

## HYGARD® MS1250 POLYCARBONATE SHEET

### MULTI SHOT PROTECTION

Hygard MS1250 ballistic grade sheet is a 1.250", 4-ply acrylic and polycarbonate laminate that meets UL 752 Level 6 rating for high speed multi-shot 9 mm (Uzi) ballistic 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, and graffiti attack. Hygard MS1250 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, specialty retailers, 24 hour convenience stores, cash transaction windows

### TYPICAL PROPERTIES\*

Property	Values
Gauge / Tolerance	1.30 in
Weight	8.1 lbs / sq ft
Shading Coefficient	0.98
U-Value	0.56
Light Transmission	78%

\*Typical properties are not intended for specification purposes

### PRODUCT PERFORMANCE RATINGS

#### BALLISTIC

UL 752 Level 6 multiple shots from a sub-machine gun, such as a 9 mm Uzi, with muzzle energy 540-653 ft-lbs

Supplementary Shotgun - A supplementary UL test using rifled lead slug with a muzzle energy of 2438-2950 ft-lbs (3306-4000 J) and 00 lead buckshot with a muzzle energy of 2078-2415 ft-lbs (2818-3275 J) fired from a 12-gauge shotgun

#### AGENCY INFORMATION

Combustibility Class CC2  
 Florida Building Code 2017  
 Miami-Dade NOA: NOA  
 UL File #BP6864

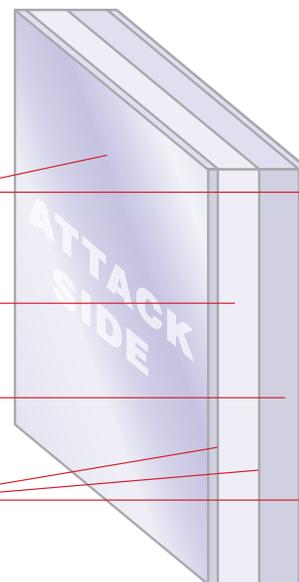
### Hygard MS1250 Sheet Construction

1/8" TUFFAK AR-1 sheet

1/2" Acrylic Attack Side

1/2" TUFFAK sheet

Interlayer Bond



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## Glazing recommendations

- » Structural security framing systems with equal or greater forced entry and/or ballistics ratings as the selected Hygard laminate are recommended
- » Hygard MS1250 must be installed with acrylic ply facing the ballistic attack side
- » 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 96"

## Product specification

Hygard MS1250 polycarbonate and acrylic laminate:

- » Four-ply, clear Hygard polycarbonate sheet constructed as follows:
  - 1/8" TUFFAK AR-1 abrasion resistant surface
  - Polyurethane bonding interlayer
  - 1/2" TUFFAK polycarbonate sheet
  - Polyurethane bonding interlayer
  - 1/2" acrylic sheet
  - Polyurethane bonding interlayer
  - 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.

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