



Makrolon® AR500 sheet

Containment glazing

Makrolon® AR500 monolithic polycarbonate sheet has been tested to ASTM F 1233, ASTM F 1915, and HPW TP 0500 standards for containment and forced entry applications. This specific Makrolon grade is produced for high optical quality in thick gauge security glazing. Its proprietary hardcoat facilitates cleaning and resists marring, chemical, and graffiti attack. Makrolon AR500 has a seven (7) year Limited Product Warranty against coating failure, hazing, and yellowing.

Applications

Security doors and windows

Typical Properties*	
Property	Values
Gauge / Tolerance	0.500 in ± 5%
Weight	3.12 lbs / sq ft
Shading Coefficient	0.90
U-Value	0.82
Light Transmission	83%

*Typical properties are not intended for specification purposes

Product Performance Ratings
FORCED ENTRY & CONTAINMENT ASTM F 1233 Class 2.0 Body Passage ASTM F 1233 Class 1.4 Contraband Passage ASTM F 1915 Grade 3 H.P. White TP 0500 Level 1 Sequence 8
AGENCY INFORMATION Combustibility Class CC1

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Glazing Information

Structural security framing systems with equal or greater forced entry and/or ballistics ratings as the selected Makrolon AR500 sheet are recommended.

Makrolon AR500 sheet should be cut to allow for a minimum of one(1) inch edge engagement in the frame, with sufficient rabbet depth for material expansion (approx. 1/16~/ft.).

Use wet or dry sealants/gaskets that are compatible with polycarbonate.

Remove protective masking after glazing operations are completed and before prolonged exposure to direct sunlight, moisture, or high temperature.

Product specification for Makrolon AR500 polycarbonate sheet

One-ply, clear Makrolon polycarbonate sheet constructed as follows:

.500 Makrolon® AR-2 abrasion resistant surface

Standard Sheet Size

48" x 96", 60" x 96", 72" x 96"

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
Acids:	
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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