Quality, commitment and innovation

Glasteel, with more than 50 years of experience, is one of the largest manufacturers of Fiberglass Reinforced Panels in the North American Market supported by three state-of-the-art manufacturing plants (all ISO 9001:2008 Certified) and three strategically located distribution centers. Our mission is to offer added value products with the highest quality standards, competitive pricing and best customer service of the industry.

Glasliner FRP meets many of today’s demanding applications that require high sanitation needs. These applications range from restaurants and supermarkets to restrooms and storage areas. Glasteel’s process uses a special type of high strength polyester resin combined with fiberglass reinforcement to produce liner panels offering superior quality and durability. The result is a panel with a resin rich surface that is tough, strong and easy to clean.

The Best Products, Service, Price & Selection
All Under One Brand

Glasliner® FRP
Wall & Ceiling Liner Panels

800-238-5546 www.glasteel.com
Resin rich surfaces that are tough, strong and easy to clean.

Maximum Sanitation Protection
• Meets USDA Standards
• Maximum sanitation protection
• Significant cost savings over other materials

Excellent Quality
• Years of dependable performance
• Resin rich surface that is tough & easy to clean
• Meets today’s high sanitation standards

Moisture Resistant
• Does not support mold or mildew
• Will not rust or corrode

Highly Impact Resistant
• Extremely high strength to weight ratio
• Tough surface that resists shattering, scratches and abrasions

Outstanding Cleanability
• Cleans with regular detergents and water

Wall Panel Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Nominal Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>.120”</td>
</tr>
<tr>
<td>1200</td>
<td>.090”</td>
</tr>
<tr>
<td>180</td>
<td>.060”</td>
</tr>
<tr>
<td>160</td>
<td>.045”</td>
</tr>
<tr>
<td>150</td>
<td>.035”</td>
</tr>
</tbody>
</table>

Width  Standard 4 Feet
Length 8, 9, 10 and 12 Feet

Glasliner FRP is available in the following sizes:

800-238-5546  www.glasteel.com
Low Cost Installation
• Easy to handle and install in any type of construction, and over any type of existing wall surface
• No special tools needed
• More economical than stainless steel or ceramic tile

Improved Chemical Resistance
• Resists stains
• Rust proof - will not corrode
• Minimum maintenance and never needs painting

Superior Flexibility
• Panels are flexible enough to lay flat, allowing a better fit into areas with close tolerance seams

Custom Designed Liner Panels
• Available in 5 different standard panel thicknesses
• Shipped in standard 4 foot width and in 8, 9, 10 and 12 foot lengths

800-238-5546 www.glasteel.com
Approvals & Certifications

- **ISO 9001:2008**: All Glasteel plants are ISO 9001:2008 Certified
- **Meets USDA/FSIS requirements**
- **Canadian Food Inspection Agency (CFIA) accepted**
- **ASTM**: All Glasliner FRP liner panels are manufactured according to industry standard ASTM D-5319-2008

- **Fire Ratings**: Glasliner products are available on multiple fire ratings, such as Class C (general purpose) and Class A (fire retardant). Please contact your Glasteel representative for test results.

### Typical Physical Properties for .090” Contractor Grade

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Unit</th>
<th>Glasteel Class C General Purpose Result</th>
<th>Glasteel Class A Fire Retardant Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength</td>
<td>ASTM D-790</td>
<td>PSI</td>
<td>17,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>ASTM D-790</td>
<td>PSI</td>
<td>6.0 x 10^5</td>
<td>3.1 x 10^5</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D-638</td>
<td>PSI</td>
<td>8,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>ASTM D-638</td>
<td>PSI</td>
<td>9.43 x 10^5</td>
<td>3.1 x 10^5</td>
</tr>
<tr>
<td>% Elongation</td>
<td>ASTM D-638</td>
<td>%</td>
<td>1.20</td>
<td>1.80</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>ASTM D-570</td>
<td>%</td>
<td>0.17</td>
<td>0.72</td>
</tr>
<tr>
<td>Izod Impact Strength</td>
<td>ASTM D-256</td>
<td>ft.-lbs./in.</td>
<td>7.0</td>
<td>7.16</td>
</tr>
<tr>
<td>Coef. of Linear Thermal Expansion</td>
<td>ASTM D-696</td>
<td>in./in. /˚F</td>
<td>2.22 x 10^{-5}</td>
<td>2.39 x 10^{-5}</td>
</tr>
<tr>
<td>Barcol Hardness</td>
<td>ASTM D-2583</td>
<td>Avg.</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>ASTM D-792</td>
<td>N/A</td>
<td>1.6138</td>
<td>1.5743</td>
</tr>
<tr>
<td>Abrasion Resistance</td>
<td>TABER</td>
<td>% WT Loss</td>
<td>0.293</td>
<td>0.391</td>
</tr>
<tr>
<td>Flash Ignition Temp.</td>
<td>ASTM 1929</td>
<td>ºC</td>
<td>430</td>
<td>400</td>
</tr>
<tr>
<td>Self Ignition Temp.</td>
<td>ASTM 1929</td>
<td>ºC</td>
<td>450</td>
<td>430</td>
</tr>
<tr>
<td>Flame Spread</td>
<td>ASTM E-84</td>
<td>N/A</td>
<td>≤200</td>
<td>≤25</td>
</tr>
<tr>
<td>Smoke Generation</td>
<td>ASTM E-84</td>
<td>N/A</td>
<td>&lt;450</td>
<td>&lt;450</td>
</tr>
</tbody>
</table>

Storage Recommendations

- Store panels indoors in a cool, dry, well-ventilated area
- Panels should be stacked on skids not more than 5 skids high
- Do not allow moisture to collect on or in-between panels

800-238-5546   www.glasteel.com
**Safety:**
- Use eye protection.
- Wear filter mask to cover nose and mouth, especially when cutting.
- Refer to our web site for recommended sealants and adhesives.

**Tools Needed:**
- Power or hand saw (fine tooth or carbide blade)
- Power or hand drill (carbide tip recommended)
- Carpenter’s square
- Hammer, tape measure and level
- Adhesive and notched trowel
- Silicone sealant and caulkging gun
- Vinyl moldings and 3/4” nylon fasteners
- Eye and Nose/Mouth Protection

**Preparation:**
- It is important to store Glasliner FRP flat, on a clean, dry surface for 24 hours before installation. It is preferable to store them inside the actual area of installation or, at least, under similar climate conditions.
- Walls must be clean and free of all substances.
- Level any high or low spots on walls. Concrete block walls may require a leveling coat of plaster or other similar material.

**Installation of FRP Panels, in any application, should be approved by local building code officials before panels are ordered. Glasteel cannot ensure local code compliance in any or all situations.**

**NOTICE**
- Panels and components made of fiberglass (FRP), wood, vinyl or foam may be combustible. **DISCLAIMER and LIMITATION OF LIABILITY**
- The information contained in this literature is presented in good faith, and is believed to be accurate and reliable at time of publication. No representation, guarantee or warranty is made as to the completeness, reliability or accuracy of this information. This also includes NO IMPLIED WARRANTY OR MERCHANTABILITY OR FUNCTIONAL USE FOR SPECIFIC APPLICATION.
Cutting Glasliner FRP for Floor to Ceiling Heights of 8 Feet or Less:

- Subtract 1/2” from height measurement to allow for expansion.
- Allow for 1/8” expansion gap around pipes and other projections.

Drilling Fastener Holes:

- Pre-drill fastener holes before applying adhesive.
- Fastener holes should be slightly oversize to allow for normal expansion and contraction.
- Drill holes no further than 8” apart and 1” from outside edge, 16” apart on intermediate and on 16” centers.

Installation reminders:

1. Follow safety and fire guidelines during installation and use of panels.
2. First panel installed should be set true with plumb line.
3. Wall must be clean and flat.
4. Use moldings, silicone, nylon rivets and adhesive for best installation.
5. Apply adhesive per manufacturer’s instructions.
6. Install panels and moldings.
7. Seal edges and moldings.
8. Remove excess silicone.
9. Clean panels after installation with light detergent.

800-238-5546 www.glasteel.com

Applying Adhesive

- For best installation, combine adhesive and nylon fasteners.
- Glasliner FRP should never be installed on uneven walls using only adhesive.

Actual requirements may vary. Call Glasteel for complete Installation Instructions.

www.glasteel.com
Ceiling Panels

Applications
- Food processing areas
- Restaurants
- Bathrooms
- Storage rooms
- Schools
- Hospitals
- Many other applications where sanitation is required

Easy to Install
- Cut to size for easy installation
- Lightweight and easy to handle

Minimal Deflection
- Panel formulation makes for a strong, rigid ceiling panel

Characteristics
- Moisture resistant - does not support mold or mildew
- Rust proof - will not corrode
- Stain resistant
- High strength-to-weight ratio
- Easily removable for cleaning

Ceiling Panel Specifications

<table>
<thead>
<tr>
<th>Sizes</th>
<th>23 3/4” x 23 3/4”</th>
<th>23 3/4” x 47 3/4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>0.100”</td>
<td></td>
</tr>
<tr>
<td>Finishes</td>
<td>Textured or Smooth</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Standard Colors</td>
<td></td>
</tr>
<tr>
<td>Sag Tolerance</td>
<td>← .25”</td>
<td></td>
</tr>
<tr>
<td>Fire Rating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class C</td>
<td>General Purpose</td>
<td></td>
</tr>
<tr>
<td>Class A</td>
<td>Fire Retardant</td>
<td></td>
</tr>
</tbody>
</table>

800-238-5546 www.glasteel.com
Glasliner can be installed directly to solid walls or over insulation. As an extra barrier of protection against moisture and insects,
Glasliner also traps in the energy used to heat and cool your home.

Features
- UV Resistant
- .060” thickness
- Stain, odor and moisture resistant
- Insect and pest resistant
- Shatter resistant
- Energy efficient
- Attractive gray pebbled finish adds value to your property
- Protects basements and crawlspaces from flooding
- Easy to install on both existing buildings and new construction
- Can be installed directly to solid walls or over insulation
- Stays strong and sturdy in any season
- 10 year Limited Warranty

Sizes
- Standard 50’ lengths
- 1’, 2’ and 4’ widths.

Recommended Accessories

*Savings from insulated foundations vary with fuel prices, heating equipment, performance, and climate.

800-238-5546 www.glasteel.com