



Makrolon® FI sheet

Flame inhibiting

Makrolon® FI sheet is a flame retardant, non-UV stabilized, clear polycarbonate product with a UL 94 V-0 rating at 0.060" and UL 94 5VA rating at 0.118". It features high impact strength, superior dimensional stability, high temperature resistance, and high clarity. This lightweight thermoformable sheet is also easy to fabricate and decorate.

Applications

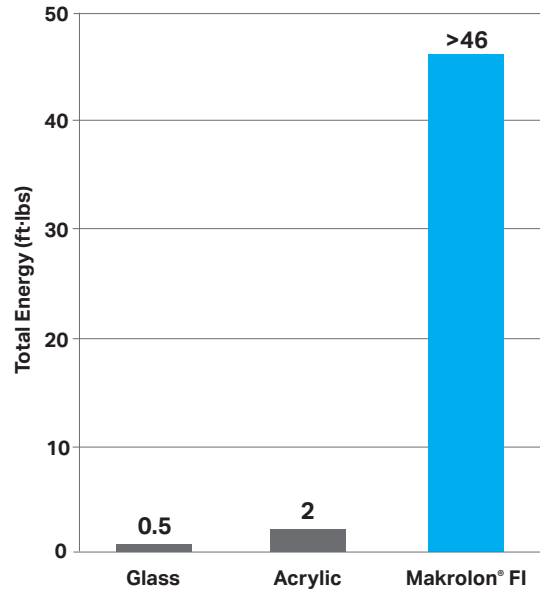
Electrical devices, equipment housings, switchgear covers, light fixtures

Typical Properties*			
Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D 792	–	1.25
Light Transmission, Clear @ 0.118"	ASTM D 1003	%	86
Water Absorption, 24 hours @ 73°F	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	–	0.38
MECHANICAL			
Tensile Strength, Break	ASTM D 638	psi	9,500
Tensile Strength, Yield	ASTM D 638	psi	9,000
Tensile Modulus	ASTM D 638	psi	340,000
Flexural Strength	ASTM D 790	psi	13,500
Compressive Strength	ASTM D 695	psi	12,500
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft-lbs/in	2
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft-lbs/in	60 (no failure)
Instrumented Impact @ 0.125"	ASTM D 3763	ft-lbs	>46
THERMAL			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
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	–	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 @ 0.125"	ASTM D 149	V/mil	380
FLAMMABILITY			
Flame Class @ 0.060"	UL 94	–	V-0
Flame Class @ 0.118"	UL 94	–	5VA
FAA Flammability	FAR 25.853		
@ 0.060" - 0.125"	Part 1, a (i) - 60 sec	–	Pass
@ 0.060" - 0.125"	Part 1, a (ii) - 12 sec	–	Pass

*Typical properties are not intended for specification purposes.

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Impact Resistance*



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

Agency and specification compliance

Polycarbonate sheet classification	A-A-59502	Type II Class 2
Polycarbonate resin classification	ASTM D 3935	PC0120
Flammability - Plastic component	UL 94	UL File #E351891
Flammability - FAA	FAR 25.853	Part 1 60-second and 12-second

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