

# Bullet Resistant Glazing Product Data

## **MAKROLON HYGARD® BR1250**

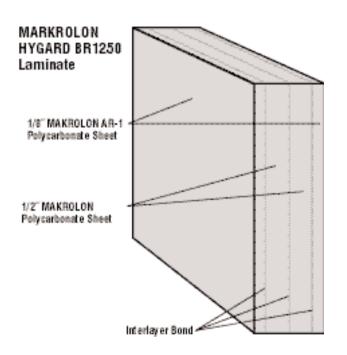
### **MAKROLON HYGARD® BR1250**

laminate is a four-ply MAKROLON polycarbonate sheet for use in security applications that require UL Listed Level III bullet-resisting glazing. MAKROLON HYGARD BR1250 laminate is hard coated with abrasion and UV resistant surfaces for extended service life in harsh environments.

### **APPLICATIONS**

MAKROLON HYGARD BR1250 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	1.30 ± 5%
Weight	8.1 lbs./s.f.
Shading Coefficient	.81
% Light Transmittance	67% (clear)
Colors Custom Colors on request	Standard: Clear
Sheet Sizes	Standard: 38 x 96



## FORCED ENTRY, BALLISTICS RATINGS

H.P. WHITE TP0500.01 Level V H.P. WHITE TP0500.01 Level C Ballistics (.44 magnum) ASTM F 1233 Class V Step 38 Ballistics (.44 magnum) UL752 Level III SPSA .44 Magnum

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#### **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 naptha or isopropyl alcohol. Wash and rinse. Do not use razor blades, scrapers, or squeegees.

## **Product Specification**

#### **MAKROLON HYGARD BR1250 laminate:**

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

- 1/8 MAKROLON polycarbonate sheet with high AR abrasion-resistant surface
- · Polyurethane bonding interlayer
- 1/2 MAKROLON polycarbonate sheet
- · Polyurethane bonding interlayer
- 1/2 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 exhibit a self ignition temperature of 1077°F and a flash ignition temperature of 872°F (ASTM D-1929), and conform with ICBO & BOCA Model Building Codes as a CC-1 rated Approved Light Transmitting Plastic.









Unit 20 / Eastern Valley Way, Chatswood, NSW 2067

Phone: (02) 9417 6111 Fax: (02) 9417 6169

Email: sales@allplastics.com.au

www.allplastics.com.au