FXE - Factory Mutual Approved

GLASBORD EMBOSSED WALL & CEILING PANEL
CLASS A FIRE RATING AS TESTED PER ASTM E-84

Product
Factory Mutual approved Fire-X Glasbord FM with Surfaseal is made of fiberglass reinforced plastic. It is a durable, flexible building material and will not mold, mildew, rot, or corrode. It exhibits excellent resistance to mild chemicals and moisture. The panel has a Class A (1) rating for flame spread and smoke development.

Surfaseal Finish
Surfaseal is a unique surface treatment that, when compared to ordinary ffp, exhibits up to ten times the cleanliness, six times the stain resistance, and twice the abrasion resistance.

Purpose
Fire-X Glasbord FM embossed panels are designed for interior wall finishes where a Class A fire-rated, Factory Mutual approved, sanitary, easy-to-clean panel is desired.

Ceiling Application
Fire-X Glasbord FM panels are approved for lay-in ceiling applications in a steel suspended ceiling system, without overlaid gypsum or insulation panels or blankets.

PHYSICAL PROPERTIES: TABLE 1

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>0.09&quot;</th>
<th>2.3 mm</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength</td>
<td>15 x 10^6 psi</td>
<td>103 MPa</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>0.9 x 10^6 psi</td>
<td>6200 MPa</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>6 x 10^6 psi</td>
<td>40 MPa</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>1.6 x 10^6 psi</td>
<td>8960 MPa</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Barcol Hardness</td>
<td>55</td>
<td>55</td>
<td>ASTM D2583</td>
</tr>
<tr>
<td>Izod Impact Strength</td>
<td>11 ft-lb/in notched</td>
<td>0.58 J/mm</td>
<td>ASTM D256</td>
</tr>
<tr>
<td>Gardner Impact Strength</td>
<td>40 in-lbs</td>
<td></td>
<td>ASTM D5420</td>
</tr>
<tr>
<td>Coefficient of Linear Thermal Expansion</td>
<td>1.7 x 10^-5 in/in•F</td>
<td>31 μm/m•°C</td>
<td>ASTM D686</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>0.16%/24 hrs @77°F</td>
<td>0.16%/24 hrs @25°C</td>
<td>ASTM D570</td>
</tr>
<tr>
<td>R Value</td>
<td>0.23 hr*ft²°F/Btu</td>
<td>0.047 hr•m²•°C/kcal</td>
<td>ASTM D177</td>
</tr>
<tr>
<td>Surface Burning Characteristics</td>
<td>Class A</td>
<td></td>
<td>Class A</td>
</tr>
<tr>
<td>Taber Abrasion Resistance</td>
<td>0.036% max wt loss</td>
<td>0.038% max wt loss</td>
<td>Taber Abrader</td>
</tr>
</tbody>
</table>

DESIGN DATA: TABLE 2

<table>
<thead>
<tr>
<th>PART NUMBER IDENTIFIER</th>
<th>AVAILABLE COLORS</th>
<th>SIZE</th>
<th>FINISH</th>
<th>NOMINAL THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FXE</td>
<td>85 white</td>
<td>4' x 8', 9', 10', 12'</td>
<td>embossed</td>
<td>0.09&quot; (2.3 mm)</td>
</tr>
</tbody>
</table>

(1.2m x 2.4m, 2.7m, 3.0m, 3.7m)  
2' x 2' and 2' x 4' grid systems  
(0.6m x 0.6m and 0.6m x 1.2m)  

Other lengths, widths, and colors available by quotation.
SPECIFICATIONS
These panels are manufactured by a continuous laminating process in lengths as required.

COMPOSITION
1. Reinforcement: Random chopped fiberglass roving.
2. Resin mix: Modified polyester copolymer and inorganic fillers and pigments.

FINISHED PANEL QUALITY
1. Panels shall have a wear side with a pebble-like embossed finish. Color shall be uniform throughout, as specified. Other colors can be manufactured. The backside shall be smooth. Backside imperfections that do not affect functional properties are not cause for rejection.
2. Physical properties shall be as set forth in Table 1.
3. Product quality standards and tolerances for panel weight and thickness shall be as set forth in Crane Composites’ Quality Control Procedures/Standards which are available on request.
4. Dimensions shall be as specified on purchase order, subject to the following tolerances:
   Width: ±1/8” (3.2 mm)
   Length: ±1/8” (3.2 mm) up to 12’ (3.7 m)
   Squareness: not more than 1/8” (3.2 mm) out of square.
5. Panels shall be installed in accordance with manufacturer’s guidelines as set forth in the Glasbord “Installation Guide.”
6. Bulk Coil Policy #6207 applies for coils for lamination.

CERTIFICATION
A. Meets USDA/FSIS requirements.
B. Meets minimum requirements of model building codes for Class A (1) interior wall and ceiling finishes. Flame spread less than 25, smoke developed 450 or less (as tested per ASTM E-84).
C. ICBO Report #ER-4583.
D. Product identified by two sets of one red and one blue thread on backside of the panels and one red and one blue thread on the backside of the ceiling panels. Two Translucent Plastic Threads with Fluorescent Pigment Design on the front side Glassbord FM.
E. FRP does not support mold or mildew (as tested per ASTM D3273 and ASTM D3274).
F. FMRC approved.

With the misinformation that exists in the market, contractors may be presented with product choices they believe to meet an “FM Approved” specification. Fire-X Glassbord FM is the only fiberglass reinforced interior wall panel that is accepted under Factory Mutual Research Approved FRP, Class 1 Interior Finish Material in accordance with Factory Mutual Research Approval Standard 4690. Test report #2662-A.FM. Fire-X Glassbord FM is manufactured by Crane Composites, Channahon, IL.

FABRICATING RECOMMENDATIONS
Note: Protect your eyes with goggles; cover your nose and mouth with a filter mask when cutting Glassbord panels.
Hand fabricating: Drilling—High speed drill bit (60° cutting angle, with 12°-15° clearance) or hole saw.
Stapling: Standard pneumatic stapler.
Cutting: Sheet metal shears or circular saw with reinforced carboundum or carbide-tipped blade.
Production fabricating: Use carbide-tipped tools. Straight cuts can be sheared (90° cutting edge with 0.002” [0.05 mm] clearance) or sawed. For irregular cuts, use die punch or band saw.

STORAGE
All Crane Composites products should be stored indoors.

SERVICEABLE TEMPERATURE RANGE
Panels will perform in temperatures from -40°F (-40°C) to 130°F (55°C). For use in environments beyond this range, contact Crane Composites for recommendations.

PRODUCT LIMITATIONS
Near heat source: Glasbord panel products may discolor when installed near a heat source which radiates temperatures exceeding 130°F (55°C) such as cookers, ovens, and deep fryers.
Uneven surface: Installation over uneven concrete block walls may result in areas of delamination and bulging.

CRANE COMPOSITES TESTING
Cleanability test: When Glasbord with Surfaseal and an ordinary FRP panel are heavily soiled, the Glasbord panel exhibits up to 10 times more cleanability per Macbeth Computer Colorimeter. Stain resistance test: Prolonged direct contact to concentrated ammonia-based cleaner exhibited no color change per Macbeth Computer Colorimeter.

NOTICE
Panels will provide a clean, aesthetically-pleasing finished installation. However, by nature, fiberglass reinforced plastic paneling may occasionally have small areas that are aesthetically unacceptable for use. Panels should be inspected on-site prior to installation. If any portion of material will not provide an acceptable appearance, Crane Composites should be notified at once. Upon verification of unacceptable, that portion of material will be replaced by Crane Composites. Crane Composites’ sole responsibility is for the replacement of defective material but not for labor or other handling or installation expenses.

We believe all information given is accurate. It is offered in good faith, but without guarantee. Since conditions of use are beyond our control, all risks are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending a license under valid patents.

FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS
The numerical flame spread and smoke development ratings are not intended to reflect hazards presented by Crane Composites products or any other material under actual fire conditions. These ratings are determined by small-scale tests conducted by Underwriters Laboratories and other independent testing facilities using the American Society for Testing and Materials E-84 test standard (commonly referred to as the “Tunnel Test”). CRANE COMPOSITES PROVIDES THESE RATINGS FOR MATERIAL COMPARISON PURPOSES ONLY. Like other organic building materials (e.g., wood), panels made of fiberglass reinforced plastic resins will burn. When ignited, FRP may produce dense smoke very rapidly. All smoke is toxic. Fire safety requires proper design of facilities and fire suppression systems, as well as precautions during construction and occupancy. Local codes, insurance requirements and any special needs of the product user will determine the correct fire-rated interior finish and fire suppression system necessary for a specific installation.

Additional Information Available:
- #6211 Installation Guide
- CSI Specifications
- #6220 Accessories Tech Data

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1-815-467-8600 ph.
1-815-467-8666 fax
www.glasbord.com

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CRANE Composites
Form 6223 Rev. 14 (4031)