

Makrolon® SK1 sheet

Skylight prismatic

Makrolon® SK1 sheet's prismatic pattern is optimized to diffuse and distribute light while maintaining high light transmission, making it the material of choice for daylighting applications. The product is available with a UV enhanced cap layer in both clear and white. Makrolon SK1 can be drape or thermoformed for use in contoured applications such as domed skylights. In either flat or contoured geometries, it has a higher impact resistance compared to acrylic or glass. Makrolon SK1 has a Limited Product Warranty against breakage, yellowing, and loss of light transmission. The terms of the warranty are available upon request.

Applications

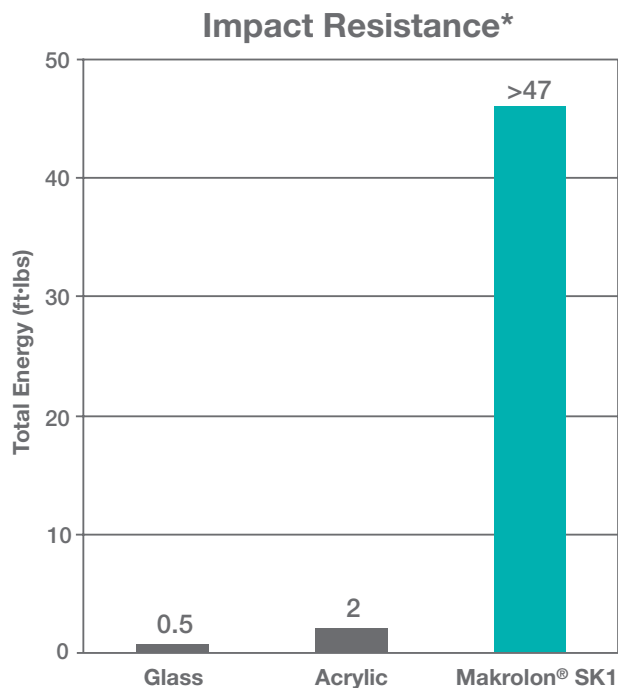
Awnings, entryway canopies, skylights, barrel vaults, glazed archways, covered pedestrian walkways, and sloped, vertical, and curved glazing

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 @ 0.118"	ASTM D 1003	%	92
Light Transmission, B72 White @ 0.118"	ASTM D 1003	%	74
Water Absorption, 24 hours	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
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
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft·lbs/in	16
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft·lbs/in	60 (No Break)
Instrumented Impact @ 0.125"	ASTM D 3763	ft·lbs	>47
Shear Strength, Yield	ASTM D 732	psi	6,000
Shear Modulus	ASTM D 732	psi	114,000
Rockwell Hardness	ASTM D 785	–	M70 / R118
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
Brittleness Temperature	ASTM D 746	°F	-200
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

*Typical properties are not intended for specification purposes

**Some properties characterised using non textured sheet

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*Instrumented Impact per ASTM D 3763,
sample thickness is 0.125" nominal
Smooth Surface - No Pattern

Regulatory code compliance and certifications

ANSI Z97.1 2009 Impact Rating - Class A

Hail Impact Resistance (FM 4431) Class 4 Severe Rating – Pass

IBC 2006 Rating for Horizontal Burn Rate ASTM D635-10 – CC1

IBC 2012 Self Ignition Greater than 650°F ASTM D1929-13a – Pass

UL 972: Burglary Resistant File #BP2126



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