

## MAKROLON HYGARD<sup>®</sup> BR1000

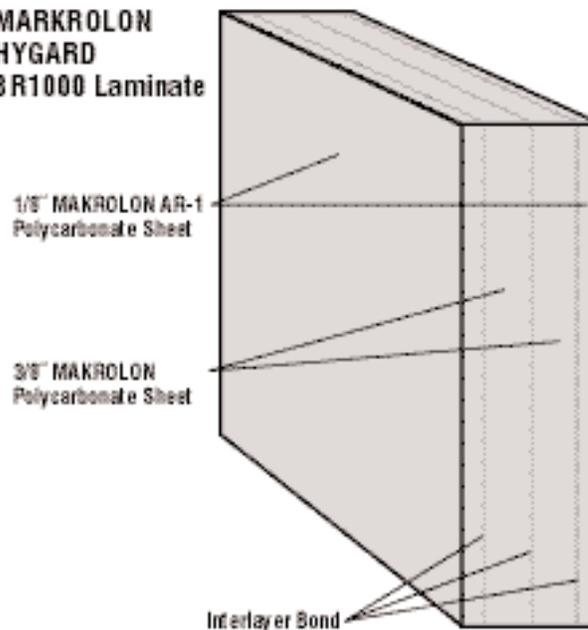
**MAKROLON HYGARD<sup>®</sup> BR1000** laminate is a four-ply MAKROLON polycarbonate sheet for use in security applications that require UL Listed Level 2 bullet-resisting glazing. MAKROLON HYGARD BR1000 laminate is hard coated with abrasion and UV resistant surfaces for extended service life in harsh environments.

### APPLICATIONS

MAKROLON HYGARD BR1000 laminate is used as containment and bullet-resistant glazing in a wide variety of higher level security applications. Installations include 24-hour convenience stores, specialty retailers, banks, governmental and detention facilities, as well as other cash transaction areas.

Typical Physical Properties	
Gauge/Tolerance	1.05 ± 5%
Weight	6.5 lbs./s.f.
% Light Transmittance	72% (clear)
Colors	Standard: Clear Custom Colors on request
Sheet Sizes	Standard: 38 x 96 48 x 60 48 x 72 48 x 96 60 x 96 Custom Sizes on request

### MARKROLON HYGARD BR1000 Laminate



### FORCED ENTRY, BALLISTICS RATINGS

HP White TP0500.02 Level V Sequence 42  
 HP White TP0500.02 Level B Ballistics (9mm)  
 ASTM F1233 Class V  
 ASTM F-1233 Ballistics (.38 Super)  
 UL752 Level 2 HPSA (.357 Mag)

# Product Data

## MAKROLON HYGARD® BR1000

### GLAZING INFORMATION

- Use of structural security framing systems with equal or greater forced entry and/or ballistics ratings as the selected MAKROLON HYGARD laminate is recommended.
- Size MAKROLON HYGARD laminates to allow for a minimum of 1" 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.

### CLEANING INSTRUCTIONS

- Rinse with clean water to remove abrasive dust and dirt.
- Wash with soap or mild detergent using a sponge or soft cloth. Do not scrub.
- Rinse once more. Dry with a soft cloth or chamois to prevent water spots.
- To remove labels, stickers, or grease, rub gently with a cloth wetted thoroughly in VM & P naphtha or isopropyl alcohol. Wash and rinse. Do not use razor blades, scrapers, or squeegees.

### Product Specification

#### MAKROLON HYGARD BR1000 laminate:

Four-ply, clear MAKROLON polycarbonate sheet constructed as follows:

- 1/8 MAKROLON polycarbonate sheet with high AR abrasion-resistant surface
- Polyurethane bonding interlayer
- 3/8 MAKROLON polycarbonate sheet
- Polyurethane bonding interlayer
- 3/8 MAKROLON polycarbonate sheet
- Polyurethane bonding interlayer
- 1/8 MAKROLON polycarbonate sheet with high AR abrasion-resistant surface

Material shall have a flexural strength of at least 13,500 psi per ASTM D-790; and shall have AR (high performance abrasion-resistant) surfaces for enhanced service life and resistance to marring. Material shall conform with ICBO & BOCA Model Building Codes as a CC-1 rated Approved Light Transmitting Plastic.



**ALLPLASTICS**



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