

TUFFAK FD POLYCARBONATE SHEET

FDA FOOD CONTACT COMPLIANT

TUFFAK FD sheet is a non-UV stabilized transparent polycarbonate product which complies with FDA regulation 21 CFR § 177.1580 requirements for food contact. It features outstanding impact strength, superior dimensional stability, high temperature resistance, and high clarity. Ideally suited for demanding applications in food processing environments, as well as medical applications, this lightweight thermoformable sheet is also easy to fabricate and decorate. TUFFAK FD sheet is offered with a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

APPLICATIONS

Food processing equipment and guards, bulk food bins, candy molds, sneeze guards, single use autoclave packaging, hospital trays, bassinets, incubators, medical device storage containers

Regulatory code compliance and certifications

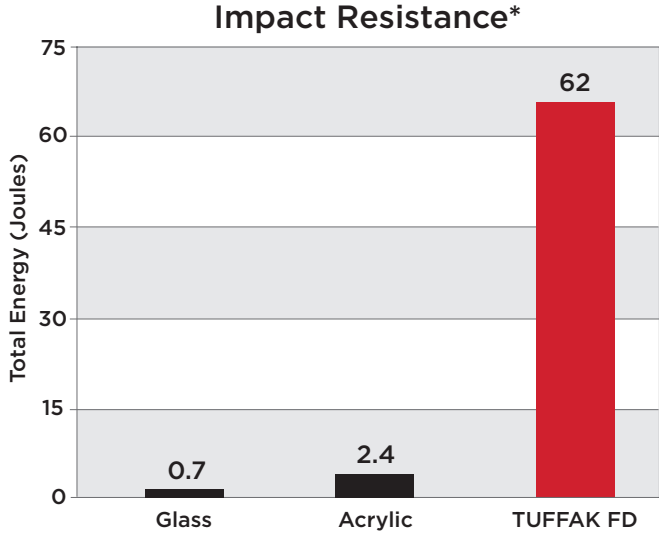
UL 94: Flammability - File #E87887

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	%	86
Water Absorption, 24 hours	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	-	0.38
MECHANICAL			
Tensile Strength, Ultimate	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 @ 3.18mm	ASTM D 256	J/cm	9.6
Izod Impact Strength, Unnotched @ 3.18mm	ASTM D 256	J/cm	32 (no break)
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	cm/cm/°C	6.8 x 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	139
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 x 10 ¹⁶
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
Arc Resistance			
Stainless Steel Strip electrode	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air @ 3.18mm	ASTM D 149	V/mm	15000
FLAMMABILITY			
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

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*Instrumented Impact per ASTM D 3763, sample thickness 3.2mm 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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