



# Makrolon® AS2 sheet

## ANSI glazing

Makrolon® AS2 sheet is a polycarbonate product with an ultra-hard coating designed for high optical quality and exceptional durability. State-of-the-art manufacturing and inspection processes provide low optical distortion and the advanced hard coat technology provides excellent abrasion resistance, chemical resistance, and long lasting outdoor weathering performance. Developed to maximize operator safety and visibility, the product conforms to the AS2 requirements of the ANSI Z26.1 standard. This lightweight and high impact resistance polycarbonate sheet product provides security combined with durability, resulting in less maintenance and downtime.

Makrolon AS2 is offered with a five (5) year Limited Product Warranty against breakage for flat vertical applications. The terms of the warranty are available upon request.

## Applications

Bus driver safety surrounds, transportation glazing, ultra-abrasion resistant requirements

## Typical Properties\*

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	–	1.2
Light Transmission, Clear @ 0.236"	ASTM D 1003	%	84
Chemical Resistance	ANSI Z26.1	–	Pass
Taber Abrasion @ 1000 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	1.7
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Modulus of Elasticity	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	16
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft-lbs/in	No Break
Instrumented Impact @ 0.125"	ASTM D 3763	ft-lbs	47
Poisson's Ratio	ASTM E 132	–	0.38
Rockwell Hardness	ASTM D 785	–	M70/R118
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
<b>ELECTRICAL</b>			
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 <sup>16</sup>
Dissipation Factor @ 60 Hz	ASTM D 150	–	0.0009
Dissipation Factor @ 1 MHz	ASTM D 150	–	0.01
Arc Resistance	–	–	–
Stainless Steel Strip Electrodes	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air, 125 mils	ASTM D 149	V/mil	380
<b>AGENCY CONFORMANCE</b>			
FMVSS 205	ANSI Z26.1, AS2	–	Pass

\*Typical properties are not intended for specification purposes.

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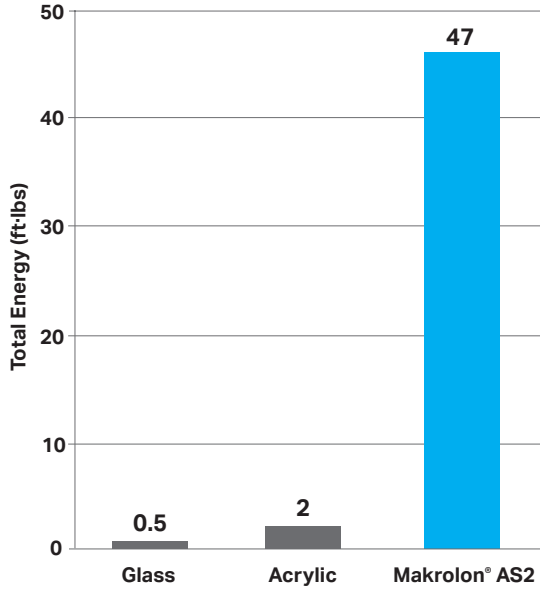


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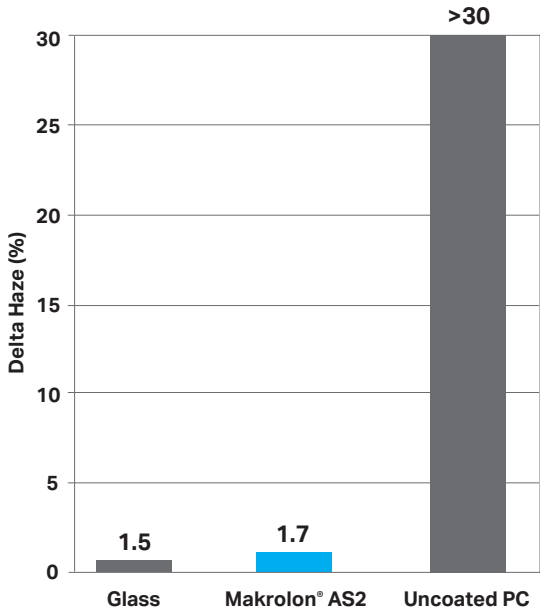
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## Impact Resistance\*



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

## Abrasion Resistance\*



\*Taber Abrasion per ASTM D 1044, 1000 cycles using CS-10F wheels at 500 g load

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