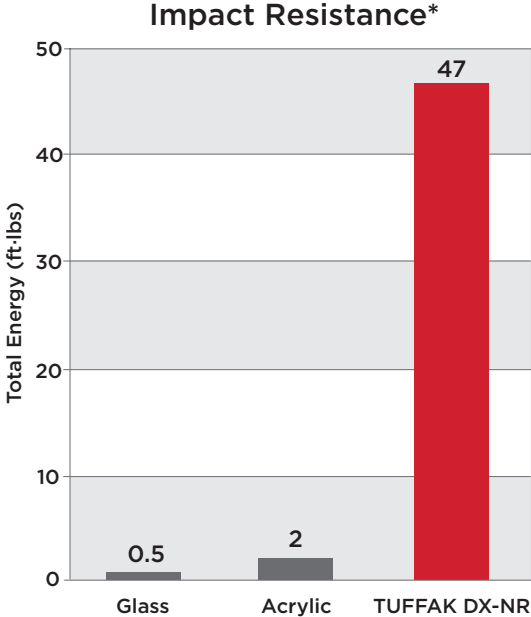
UL 746C: Suitability for Outdoor Use, UL File #E87887

TYPICAL PROPERTIES*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D 792	-	1.2
Water Absorption, 24 hrs	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
Light Transmission @ 0.060" / 0.118"	ASTM D 1003	%	69 / 61
Light Diffusion @ 0.060" / 0.118"	fwhm	degrees	150 / 152
MECHANICAL			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Tensile Strength, Yield	ASTM D 638	psi	9,000
Tensile Modulus	ASTM D 638	psi	340,000
Elongation	ASTM D 638	%	110
Flexural Strength	ASTM D 790	psi	13,500
Flexural Modulus	ASTM D 790	psi	345,000
Instrumented Impact @ 0.118"	ASTM D 3763	ft-lbs	47
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
Coefficient of Thermal Conductivity	ASTM C 177	BTU-in/hr-ft ² -°F	1.35
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
ELECTRICAL			
Dielectric Constant @10 Hz	ASTM D 150	-	3.0
Dielectric Constant @ 60 Hz	ASTM D 150	-	3.2
Volume Resistivity	ASTM D 257	Ohm-cm	>8 x 10 ¹⁵
FLAMMABILITY			
Flame Class @ 0.060"	UL 94	-	V2
@ 0.118"	UL 94	-	HB
Horizontal Burn	ASTM D 635	in.	<1 (CC1)
Glow Wire Flammability Index	DIN EN 60695-2-12	°F	1560
Glow Wire Ignition Test	DIN EN 60695-2-13	°F	1607

*Typical properties are not intended for specification purposes

TUFFAK DX-NR POLYCARBONATE SHEET



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

CURBELL
PLASTICS

1-888-CURBELL
www.curbellplastics.com

Curbell Plastics is a proud supplier of Plaskolite materials.

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.

© 2022 PLASKOLITE, LLC 122022
TUFFAK® is a registered trademark of Plaskolite LLC

PLASKOLITE

400 W Nationwide Blvd, Suite 400
Columbus, OH 43215
800.848.9124 • Fax: 877.538.0754
plaskolite@plaskolite.com
www.plaskolite.com