



# Makrolon® HV sheet

## Heavy equipment glazing

Makrolon® HV sheet is a hard-coated polycarbonate product designed for applications that demand high optics, impact resistance, and enhanced weathering. State-of-the-art manufacturing and inspection processes deliver low optical distortion and the advanced hard coat technology provides excellent abrasion resistance, chemical resistance, and long lasting outdoor weathering performance. Makrolon HV is available in clear as well as a variety of standard and custom tints.

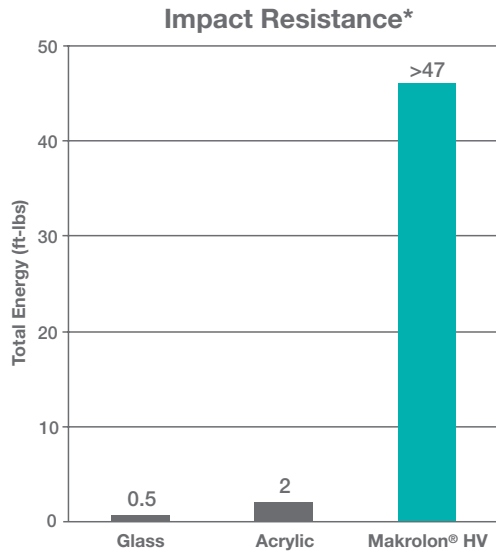
## Applications

Off-road, specialty and heavy duty vehicle glazing

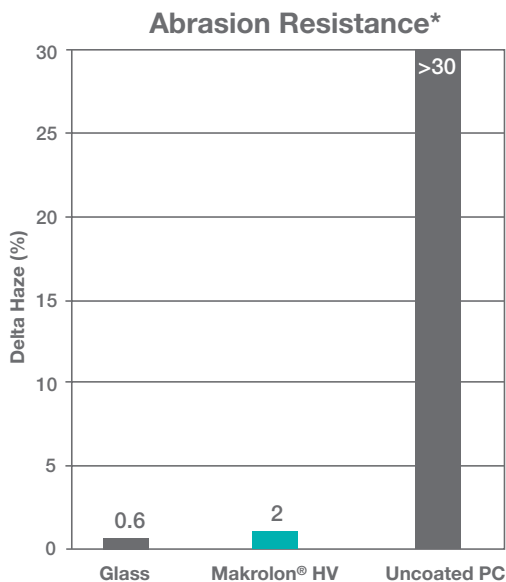
Typical Properties*			
Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	-	1.2
Light Transmission, Clear, 0.375"	ASTM D 1003	%	80
Light Transmission, Clear, 0.500"	ASTM D 1003	%	77
Chemical Resistance	ANSI Z26.1	-	Pass
Taber Abrasion @ 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
<b>MECHANICAL</b>			
Tensile Strength, Break	ASTM D 638	psi	9,500
Flexural Strength	ASTM D 790	psi	13,500
Compressive Strength	ASTM D 695	psi	12,500
Modulus of Elasticity	ASTM D 638	psi	340,000
Poisson's Ratio	-	-	0.38
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
<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

\*Typical Properties are not for specification purposes

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



\*Taber Abrasion per ASTM D 1044, 100 cycles using CS-10F wheels at 500 g load

## Chemical Resistance\*

Chemical Tested	Resistance Time
Acetone	>24 hrs
Ammonia (10% concentration)	>24 hrs
Antifreeze (50/50)	>24 hrs
Benzene	>24 hrs
Bleach (Clorox concentrated)	>24 hrs
Chloroform	>24 hrs
Denatured Alcohol	>24 hrs
Di (2-ethylhexyl) phthalate	>24 hrs
Diesel Oil	>24 hrs
Isopropyl Alcohol (IPA)	>24 hrs
Kerosene	>24 hrs
Methyl Alcohol	>24 hrs
Methyl Butyl Ketone	>24 hrs
Methyl Ethyl Ketone	>24 hrs
Methylene Chloride	>24 hrs
Naphthalene, 1-bromo-	>24 hrs
Potassium Hydroxide - Lye (10%)	>24 hrs
Sodium Hydroxide (10%)	>24 hrs
Toluene	>24 hrs
Turpentine	>24 hrs
Unleaded Gasoline (87 Octane)	>24 hrs
Vinegar	>24 hrs
Xylene	>24 hrs
<b>Acids:</b>	
Hydrochloric Acid (20%)	>24 hrs
Nitric Acid (20%)	>24 hrs
Sulfuric Acid (20%)	>24 hrs

\*Tested in accordance to ASTM D 1308-02

Always keep hazardous chemicals away from uncoated edge of Makrolon Polycarbonate

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About Bayer MaterialScience:

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