



# Makrolon® BG sheet

## Bus glazing

Makrolon® BG sheet is a hard-coated polycarbonate product designed for exceptional durability. Manufactured to meet demanding bus glazing requirements, this product features abrasion resistance, chemical resistance, and long lasting outdoor weathering performance. The high impact strength of this product provides excellent protection against vandalism, reducing unplanned maintenance and repair. Makrolon BG meets DOT/FMVSS 205/ANSI Z26.1 Item AS-4 and is available in clear as well as a variety of standard and custom tints.

## Applications

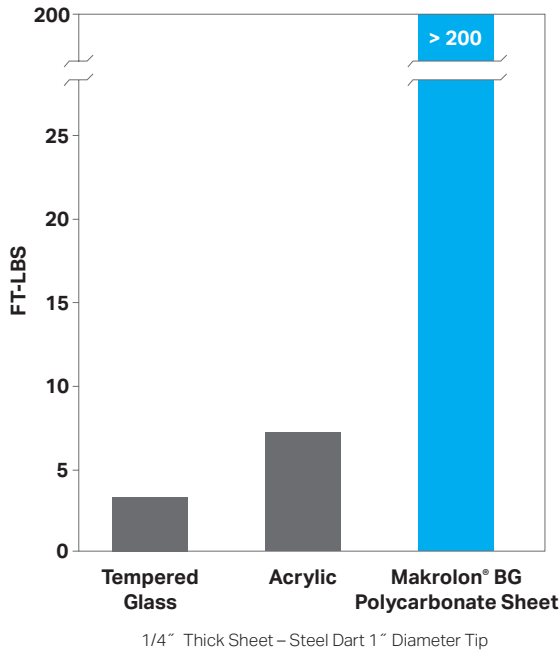
Bus windows

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 @ 100 Cycles, Delta Haze CS-10F Wheel @ 500 g load	ASTM D 1044	%	2
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	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
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	>46
Poisson's Ratio	ASTM E 132	–	0.38
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
<b>FLAMMABILITY</b>			
Flammability of Interior Materials	FMVSS 302	–	Pass

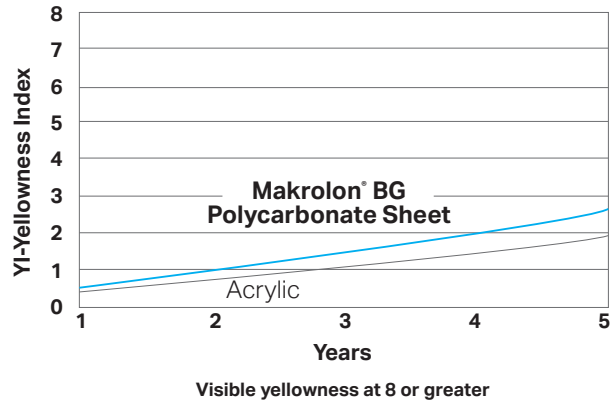
\*Typical properties are not intended for specification purposes

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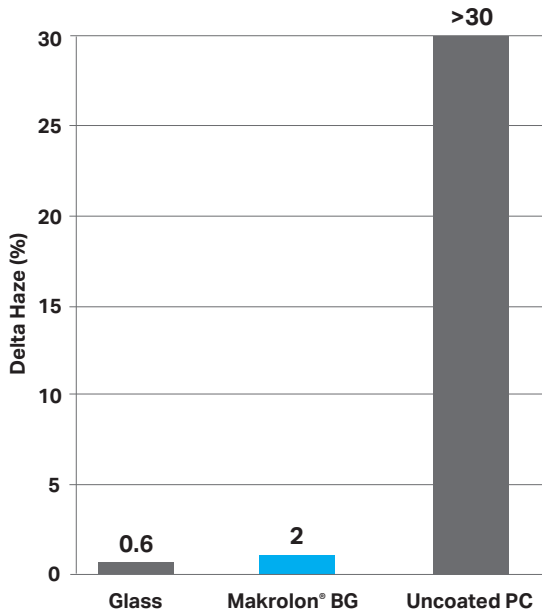
## Impact Resistance



## UV Weather Resistance



## Abrasion Resistance\*



## 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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