

## TUFFAK CA POLYCARBONATE SHEET

### CLASS A PERFORMANCE

TUFFAK CA is an optical grade transparent polycarbonate sheet product designed to meet Class A flammability requirements in the International Building Code (IBC) for interior wall and ceiling finishes. It features outstanding impact strength, high temperature resistance and high clarity and passes the National Fire Protection Association (NFPA) 286 flammability requirements. This UV stable, lightweight, thermoformable, and easy to fabricate sheet is available in smooth and patterns; clear and colors. TUFFAK CA sheet is offered with a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

### APPLICATIONS

Class A rated wall and ceiling finishes, coverings, decorative panels, protective coverings, partitions, interior windows, safety barriers, lighting diffusers and interior signage

### Regulatory code compliance and Certifications

Class A rated per the 2015 International Building Code Section 803.1 for interior wall and ceiling finishes

### TYPICAL PROPERTIES\*

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	-	1.2
Refractive Index	ASTM D542	-	1.586
Light Transmission, Clear @ 0.118"	ASTM D1003	%	88
Light Transmission, B59 White @ 0.118"	ASTM D1003	%	27
Light Transmission, B54 White @ > 0.118"	ASTM D1003	%	27
Light Transmission, B27 White @ 0.118"	ASTM D1003	%	27
Light Transmission, B48 White @ 0.118"	ASTM D1003	%	50
Light Transmission, 130 Gray @ 0.118"	ASTM D1003	%	50
Light Transmission, 135 Dark Gray @ 0.118"	ASTM D1003	%	18
Light Transmission, K09 Bronze @ 0.118"	ASTM D1003	%	50
Water Absorption, 24 hours @ 73°F	ASTM D570	%	0.15
Poisson's Ratio	ASTM E132	-	0.38
<b>MECHANICAL</b>			
Tensile Strength, Break	ASTM D638	psi	9,500
Tensile Strength, Yield	ASTM D638	psi	9,000
Tensile Modulus	ASTM D638	psi	340,000
Elongation	ASTM D638	%	110
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	345,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Izod Impact Strength, Notched @ 0.125"	ASTM D256	ft-lbs/in	18
Izod Impact Strength, Unnotched @ 0.125"	ASTM D256	ft-lbs/in	60 No Break
Instrumented Impact @ 0.125"	ASTM D3763	ft-lbs	47
Shear Strength, Break	ASTM D732	psi	10,000
Shear Strength, Yield	ASTM D732	psi	6,000
Shear Modulus	ASTM D732	psi	114,000
Rockwell Hardness	ASTM D785	-	M70 / R118
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	ASTM C177	BTU-in/hr-ft <sup>2</sup> -°F	1.35
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D648	°F	280
Brittleness Temperature	ASTM D746	°F	-200
<b>FLAMMABILITY</b>			
Horizontal Burn, AEB	ASTM D635	°F	<1
Ignition Temperature, Self	ASTM D1929	in	1022
Ignition Temperature, Flash	ASTM D1929	°F	824

\*Typical properties are not intended for specification purposes.

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TUFFAK CA has been fire tested and certified in numerous installation configurations; both on and off wall and off ceiling. For maximum fire resistance, TUFFAK CA meets IBC code compliance for Class A performance when installed as outlined below.

## Regulatory code compliance and certifications

NFPA 286 Wall or Ceiling	Pass
2015 IBC Section 803	Class A Performance, also can be used wherever Class B or C is required

Grade	Location	Attachment	Gauge	Distance from Ceiling	Distance from Wall	Rating
<b>TUFFAK CA</b>	Ceiling	Standoffs / Hanger Bars	0.118" - 0.500"	≥ 2"		Class A Equivalent
	Wall	On wall at corners	0.118" - 0.236"		0"	Class A Equivalent
	Wall	Standoffs	0.118" - 0.236"		≥ 0.5"	Class A Equivalent
	Wall	Plastic Channels	0.118" - 0.236"		0"	Class A Equivalent

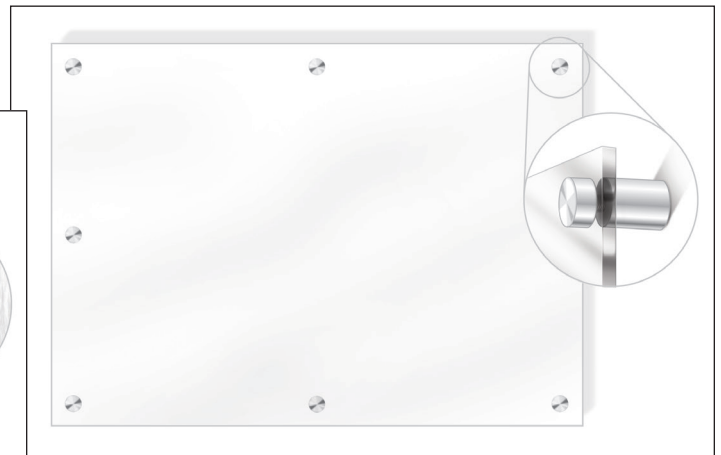
*Ceiling Stand-offs / Hanger bars*



*Rigid plastic H-channels*



*Cap / Barrel Stand-offs mounts to wall*



*Screw / Washer attachments on corners*

Additional information can be found in TUFFAK CA fabrication guidelines at [www.plastolite.com](http://www.plastolite.com)

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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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