GlasArmor™
Ballistic Resistant FRP Composite Panels

PRODUCT DESCRIPTION
GlasArmor™ panels are constructed from layers of 0-90° woven E-glass fiber reinforcements with a proprietary resin system in several sizes, from 36” x 84” to 48” x 120”, with other panel lengths available. Panels are available with a nominal thickness of 1/4”, 3/8” and 1/2” for protection to UL 752 levels 1, 2 & 3 and NIJ Levels I, II & IIIA test standards for ballistic resistance. Additional protection against higher power ammunitions to UL 752 Level 4 for .30 caliber rifles and Level 8 for 7.62mm rifles can be achieved by layering multiple GlasArmor panels.

VALUE SOLUTION
Military grade protection
GlasArmor ballistic resistant panels are constructed to provide the latest in military grade protection from armed attackers for any facility. Originally developed for protection from mortar fire, fiber-reinforced composite panels offer superior ballistic resistance at a weight less than 25% that of a comparable steel panel. These panels are now available for commercial security applications for your business, home, or governmental facility.

Resistant Security
The unique composite matrix of the panels allow for retention of the projectile to avoid potentially hazardous ricochet. These fiber-reinforced panels offer ballistic-resistant security with additional performance advantages, including durability, corrosion resistance, electrical non-conductivity, low thermal conductivity and reduced weight.

KEY CHARACTERISTICS
GlasArmor panels are fire rated for 1-hour per ASTM E-119-09c Fire Tests of Building Construction & Materials, modified to a smaller scale gypsum board wall assembly. Panels also meet a Flame Spread Rating of 45 and a Smoke Developed Rating of 165 per ASTM E-84-08a (Standard Method of Test for Surface Burning Characteristics of Building Materials), achieving a NFPA & IBC Class B Fire rating.
TARGET MARKET AND APPLICATIONS

GlasArmor composite ballistic panels are suitable for in the commercial, governmental, industrial and residential industries for the following applications:

- Banks
- Check cashing stations
- Pawn shops
- Loan and bail/bond offices
- Courtrooms
- Police stations
- Detention facilities
- Bonded warehousing
- Security buildings
- Equipment shielding locations
- Safe rooms
- Storm shelters
- Judges’ chambers

TECHNICAL PROPERTIES

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Thickness</th>
<th>Nominal Weight</th>
<th>Ammunition Type</th>
<th>Ballistic Rating</th>
<th>Typical Panel Sizes</th>
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</thead>
<tbody>
<tr>
<td>GA256-A5L1</td>
<td>0.256” (1/4”)</td>
<td>2.7 lbs/ft²</td>
<td>9 mm</td>
<td>UL 752 Level 1</td>
<td>36” x 84”, 36” x 108”</td>
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<td>NIJ Level I</td>
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<td>GA384-A5L2</td>
<td>0.384” (3/8”)</td>
<td>4.0 lbs/ft²</td>
<td>0.357 Mag</td>
<td>UL 752 Level 2</td>
<td>36” x 108”, 48” x 96”</td>
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<td>NIJ Level II</td>
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<td>GA500-A5L3</td>
<td>0.512” (1/2”)</td>
<td>5.4 lbs/ft²</td>
<td>0.44 Mag</td>
<td>UL 752 Level 3</td>
<td>48” x 108”, 48” x 120”</td>
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<td>NIJ Level IIIA</td>
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CONTACT INFORMATION

To learn more about ballistic resistant solutions, contact Glasforms at +1 408-297-9300 or visit glasforms.com/advancedcomposites.