

# Makrolon Hygard BR1000 Product Details

## Hygard® BR1000 sheet

### Ballistic glazing - Level 2

Hygard® BR1000 ballistic grade sheet is a 1.000", 4-ply polycarbonate laminate that meets the UL 752 Level 2 rating for .357 Magnum ballistic attack and HP White TP 0500 Level IV. Unlike glass-clad products, this all-polycarbonate laminate resists spalling and white-out after repeated high force and ballistic impacts, an advantage in maintaining visibility of a threat during an attack. All Hygard products incorporate Makrolon® polycarbonate sheet produced for high optical quality in security glazing laminates. Exterior surfaces have a proprietary Makrolon AR hardcoat that facilitates cleaning and resists marring, chemical attack, and graffiti. Hygard BR1000 sheet has a seven (7) year Limited Product Warranty against coating failure, yellowing, and hazing. The terms of the warranty are available upon request.

### Applications

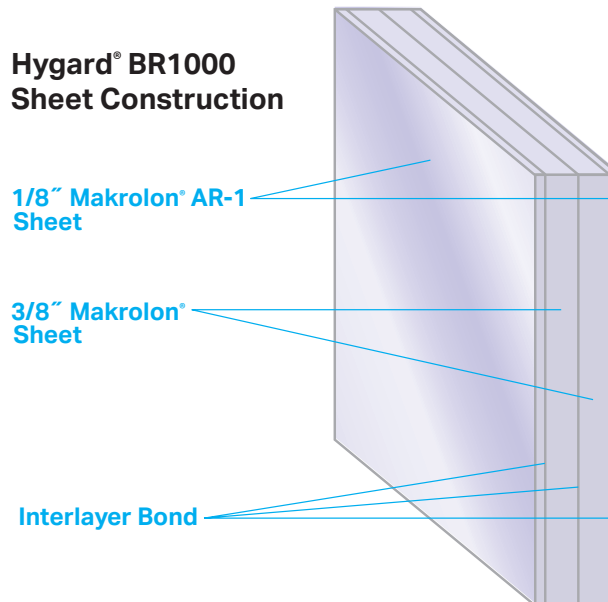
Government and detention facilities, banks, heavy equipment glazing, specialty retailers, 24 hour convenience stores, cash transaction windows

| Typical Properties* |                 |
|---------------------|-----------------|
| Property            | Values          |
| Gauge / Tolerance   | 1.05 in ± 5%    |
| Weight              | 6.5 lbs / sq ft |
| Shading Coefficient | 0.85            |
| U-Value             | 0.60            |
| Light Transmission  | 72%             |

\*Typical properties are not intended for specification purposes

| Product Performance Ratings  |
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| <p><b>BALLISTIC</b><br/>UL 752 Level 2 (.357 Magnum jacketed lead soft point)</p>  |
| <p><b>FORCED ENTRY &amp; CONTAINMENT</b><br/>ASTM F 1233.08 Class 5 Body Passage<br/>ASTM F 1233.08 Class 2.4 Contraband Passage<br/>ASTM F 1915.03 Grade 1<br/>H.P. White TP 0500.03 Level IV Sequence 43</p> |
| <p><b>AGENCY INFORMATION</b><br/>UL File: BP6864<br/>Combustibility Class CC1<br/>Miami-Dade NOA 12-0605.05</p>  |

### Hygard® BR1000 Sheet Construction



## Hygard® BR1000 sheet

### Glazing recommendations

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

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
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  - Polyurethane bonding interlayer
  - 1/8" Makrolon AR-1 abrasion resistant surface



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