

**MAKROLON<sup>®</sup> HYGARD BR1000 Sheet**

**Ballistic Glazing**

MAKROLON HYGARD BR1000 four-ply laminate sheet is designed for the high demands of ballistic and forced entry applications. MAKROLON HYGARD BR1000 is a no spall and no white out sheet product. This product features a coating that provides resistance to abrasion, UV, chemical attack and graffiti. MAKROLON HYGARD BR1000 has been tested to the following standards: UL752, ASTM F1233, HPW TP 0500. MAKROLON HYGARD BR1000 has a seven (7) year Limited Product Warranty against coating failure, yellowing and hazing. The terms of the warranty are available upon request.

**Applications**

Government and detention facilities, financial institutions, heavy equipment glazing, specialty retail, 24 hour convenience stores, cash transaction windows.

<b>Gauge/Tolerance</b>	<b>1.05 in +/- 5%</b>
<b>Weight</b>	<b>6.5 lbs / sq ft</b>
<b>Shading Coefficient</b>	<b>.93</b>
<b>U Value</b>	<b>.60</b>
<b>Light Transmittance</b>	<b>72%</b>

**Product Performance Ratings**

**Ballistic**

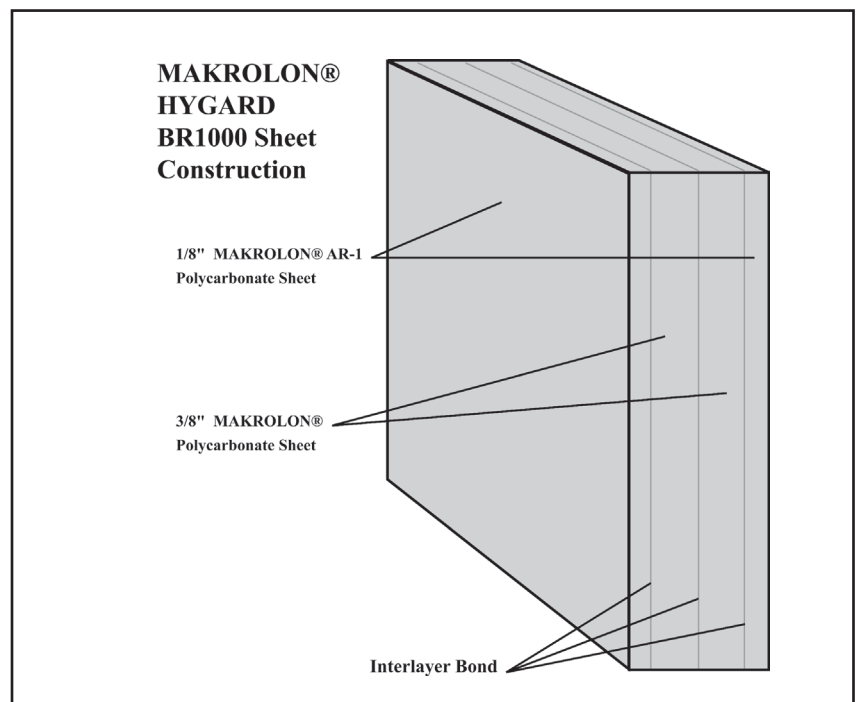
UL 752 Level 2 (.357 Magnum jacketed lead soft point.)

**Forced Entry & Containment**

ASTM F1233.08 Class 5 Body Passage  
 ASTM F1233.08 Class 2.4 Contraband Passage  
 ASTM F1915.05 Grade 1  
 HP White TP 0500.03 Level IV Sequence 43

**Agency Information**

UL File: BP6864  
 Combustibility Class CC1  
 Miami-Dade NOA 08.0926.15



# Product Data

## MAKROLON® HYGARD BR1000 Sheet

### Glazing Information

- Structural security framing systems with equal or greater forced entry and/or ballistics ratings as the selected MAKROLON HYGARD laminate are recommended.
- MAKROLON HYGARD laminate 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.

### Standard Sheet Size

48" x 60", 48" x 72", 38" x 78", 38" x 96"  
48" x 96", 60" x 72", 60" x 96"

### Product Specification

**MAKROLON HYGARD BR1000** polycarbonate laminate:

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

- 1/8" MAKROLON® AR-1 abrasion resistant surface
- Polyurethane bonding interlayer
- 3/8" MAKROLON® polycarbonate sheet
- Polyurethane bonding interlayer
- 3/8" MAKROLON Sheet
- Polyurethane bonding interlayer
- 1/8" MAKROLON AR-1 abrasion resistant surface

### Disclaimer

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

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