

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

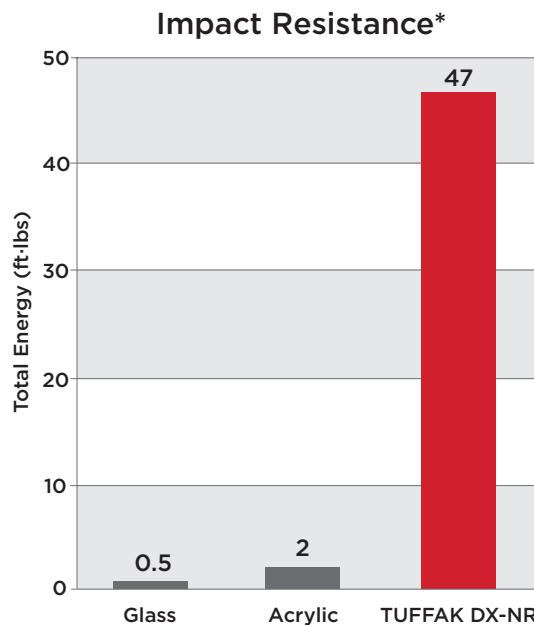
UL 94: Flammability File #E87887

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 1015	
FLAMMABILITY				
Flame Class @ 0.060"	UL 94	-	V2**	
@ 0.118"	UL 94	-	HB**	
Horizontal Burn	ASTM D 635	in.	<1 (CCI)	
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

**Test results, product not UL 94 Listed

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

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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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