

Hygard BR1000 Polycarbonate Sheet



Ballistic Glazing – Level 2

Hygard BR1000 ballistic grade sheet is a 1.000", 4-ply polycarbonate laminate that conforms with UL 752 Level 2 rating for 0.357 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 TUFFAK polycarbonate sheet produced for high optical quality in security glazing laminates. Exterior surfaces have a proprietary TUFFAK AR hardcoat that facilitates cleaning and resists marring, chemical attack, and graffiti.

Applications

Government and detention facilities, banks, 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

BALLISTIC

UL 752 Level 1 (9mm Full Metal Copper Jacket with lead)

FORCED ENTRY & CONTAINMENT

ASTM F 1233.08 Class 5 Body Passage
ASTM F 1233.08 Class 2.4 Contraband Passage
ASTM F 1915.03 Grade 1
H.P. White TP 0500.03 Level IV Sequence 43

AGENCY INFORMATION

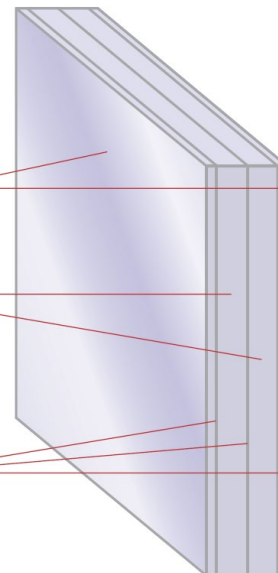
Combustibility Class CC1
Florida Building Code
Miami-Dade NOA

Hygard BR1000 Sheet Construction

1/8" TUFFAK AR-1 sheet

3/8" TUFFAK sheet

Interlayer Bond



Hygard BR1000 Polycarbonate 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 (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 TUFFAK polycarbonate sheet constructed as follows:
 - 1/8" TUFFAK AR-1 abrasion resistant surface
 - Polyurethane bonding interlayer
 - 3/8" TUFFAK polycarbonate sheet
 - Polyurethane bonding interlayer
 - 3/8" TUFFAK polycarbonate sheet
 - Polyurethane bonding layer
 - 1/8" TUFFAK AR-1 abrasion resistant surface

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.