

TUFFAK NR polycarbonate sheet

TUFFAK NR is an enhanced UV resistant polycarbonate sheet product with a proprietary matte surface which reduces reflections typically associated with smooth sheet. The product's advanced UV resistance technology promotes long lasting outdoor weathering performance. It features outstanding impact strength, superior dimensional stability and high temperature resistance. This lightweight sheet is also easy to fabricate and decorate.

APPLICATIONS

Display and screen protectors, signage, lenses, menu boards, and other applications requiring a non-reflective surface for improved viewing with reduced glare.

Regulatory code compliance and certifications

UL 94: Flammability File #E351891

UL 746C: Suitability for Outdoor Use, UL File #E351891

UL 879: Electric Sign Components,

UL File #E146154

TUFFAK NR and NR-C complies with ADA standards for non-glare signage.

Typical Properties*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D 792	-	1.2
Refractive Index	ASTM D 542	-	1.586
Light Transmission, Clear @	ASTM D 1003	%	86
0.118" Specular Gloss at 20°	ASTM D 523	-	25
Water Absorption, 24 hours	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
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
Compressive Strength	ASTM D 695	psi	12,500
Compressive Modulus	ASTM D 695	psi	345,000
Instrumented Impact @ 0.125"	ASTM D3763	ft-lbs	45***
Shear Strength, Ultimate	ASTM D 732	psi	10,000
Shear Strength, Yield	ASTM D 732	psi	6,000
Shear Modulus	ASTM D 732	psi	114,000
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
FLAMMABILITY			
Horizontal Burn, AEB	ASTM D 635	in	<1
Ignition Temperature, Self	ASTM D 1929	°F	1022
Ignition Temperature, Flash	ASTM D 1929	°F	824
Flame Class @ 0.060"	UL 94	-	HB

*Typical properties are not intended for specification purposes.

**Some properties characterized using non-textured sheet.

***Impacted on Matte Surface

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.

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