USG BORAL GLASS-MAT PORTFOLIO

USG BORAL GLASS-MAT PANELS NOW HAVE YOU COVERED INSIDE AND OUT.
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“We believe we can change the way buildings are designed and built.”
Factory of USG Boral Middle East, a building construction products joint venture, brings together Boral’s leading plasterboard manufacturing and distribution in Asia and the Middle East with USG’s world-leading technologies and strategic assets in Asia and the Middle East.

For over 100 years, USG has led the building industry in drywall innovation. In that time, USG Sheetrock®, Securock®, Durock® and Fiberock® brands have become the standard for the highest-quality and best-performing walls and ceilings. The USG Boral joint venture now makes these products available to our customers in Middle East under the USG Boral brand names.

Leading the way in translating our customers’ needs into innovative solutions, USG Boral’s Glass-Mat portfolio encompasses a range of applications, from wet area to sheathing, delivering the quality, strength, and ease of use that contractors, builders and dealers need.

Offering one of the region’s largest-selling, broadest line of interior and exterior panels, USG Boral’s range of products exceed the essential requirements of performance, safety, efficiency, workability, strength and ease of decoration to achieve top quality construction.

Beyond outstanding products, we also offer expertise, technical support and Middle East wide distribution. All driven by a dedication to finding solutions for you. We do all of this to contribute to improving the lives of our employees, our customers and our communities.

When you succeed, we succeed. And your exceptional work — combined with our solutions — brings new levels of performance, enabling you to create the spaces where people live, work and play.
USG BORAL SECUROCK™ BRAND
GLASS-MAT PORTFOLIO

Exterior and Wet Area Applications
USG Boral Securock™ Brand Glass-Mat Sheathing Regular and Firecode™

USG Boral Securock™ Brand Glass-Mat Sheathing is a non-combustible, moisture- and mold-resistant panel that offers a fiberglass facer mat to maximize coverage of air/water barrier systems. It was designed for use under exterior claddings, where conventional gypsum sheathing products have traditionally been used; or, as a substrate in properly detailed Exterior Insulation Finishing Systems (EIFS), Direct-applied Exterior Finishing System (DEFS), metal panel finishing, clapboard siding, shingle siding, shake siding and conventional stucco.

Advantages:

**Mold-resistant:** High resistance to mold and mildew, scoring a 10 (highest) when tested in accordance with ASTM D3273.

**Resists Water:** Glass-mat sheathing facer on both sides sheds water.

**Fire-resistant:** Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation USGX)

**Quick and Dry Installation:** Quick score and snap, with neither sawing or special tools nor rapid screws or nail attachments required.

**Exposure:** Can be exposed to weather for up to 12 months after application.

**Warranted Performance:** USG Boral Securock™ Glass-Mat Sheathing is guaranteed for five years against manufacturing defects and for 12 months of weather exposure.
FEATURES AND BENEFITS

Exterior and Wet Area Applications

Water-, Moisture- and Mold-resistant, and Non-combustible
- 100% inorganic, non-woven glass fiber scrim on both sides
- Patented Mold Tough™ technology with moisture- and mold-resistant gypsum core
- Non-combustible per BS 476 part 4 and ASTM E136

Meets Industry Standard
- Approved for use by leading EIFS/DEFS companies
- Compliant with ASTM C1177 standards (Standard specification for Glass-Mat Substrate for use as sheathing)
- Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation USGX)

Quick Installation
- Easy to score and snap
- Accepts fasteners well

Warranted Performance
- Can be exposed to the weather for up to 12 months
- Guaranteed for five years against manufacturing defects
- Backed by the high-quality standards and outstanding service of USG Boral

Choice
- Global manufacturing network
- 12.7mm (1/2”) Securock™ Glass-Mat Sheathing Panel
- 15.9mm (5/8”) Securock™ Glass-Mat Sheathing Panel
USG Boral Securock™ Brand Glass-Mat Sheathing
Regular and Firecode™ X

### Quality, High-performance Sheathing for Warranted Protection from the Elements

- Treated gypsum core, combined with fibreglass face and back, offers exceptional water resistance
- Scores and snaps easily for quick installation
- For use in most exterior systems when properly detailed by exterior finish manufacturer
- Meets or exceeds the requirements of ASTM C1177

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ADVANTAGES</th>
</tr>
</thead>
</table>
| USG Boral Securock™ Brand Glass-Mat Sheathing is a non-combustible, moisture- and mold-resistant panel designed for use under exterior claddings where conventional gypsum sheathing products have traditionally been used, such as brick veneer, properly detailed Exterior Insulation Finish Systems (EIFS), Direct-applied Exterior Finishing System (DEFS), metal panel finishing, clapboard siding, shingle siding, shake siding and conventional stucco. | **Mold-resistant**: High resistance to mold and mildew, scoring a 10 (highest) when tested in accordance with ASTM D3273.  
**Resists Water**: Glass-Mat Sheathing facer on both sides sheds water.  
**Quick and Dry Installation**: Quick score and snap, with neither sawing or special tools nor rapid screws or nail attachments required.  
**Exposure**: Can be exposed to weather for up to 12 months after application.  
**Warranted Performance**: USG Boral Securock™ Glass-Mat Sheathing is guaranteed for five years against manufacturing defects and for 12 months of weather exposure. |
LIMITATIONS

1. USG Boral Securock™ Glass-Mat Sheathing shall not be used as a nail base for exterior cladding.

2. Specific requirements regarding framing spacing, fastener spacing and fastener specifics to provide required lateral wind-load resistance are the responsibility of the design professional. (Refer to technical data and specifications on the following pages.)

3. USG Boral Securock™ Glass-Mat Sheathing offers resistance to weather but is not intended for constant exposure to water. Protect this and all similar materials from the eroding effects of cascading water. If extreme weather conditions are possible, the design professional should consider recommending that panel joints be treated or a weather-resistant barrier be installed.

4. Not recommended for lamination to masonry surfaces. Use furring strips or framing.

5. Maximum stud spacing is 24" (610mm) centers.

6. USG Boral Securock™ Glass-Mat Sheathing is not a finished surface.

PRODUCT DATA

**Dimension:** 1/2" (12.7mm) or 5/8" (15.9mm) thick, 48" (1219mm) wide, 2300mm, 8’ (2438mm), 9’ (2743mm) and 10’ (3048mm) long. Up to 12’ (3658mm) lengths available in 5/8” (15.9mm) thickness in some markets. Other sizes available on special order. Consult your USG Boral sales office or representative for more information.

**Weight:** Approximately 2.0 lbs./sq. ft (9.8 kg/m²) for 1/2” (12.7mm thickness), 2.7 lbs./sq. ft. (13.2 kg/m²) for 5/8” (15.9mm) thickness.

**Edge Configuration:** Square edges.

**Compliance with Standards:** Meets or exceeds the physical property requirements of ASTM C1177. 5/8” (15.9mm) USG Boral Securock™ Glass-Mat Sheathing is UL Classified as to fire resistance, surface burning characteristics and core combustibility. ICCES Evaluation Report ESR 3044.

**Fire Performance:** USG Boral Securock™ Glass-Mat Sheathing has a non-combustible core when tested in accordance with ASTM E136. Surface-burning characteristics - Flame spread: 0, and smoke developed: 0, when tested in accordance with ASTM E84. Fire resistance — 5/8” (15.9mm) panels meet the requirements of Type X as defined in ASTM C1396 and ASTM C1177 when tested in accordance with ASTM E119. UL Classified as to fire resistance. See Underwriters Laboratories Fire Resistance Directory for specific designs.

**Tensile Bond:** Exceeds 15 psi requirements for both cementitious and acrylic adhesives per ASTM C297.
Due to the variability in environmental conditions of each installation, the framing and fastener spacing of curved walls should be reduced as the radius approaches the minimum allowed. At the minimum radius, it is recommended that fastener and frame spacing be 6” (152mm) centers.

Notes:
Applicable for both steel and wood framing. The values in this table are based on testing per ASTM E330 and represent the capacity of the sheathing to resist flexural failure or fastener pull-through with a 3.0 factor of safety. Capacities are based on a minimum fastener head diameter of 0.325” (8.3mm) (#6 bugle head screw). The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the Designer of Record. Manufacturer’s recommendations are given below. These capacities assume continuous support of each stud flange over the full length of the sheathing panel. Allowable pressures are based on a maximum deflection limitation of L/360. Consult USG Boral representative for higher deflection limitations. Allowable pressure values are for short-term wind loads. Framing design is independent of these values. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

Moisture and Mold Resistance: USG Boral Securock™ Glass-Mat Sheathing resists moisture and mold, and complies with ASTM CI177 for water resistance. In independent lab tests conducted on USG Boral Securock™ Glass-Mat Sheathing at the time of manufacture per ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be affected by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation, as well as after completion of the building. This can be accomplished by using good design and construction practices.

### Physical Properties Per ASTM CI177

<table>
<thead>
<tr>
<th>Property</th>
<th>1/2” (12.7mm) USG Boral Securock™ Brand Glass-Mat Sheathing</th>
<th>5/8” (15.9mm) USG Boral Securock™ Brand Glass-Mat Sheathing Firecode™ X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight, nominal, lbs./sq. ft. (kg/m)</td>
<td>2.0 (9.8)</td>
<td>2.7 (13.2)</td>
</tr>
<tr>
<td>Linear expansion with moisture change, in/in %RH</td>
<td>6.25 x 10⁻⁴</td>
<td>6.25 x 10⁻⁴</td>
</tr>
<tr>
<td>Coefficient of thermal expansion, in/in/°F (mm/mm/°C)</td>
<td>8.5 x 10⁻⁴ (15.3 x 10⁻⁴)</td>
<td>8.5 x 10⁻⁴ (15.3 x 10⁻⁴)</td>
</tr>
<tr>
<td>Flexural strength, parallel, lbf. (N)</td>
<td>&gt;80(356)</td>
<td>&gt;100(444)</td>
</tr>
<tr>
<td>Flexural strength, perpendicular, lbf. (N)</td>
<td>&gt;107(476)</td>
<td>&gt;147(653)</td>
</tr>
<tr>
<td>R-Value, ft²•°F•hr/BTU (m²•K/W)</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td>Combustibility</td>
<td>Non-combustible</td>
<td>Non-combustible</td>
</tr>
<tr>
<td>ASTM D3273 score</td>
<td>10/10</td>
<td>10/10</td>
</tr>
<tr>
<td>Permeance, perms</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>Surface burning characteristics (per ASTM E84 or CAN/ULC-S102): flame spread/smoke developed</td>
<td>O/O</td>
<td>O/O</td>
</tr>
<tr>
<td>Humidified deflection, in. (mm)</td>
<td>&lt;2/8” (&lt;6.4)</td>
<td>&lt;1/8” (&lt;3.0)</td>
</tr>
<tr>
<td>Bending radius (dry)*, ft. (mm)</td>
<td>9” (2743)</td>
<td>9” (2743)</td>
</tr>
</tbody>
</table>

Due to the variability in environmental conditions of each installation, the framing and fastener spacing of curved walls should be reduced as the radius approaches the minimum allowed. At the minimum radius, it is recommended that fastener and frame spacing be 6” (152mm) centers.

### Allowable Uniform Wind Load (lbs./sq. ft.) for 1/2” - Thick Panels [kN/m² for 12.7mm-Thick Panels]

<table>
<thead>
<tr>
<th>Frame Spacing</th>
<th>12” (305mm)</th>
<th>16” (406mm)</th>
<th>24” (610mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fastener Spacing</td>
<td>4 (102mm)</td>
<td>6 (152mm)</td>
<td>8 (203mm)</td>
</tr>
<tr>
<td>Allowable Pressure</td>
<td>75 (3.59)</td>
<td>46 (2.20)</td>
<td>34 (1.63)</td>
</tr>
</tbody>
</table>

### Allowable Uniform Wind Load (lbs./sq. ft.) for 5/8” - Thick Panels [kN/m² for 15.9mm-Thick Panels]

<table>
<thead>
<tr>
<th>Frame Spacing</th>
<th>12” (305mm)</th>
<th>16” (406mm)</th>
<th>24” (610mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fastener Spacing</td>
<td>4 (102mm)</td>
<td>6 (152mm)</td>
<td>8 (203mm)</td>
</tr>
<tr>
<td>Allowable Pressure</td>
<td>107 (5.12)</td>
<td>67 (3.21)</td>
<td>50 (2.39)</td>
</tr>
</tbody>
</table>

Notes: Applicable for both steel and wood framing. The values in this table are based on testing per ASTM E330 and represent the capacity of the sheathing to resist flexural failure or fastener pull-through with a 3.0 factor of safety. Capacities are based on a minimum fastener head diameter of 0.325” (8.3mm) (#6 bugle head screw). The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the Designer of Record. Manufacturer’s recommendations are given below. These capacities assume continuous support of each stud flange over the full length of the sheathing panel. Allowable pressures are based on a maximum deflection limitation of L/360. Consult USG Boral representative for higher deflection limitations. Allowable pressure values are for short-term wind loads. Framing design is independent of these values. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

Moisture and Mold Resistance: USG Boral Securock™ Glass-Mat Sheathing resists moisture and mold, and complies with ASTM CI177 for water resistance. In independent lab tests conducted on USG Boral Securock™ Glass-Mat Sheathing at the time of manufacture per ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be affected by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation, as well as after completion of the building. This can be accomplished by using good design and construction practices.
USG Boral Securock™ Glass-Mat Sheathing shall be installed in accordance with USG Boral Securock™ Glass-Mat Sheathing Installation Guide, GA-253 Application of Gypsum Sheathing, and ASTM C1280 Standard Specification for Application of Gypsum Panel Products for Use as Sheathing. If extreme weather conditions are possible, the design professional should consider recommending that panel joints be treated or a weather-resistant barrier be installed.

1.1 Scope
Specify to meet project requirements.

1.2 Delivery and Storage of Materials
All materials shall be stored in an enclosed shelter providing protection from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from the premises. Prior to installation, panels should be stacked flat (unless the contractor in charge of site safety directs otherwise to avoid point overloading of the structure or a tripping hazard) and reasonably protected from the elements.

Warning: Store all USG Boral Securock™ Glass-Mat panels flat. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized. Panels 12’ (3658mm) in length will be in banded units. To ensure safety and performance of the product, use of a forklift truck with ship minimum 35” (889mm) span between the forks when moving the banded units is recommended. Keep the nylon bands on each lift until individual boards are moved.

A. USG Boral Securock™ Glass-Mat Sheathing — 1/2” (12.7mm) or 5/8” (15.9mm) thick x 48” (1219mm) wide x 8’-10’ (2438mm-3048mm) long (up to 12’ (305mm) for 5/8” (15.9mm) thickness) with square edges.
B. Screws — 1-1/4” (32mm) or 1-5/8” (41mm) #6 bugle head corrosion-resistant fasteners. Where sheet-type, weather-resistive barriers or self-adhering membranes are placed over the sheathing, corrosion resistance shall be equal to or greater than a hot-dipped, galvanized coating of 460g/m² of surface area. Where liquid or fluid-applied air and water barriers are used, or where no sheet-type, weather-resistive barriers are used over the sheathing, screws shall have a corrosion resistance of more than 800 hours per ASTM B117. Stainless steel fasteners shall be used in coastal or aggressive environments. Consult the building code for other requirements.

3.1 Walls Sheathing
A. Apply weather-resistive or water barriers and flashing as required by and in accordance with the applicable local code requirements and the recommendations of the exterior cladding manufacturer, whichever is more stringent.
B. Maximum fastener spacing for vertical surfaces is 8” (203mm) centers, unless limited by wind load restrictions or wood stud racking resistance requirements outlined in Product Data.
C. Maximum frame spacing is 24” (610mm) centers.
D. Sheathing must be thoroughly dry prior to installing adhesively applied or self-adhered ice/water barriers and joint tape. Failure to do so will result in an insufficient bond to the sheathing.
E. Apply side labeled “USG Boral Securock™” toward exterior. Fit ends and edges closely but do not force them together.

F. Fasteners shall be driven flush with the panel surface, without countersinking or going deep enough to break the glass mat, and into the framing.

G. Unless otherwise specified or required, USG Boral Securock™ Glass-Mat Sheathing may be applied either perpendicular or parallel to wood or steel framing.

3.2 Soffits Sheathing Application
The maximum frame spacing for soffits is 16” (406mm) centers when installed parallel to the joists and 24” (610mm) centers when installed perpendicular to the joists. Maximum fastener spacing for horizontal surface (soffits) is 8” (203mm) centers.

3.3 Control Joints
Control joints shall be installed at building expansion joints. Location and design of these control joints shall be detailed by the design professional. Per the International Building Code (IBC), the distance between control joints shall not be more than 30’ (9144mm).

3.4 Shear- or Fire-rated Construction
Shear- or fire-rated construction may have additional execution requirements as specified in local codes or the UL Fire Resistance Directory.

3.5 Weather-resistant Barriers
No weather-resistant barrier is required for exposure warranty but may be required by local codes or cladding system specifications.

3.6 Exterior Cladding Application
Consult exterior cladding manufacturer for installation instructions.

3.7 EIFS/DEFS
EIFS/DEFS, like all other cladding systems, is vulnerable to moisture that enters the cavity through wall penetrations, such as windows, doors, deck attachments and utility pipe chases, and at wall/roof intersections. For most residential and some commercial EIFS/DEFS, manufacturers now specify a weather-resistive barrier for additional protection from moisture that penetrates the wall. In addition, manufacturers of windows, doors, flashing and sealants offer instruction on proper installation and maintenance of their products.

- EIMA (EIFS Industry Members Association), www.eima.com. This website has extensive information about proper installation of EIFS, sealants, and flashing, and proper attachment of EIFS to substrates, as well as inspection, maintenance and repair of EIFS claddings.
- ASTM E2112, Standard Practice for Installation of Exterior Windows, Doors and Skylights
- ASTM C1481, Standard Guide for Use of Joint Sealants with EIFS
- ASTM C1397, Standard Practice for Application of Class PB EIFS

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1.1 USG Boral Securock™ Brand Glass-Mat Sheathing meets or exceeds all requirements of ASTM C1177 Standard Specification for Glass-Mat Substrate for Use as Sheathing. Panels are available in 1/2” (12.7mm) and 5/8” (15.9mm) thicknesses, 48” (1219mm) wide, and standard lengths of 8’ (2438mm), 9’ (2743mm) and 10’ (3048mm), with square edges. Other sizes are available on special order.

1.2 This product may be used under exterior claddings where conventional gypsum sheathing products have traditionally been used, such as brick veneer, clapboard, wood shingles or shakes, plywood, vinyl, metal and conventional stucco. This product may also be used as a substrate for mechanically and adhesively attached EIFS/DEFS.

1.3 Details and requirements pertaining to framing and application limitations shall be controlled by the cladding, structural or fire-resistant-rated system, and must be approved by the architect, engineer or design professional of record.

1.4 This product shall be installed in accordance with GA-253 Application of Gypsum Sheathing, ASTM C1280 Standard Specification for Application of Gypsum Sheathing and the requirements of USG Boral product literature.

1.5 This product is not approved for use as a nail base.

1.6 Details for construction of a specific assembly to achieve a required fire resistance shall be installed in accordance with actual fire-resistive testing. Consult the actual UL design and local fire test report for more details.

1.7 Where sound control is required, details of construction shall be in accordance with an acoustical test report of an assembly that has met the required acoustical value(s).

1.8 Where resistance to racking shear and/or transverse wind load is required, system-design capacities shall be obtained from USG Boral-published literature, engineering evaluations and test reports of a specific assembly where mandated by local code requirements.

1.9 Always wear appropriate personal protective equipment, such as gloves, safety glasses, hearing protection and a NIOSH-approved dust mask, when handling and installing USG Boral Securock™ Glass-Mat Sheathing panels.
2.1 All materials shall be delivered in their original, unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements.

Warning: Store all USG Boral Securock™ Glass-Mat Sheathing panels flat, unless the site manager directs vertical stacking to avoid point overloading of the floor structure or a tripping hazard. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized.

2.2 Prevent face, back and edges of the panels from exposure to cascading water.

FRAMING

3.1 USG Boral Securock™ Glass-Mat Sheathing shall be installed on either wood or steel framing. The framing system shall be sized and designed to meet the requirements of the intended application.

3.2 The maximum spacing for framing members is 24” (610mm) centers.

3.3 Framing shall be straight and true, attached securely following accepted engineering practices and as required for the intended design.

3.4 The surfaces to which abutting edges or ends of the sheathing are to be attached shall not be less than 1-1/4” (32mm) for steel framing and 1-1/2” (38mm) for wood framing.

3.5 Bearing surfaces shall not be less than 3/4” (19mm) for internal corners or angles.

3.6 Framing members shall be installed so that the surface will be on an even plane, unless otherwise specified, after the sheathing has been applied. The fastening surface shall not vary more than 1/8” (3mm) from the plane of the faces of adjacent framing members.

SHEATHING CUTTING AND APPLICATION

4.1 USG Boral Securock™ Glass-Mat Sheathing may be applied with long dimensions parallel or perpendicular to framing members except where limited by specific requirements. Sheathing orientation may be governed by local code or by the requirements of shear or fire-rated construction. Consult local codes and site-specific construction documents to ensure such requirements are met for every assembly prior to construction.

4.2 USG Boral Securock™ Glass-Mat Sheathing shall be cut to size by scoring the face mat with a utility knife from the face side, or by sawing. Separate by snapping the panel away from the score line to fracture the core, and then by scoring the back mat with a utility knife. If a power saw is used, a cordless, low-rpm saw will generate less airborne debris than a corded power saw.

4.3 The cut edges and ends of the sheathing shall be trimmed to obtain neat-fitting joints when installed.

4.4 Holes for pipe penetrations, fixtures or other small openings shall be scored or saw-cut from the face side before removing the cut-out.

4.5 Install panels with the logo side out. Panels are labelled “this side out” along the edge that must be visible from the exterior side of the assembly when installed properly.

4.6 All vertical ends and edge joints shall abut over the centers of framing members and shall be offset a minimum of one framing bay between adjacent rows of sheathing panels.

4.7 Center panel joints on framing members. Fit panels closely at edges and ends, but do not force them together. Hold panels in firm contact with framing members and secure with fasteners as specified. Fasteners shall be driven flush with the panel surface — without countersinking or being deep enough to break the glass mat — and into the framing. Fasten the panel to the framing, working from the center of the panel toward the edges and ends.
4.8 Screw profile must be designed for the framing in use, unless superseded by a more stringent specification. The minimum requirements for sheathing fasteners shall be as follows:

a. **Screws:** (1-1/4”) (32mm) to (1-5/8”) (41mm) #6 bugle head corrosion-resistant fasteners.

b. **Corrosion Resistance:** Where sheet-type, weather-resistant barriers or self-adhering membranes are placed over the sheathing, corrosion resistance shall be equal to or greater than a hot-dipped galvanized coating of 1.5 ounces of zinc per square foot of surface area (460g/m²). Where liquid- or fluid-applied air and water barriers are applied to the sheathing, or where no sheet-type, weather-resistant barrier is used, screws shall have a corrosion resistance of more than 800 hours per ASTM B117. Stainless steel fasteners may be used in coastal or aggressive environments.

c. **Edge Distance:** The minimum distance from any fastener to the edge or end of the panel is 3/8” (9.5mm).

d. **Spacing:** Maximum fastener spacing is 8” (203mm) centers.

4.9 Supplementary use of panel adhesive will strengthen the connection and bridge minor irregularities between the panel and framing, facilitating enhanced performance and appearance. The use of adhesive, however, will not reduce the number of fasteners required by the specification. For optimal bond, apply adhesive in accordance with manufacturer’s instructions. Framing must be free from oil and dirt, and sheathing must be clean and dry.

4.10 Fit sheathing snugly around window and door openings. Sheathing joints shall be offset with a minimum of 4” (102mm) from the edge of any opening.

4.11 Sheathing shall be flashed at all openings (head, sill, etc.) and all roof or wall intersections (step, kickout, etc.), so water intrusion will not contact the sheathing.

4.12 Sheathing shall be no less than 8” (203mm) from the finish grade in weather- and water-protected siding, and no less than 12” (305mm) from the ground when used in correctly drained and vented crawl spaces.

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**SOFFIT CONSTRUCTION**

5.1 The roof must be dried-in prior to the installation of sheathing in horizontal applications.

5.2 Maximum fastener spacing for soffits is 8” (203mm) centers.

5.3 Panels are subject to expansion and contraction due to changes in temperature and humidity. A 1/4” (6.35mm) clearance joint (perimeter relief) is required between USG Boral Securock™ Glass-Mat Sheathing installed in soffits and adjacent walls, fascia, beams or columns. Wings of “L”, “U” and “T”-shaped areas should be separated with control joints. See the Control Joints section of this publication for additional requirements.

5.4 Adequate ventilation in accordance with the local code requirements shall be provided for the space immediately above the panels.

5.5 Applications must be designed to resist wind uplift. Contact USG Boral for a tailored design.

5.6 Fascia boards should extend at least 1/4” (6.35mm) below the ceiling board or adjacent trim moldings, whichever is lower, to provide a drip edge.
**Option 1**
Apply a synthetic-type, direct-applied finish system in accordance with the finish manufacturer’s recommendations.

**Option 2**
Apply USG Boral’s 3-coat joint system by first embedding USG Boral Paper Joint Tape in USG Boral Setting-Type Joint Compound over all joints, achieving 300mm in width for a flatter finish. Upon setting, apply the second coat to be 100mm wider than the first and the finishing coat a further 100mm wider with USG Boral Setting Type Joint Compound.

Once dry, apply a smooth and uniform coat of USG Boral Setting-Type Joint Compound over the entire surface of the panels. Setting-type joint compound should be applied thick enough to ensure proper hydration prior to setting. For ease of application, USG Boral Setting-Type Joint Compounds with longer setting times are recommended.

After the joint compound has dried, apply one coat of a good quality latex flat exterior primer and finish with two coats of a balanced, good quality alkyd or latex exterior finish paint.

**Option 3**
Apply 2 coat USG Boral DUROCK Base coat with USG DUROCK tape for exterior (4inch). Apply 3rd final coat on the board. After the basecoat has dried, apply one coat of latax flat exterior primer and finish with two coats of balanced, good quality alkyd or latex exterior finish paint. (Refer to paint manufacturer).

6.1 Install backer board with ends and edges closely abutted but not forced together. Stagger end joint in successive courses.

6.2 For wall application, fasten USG Boral Securock™ Glass-Mat Sheathing panels to framing with specified fasteners. Drive fasteners into field of panels first, working toward ends and edges.

6.3 Hold panels in firm contact with framing while driving fasteners. Ensure to space fasteners a maximum of 8” (203mm) for walls and 6” (152mm) for ceilings, with perimeter fasteners at least 3/8” (9.5mm) and less than 5/8” (15.9mm) from ends and edges. Drive screws to bottom of heads, so they are flush with panel surface and do not over drive fasteners.

6.4 Ensure the use of approved fasteners.

6.5 If required, pre-fill joints with latex-fortified mortar or approved waterproof ceramic tile adhesive, and then immediately embed USG Boral Joint Mesh Tape before levelling joints.

6.6 Maintain 1/4” (6.4mm) gap between USG Boral Securock™ Glass-Mat Sheathing to the tub surroundings.

6.7 Panels should be cut to size with a knife and straight edge. A power saw should be used only if it is equipped with a dust-collection device. Installer should wear NIOSH/MSHA-approved dust mask.

7.1 The location and design of control joints are the responsibility of the design professional of record.

7.2 Control joints are required by the International Building Code. The maximum distance between control joints shall not exceed 30’ (9144mm), and shall be installed at every building construction joint.

7.3 Locate all other control joints as per cladding system requirements or in accordance with ASTM C1280 Standard Specification for Application of Gypsum Sheathing, whichever is more stringent.
8.1 Leftover material shall be removed from the job site.

8.2 Waste material shall be disposed of in a safe manner and in compliance with site, local, state and/or federal requirements.

9.1 USG Boral Securock™ Glass-Mat Sheathing shall be covered by an exterior cladding or other weather-resistive barrier, and is not intended for long-term exposure. Sheathing shall not be exposed to the elements for more than 12 months after it has been installed. Immediately upon installing the panels, the joints should be finished and the entire panel covered with a weather-resistive barrier if the exposure time will be more than 12 months.

9.2 Apply weather-resistive or water barriers and flashing as required by and in accordance with the applicable local code requirements and the recommendations of the exterior cladding manufacturer, whichever is more stringent.

9.3 For maximum protection, the design professional may recommend treating the cut edges with a low-modulus silicone sealant; treat joints by embedding 4” (102mm)-wide USG Boral Durock™ Brand Exterior Tape in a low-modulus silicone sealant and strike joints flush using a trowel or broad knife. Allow sealant to cure per manufacturer’s instructions prior to installation of weather-resistive barrier and/or cladding system. An example of this sealant is Dow Corning® 795 Silicone Building Sealant.

Note: This treatment should be used only under mechanically attached weather-resistive barriers and cladding systems.

Warning
Products described here may not be available in all geographic markets. Consult your USG Boral sales office or representative for information.

Safety First!
This technical information is intended to provide general information and should not be a substitute for professional building advice. We recommend you use a qualified person to install USG Boral products. Illustrations in this guide are only representative of USG Boral products and the appearance and effects that may be achieved by their use. To ensure the information you are using is current, (USGBoral.com) recommends you review the latest building information available on the USG Boral website (USGBoral.com)

Follow good safety and industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

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Direct-applied Exterior Finishing System

USG Boral Securock™ Glass-Mat Sheathing Panel
- Fastened with specified screws
- Follow specified installation guide

Insulation
- Technical team specification

Full Render of Base Coat with Mesh
1. Trowel applied to joints with mesh (<2mm), allowed to dry*.
2. Trowel applied over entire surface (1.5mm), with embedded mesh. Skimmed smooth (max. 2.5mm), before allowed to dry
* Curing time of 24 hours for each coat, which may be shortened depending on weather

Stabilizer + Primer
- Roller applied
- 24 hours of drying time

Texture Finish
- Sprayed on with special spray gun** or trowel applied
**Depending on type of finishing

Clear Sealer
- Roller or spray applied

Metal Panel Facade Finishing System

Proprietary bracket for curtain wall system
Proprietary railing system installed on bracket (by curtain wall system supplier)
Insulation (optional), placed in the cavity of the drywall
USG Boral Fire Rated Plasterboard
USG Boral Metal Studs System
USG Boral Securock™ Glass-Mat Sheathing Panel

EIFS Systems
(EPS, PIR, Neo Insulation Board)

USG Boral Securock™ Glass-Mat Sheathing panel
- Fastened with specified screws
- Joints finished with BASF Basecoat and Mesh
Rock wool of Density 120 Kg/m³

Full render of BASF base coat with mesh or approved equal
BASF Fineprime or approved equal
Finestone clear sealer or approved equal
USG BORAL SHEETROCK® BRAND
GLASS-MAT PORTFOLIO

Interior and Shaftwall Applications
INTERIOR APPLICATIONS

USG Boral Sheetrock® Brand Glass-Mat Mold Tough™

USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ are engineered to be resistant to moisture and mold in interior pre-dry-in (aka "pre-rock") applications. USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ are high performance interior panels for new construction or renovation work. The panels have a non-combustible moisture- and mold-resistant core encased in a moisture-resistant fiberglass mat that sheds water and features tapered long edges for easy finishing. The facer mat is colored to match traditional drywall and is engineered to accept the application of USG Boral’s finishing systems. The 15.9 mm (5/8") and 25.4 mm (1") Firecode™ X is UL Classified for fire resistance and can be used in any UL designs where Type SGX panels are listed.

Advantages:
- **Mold-resistant**: Scores a 10 (highest) when tested in accordance with ASTM D3273.
- **Resists Water**: Water-resistant gypsum core with water-shedding glass mat on both sides.
- **Fire-resistant**: Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation SGX).
- **Quick Installation**: Simple score-and-snap, with no sawing or special tools required.
- **Warranted Performance**: USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ can be exposed to weather for up to 12 months and are guaranteed for three years against manufacturing defects.
**SHAFTWALL APPLICATIONS**

**USG Boral Sheetrock® Brand Glass-Mat Liner Panels**

USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ have non-combustible, moisture- and mold-resistant gypsum cores that are encased in moisture- and mold-resistant glass mats. The panels are UL Classified as to fire resistance (Type SLX) and feature double-beveled edges for easy installation.

**Advantages:**
- **Mold-resistant:** Scores a 10 (highest) when tested in accordance with ASTM D3273.
- **Resists Water:** Glass-Mat Sheathing facer on both sides sheds water.
- **Fire-resistant:** Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation SLX)
- **Quick and Dry Installation:** Quick score and snap, with neither sawing or special tools required.
- **Exposure:** Can be exposed to weather for up to 12 months after application.
- **Warranted Performance:** USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ is guaranteed for five years against manufacturing defects and has a 12-month limited-exposure warranty.
FEATURES AND BENEFITS

Interior and Shaftwall Applications

Water-, Moisture- and Mold-resistant
- 100% inorganic, non-woven glass fiber scrim on both sides
- Patented Mold Tough™ technology with moisture- and mold-resistant gypsum core
- Non-combustible per BS 476 part 4 and ASTM E136

Application – High-performance Shaftwall
- Walls enclosing elevator shafts, stairwells and other vertical shafts that are the lifeline of a building
- Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation SLX)

Application – Interior Application
- Pre-coated facer for smooth surface
- Ideal for pre-dry-in construction or interior applications
- Tapered edge panels and can be finished like plasterboard
- Extensive ANSI/UL 263 Fire-resistant Designs (UL Designation SGX)

Quick Installation
- Easy to score and snap
- Accepts fasteners well

Warranted Performance
- Can be exposed to the elements for up to 12 months
- Guaranteed for 5 years against manufacturing defects
- Backed by the high-quality standards and outstanding service of USG Boral

Choice
- 25.4mm (1”) Sheetrock® Brand Mold Tough™ Liner Panel
- 12.7mm (1/2”) Sheetrock® Brand Glass-Mat Mold Tough™ Panel
- 15.9mm (5/8”) Sheetrock® Brand Glass-Mat Mold Tough™ Panel (FireCode™ X)
USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™
Regular and Firecode™ X

High-performance Interior Wall Panels with Moisture and Mold Resistance

- Suitable for use in pre-dry-in and similar applications of wallboard before the building envelope is fully enclosed (i.e., semi-exposed, or when the facade or roof is not fully enclosed)
- For use in interior applications where glass-mat gypsum panels are desired
- Features an inorganic fibreglass face and back
- Can be used in protected exterior soffit applications
- Scores and snaps easily for quick installation
- Installs and finishes similar to standard drywall
- UL Classified as to fire resistance, surface-burning characteristics and non-combustibility

USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ are high-performance interior panels for new construction or renovation work. The panels have a non-combustible moisture- and mold-resistant core encased in a moisture-resistant fibreglass mat that sheds water and features tapered long edges for easy finishing. The facer mat is colored to match traditional drywall and is engineered to accept the application of USG Boral finishing systems. The back mat features USG Boral's distinctive green color. The 5/8” (15.9mm) Firecode™ X is UL Classified for fire resistance and can be used in any UL designs where Type SGX panels are listed.

**DESCRIPTION**

**ADVANTAGES**

**Mold-resistant**: Scores a 10 (highest) when tested in accordance with ASTM D3273.

**Resists Water**: Water-resistant gypsum core with water-shedding glass-mat on both sides.

**Quick Installation**: Simple score-and-snap, with no sawing or special tools required. Please see "USG Boral Sheetrock® Brand Gypsum Panels Installation Guide", for more information on the installation of gypsum panels.

**Warranted Performance**: USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ can be exposed to weather for up to 12 months and are guaranteed for three years against manufacturing defects. See warranty for details.
LIMITATIONS

1. Avoid exposure to sustained temperatures exceeding 50°C.
2. Maximum framing spacing is 24” (610mm) centers.
3. Intended for interior applications only and must be kept dry during handling and storage. Please see “Storage and Handling”, and GA-216 and ASTM C840 for handling and installation guidelines, including minimum 1/4” (6.4mm) gap from floor.
4. In pre-rock applications, temporary exposure to conditions such as wind pressure and moisture may influence the selection and spacing of fasteners and/or framing. Please reference WB2665 for more information about pre-dry-in installation of wallboard.
5. USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ offer resistance to normal weather conditions but are not intended for constant exposure to water. Protect from immersion in water and the eroding effects of cascading water.
6. The building must be dried-in prior to installation in soffits and other horizontal applications.
7. Wall cavities, floor cavities and other enclosed areas must be dry prior to being closed-up and application of interior finishing. Insulation in the wall or floor cavities must be dry.
8. Not suitable for use as a substrate for tile in wet areas such as tubs, showers, and gang showers, as well as other areas subject to direct water exposure. Use as a wall tile substrate is limited to tile installed according to current TCNA and ANSI specifications. Please consult with the adhesive and tile manufacturers for their recommendations for maximum size and weight parameters for use with gypsum board.

FINISHING AND DECORATING

For high-quality finishing results, USG Boral recommends the following products:
• USG Boral Sheetrock® Brand Ready-Mixed Joint Compounds
• USG Boral Sheetrock® Brand Setting-Type Joint Compounds
• USG Boral Sheetrock® Brand Joint Tape
• USG Boral Sheetrock® Brand Tuff-Hide™ Primer-Surfacer

Panels should not be finished until building is completely enclosed. The nature of the texture and absorption properties of the panel will require an additional skim coat on the entire panel surface with joint compound in most applications. Additionally, an aesthetic benchmark or mock-up is recommended for establishing and demonstrating an approved finishing system to coordinate the expectations of the design professionals with those of the contracted workforce. The finished appearance of the constructed standard should be approved in advance of any widespread work. Please reference “USG Boral Sheetrock® Brand Glass-Mat Panels Finishing Guide” for more information.

Painting products and systems used should comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer’s directions for materials used.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with an undiluted interior latex flat paint with high-solids content. Allow to dry before decorating.
Labeling: Each 5/8” (15.9mm) Firecode™ X panel bears the Underwriters Laboratories, Inc. label mark as evidence of UL Classifications for fire-resistance, surface-burning characteristics and non-combustibility.

### PRODUCT DATA

<table>
<thead>
<tr>
<th>Properties</th>
<th>Regular</th>
<th>Firecode™ X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness, in. (mm)</td>
<td>1/2” (12.7)</td>
<td>5/8” (15.9)</td>
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<tr>
<td>Lengths and widths¹, ft. (mm)</td>
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<td>8 - 12 (2438-3658)</td>
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<tr>
<td>Weight¹, nominal, lbs./sq. ft., (kg/m²)</td>
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<td>2.4 (11.7)</td>
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<td>Linear expansion with moisture change, in/in %RH (mm/mm %RH)</td>
<td>6.25 x 10⁻⁶</td>
<td>6.25 x 10⁻⁶</td>
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<td>Coefficient of thermal expansion, in/in/°F (mm/mm/°C)</td>
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<td>8.5 x 10⁻⁴ (15.3 x 10⁻⁵)</td>
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<tr>
<td>Flexural strength, parallel, lbf. (N)</td>
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<td>&gt;100 (444)</td>
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<tr>
<td>Flexural strength, perpendicular, lbf. (N)</td>
<td>&gt;100 (444)</td>
<td>&gt;177 (786)</td>
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<td>R Value², R²/F-hr/ BTU (m²·K /W)</td>
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<tr>
<td>Combustibility</td>
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<tr>
<td>Nail pull resistance, lbf. 3, 4 (N)</td>
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<td>90 (400)</td>
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<td>Hardness core, edges and ends, lbf. (N)</td>
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<td>&gt;15 (67)</td>
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<td>Water absorption (% of weight)</td>
<td>&lt;5</td>
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<tr>
<td>Surface water absorption</td>
<td>&lt;1.6 grams</td>
<td>&lt;1.6 grams</td>
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<tr>
<td>Surface burning characteristics (per ASTM E 84 or CAN/ULC-S102): flame spread/smoke developed</td>
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<tr>
<td>Humidified deflection, in. (mm)</td>
<td>&lt;1/4” (&lt;6.4)</td>
<td>&lt;1/8” (&lt;3.0)</td>
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<tr>
<td>Bending radius, ft. (mm)</td>
<td>8’ (2438)</td>
<td>8’ (2438)</td>
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</tbody>
</table>

¹ Other sizes available by special order. Check with your local USG Boral representative for availability.

² Represents approximate weight for design and shipping purposes. For specific product weight in your area, contact your local USG Boral representative or call the Customer Service Center at 1800 003 377.

### TEST DATA

**Moisture and Mold Resistance:** USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ resist moisture and mold, and comply with ASTM C1658 section 7.1.4 for water resistance. Per ASTM C473, the average water absorption for panels is not greater than 5 percent by weight after a two-hour immersion. In independent lab tests conducted on 5/8” (15.9mm) USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ at the time of manufacture per ASTM D3273, “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber”, the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation, and after completion of the building. This can be accomplished by using good design and construction practices.

### COMPLIANCE

- USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ comply with ASTM C 1658 section 7 and ASTM C 1177
- Per ASTM E136, non-combustible gypsum core
- Surface burning characteristics per ASTM E84: flame spread is 0, smoke developed is 0
- 5/8” (15.9mm) Firecode™ X is UL Classified Type SGX
- Qualifies as a low VOC-emitting material

### SUBMITTAL APPROVALS

<table>
<thead>
<tr>
<th>Job Name</th>
<th>Contractor</th>
<th>Date</th>
</tr>
</thead>
</table>
Finishing and Decorating Glass-Mat Interior Panels

USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough™ are high-performance interior wall panels suitable for use in pre-dry-in applications of wallboard (aka pre-rock) and similar applications before the building envelope is fully enclosed. They can be exposed to the elements for up to 12 months and are moisture and mold resistant. The fiberglass-facing and back panels shed water, and the panels score 10 out of 10 on the ASTM D3273 test for mold. Though glass-mat panels can be substituted for and installed similar to regular drywall, the fiberglass-facing of the panels is distinctly different than the paper-facing panels and need to be finished differently than paper-faced gypsum panels when receiving decoration. The texture of the panel and absorption of paint is dissimilar to paper-faced gypsum panels and requires an additional skim coat of joint compound in most applications.

There is currently no industry consensus on recommendations or standards for finishing glass-mat gypsum panels. USG Boral is working with several industry associations to update the GA-214 “Recommended Levels of Gypsum Board Finish” publication to include new finishing recommendations for glass-mat gypsum panels. The following guidelines can help improve success at the jobsite.

In addition to written project documents, a full-scale project standard(s) of the approved wall and/or ceiling configuration(s) should be erected on the jobsite by the contracted workforce so as to provide a visual benchmark. It should be finished and decorated in accordance with applicable project specifications set by the design and specifying or approving entities. Jobsite-constructed standards should be evaluated for appearance and agreed to by all stakeholders prior to conducting any widespread finishing work and/or production painting.

Determining the appropriate level of finish is dependent on a number of factors. Primary architectural considerations include the location within the structure, critical lighting conditions present, and wall smoothness desired, as well as the color, type and sheen or gloss of the decorative finish specified. Once all of the factors have been evaluated, project documents can be written in specific terms and jobsite visual standards created, enabling contractors to be better prepared to present their most competitive bid.

**JOINT TAPING**

Joints between USG Boral Sheetrock® Brand Glass-Mat Panels Mold Tough may be finished with either USG Boral Sheetrock® Brand Paper Joint Tape embedded in USG Boral Sheetrock® Brand All Purpose Ready-Mix Joint Compound or Sheetrock® Brand Fiberglass Drywall Tape embedded in USG Boral Sheetrock® Brand Setting-Type Joint Compound. Tape all joints and interior angles. After embedding tape, immediately wipe joints and interior angles with a joint knife, leaving a thin coating of joint compound.

**PROPER CONCEALMENT**

For proper concealment, use USG Boral Sheetrock® Brand All Purpose Joint Compound. For smooth wall applications, apply two separate coats over all flat joints; one separate coat over interior angles; and three separate coats to cover fasteners and accessories.

When using fill and finish coats of joint compound to properly conceal panel joints, fasteners and trim accessories make it impossible to achieve a flat plane on a finished surface. However, a properly finished panel wall can minimize the appearance of joints, fasteners and trims. Finishing and properly concealing joints and fasteners rely on two techniques: (1) using graduated arcs to prevent recesses or ridges and (2) not applying joint compound flush or flat to the panel surface. Recesses or ridges can result in distinct shadows in critical light or other adverse visual conditions. Applying joint compound flush or flat to the surface does not properly conceal the panel and increases the likelihood of joints and fasteners showing through the decorated finish.

**SANDING**

To minimize sanding, apply joint compound over joints, fasteners and accessories as smoothly or without defects as possible. Once the joint treatment phase is complete and the joint compound is thoroughly dry, some sanding of the joint compound may be required. To minimize texture variations, avoid sanding the panel face.

**Note:** DO NOT sand compound flush to panel surface; this will expose areas previously concealed. Avoid using excessively coarse or larger-sized abrasive media (or grit) that may leave visible scratches in the joint compound after painting. Remove all sanding dust prior to applying any surface treatments (primer or primer-surfacer).

**Wet Sanding:** Wet sanding with a damp sponge is preferred whenever possible, especially when minimal sanding is required.

**Note:** Wet sanding methods are not intended to remove large amounts of joint compound or compensate for poorly finished joints. Wet sanding produces no dust and requires minimal cleanup; it is less likely to scuff or damage the panel face surface. Wet-sanded areas may be more easily concealed with paint finishes than dry-sanded areas.

**Dry Sanding:** Either manual or power equipment can be used for dry sanding, which uses abrasive-faced material to remove joint compound from gypsum panel joints, fasteners and trims. Sanding materials with abrasive media or grit, sized as fine as possible are preferred. There are three major types of sanding materials: sandpaper, mesh and film; all offer a variety of grades. Good results can be achieved by using: 150-grit sandpaper or finer; 220-grit abrasive-mesh.

**SURFACE TREATMENT**

Glass-mat panels differ from paper-faced gypsum panels in the treatment of the panel surface in the following conditions:

**Level 3 finish - Recommended in areas where one or more of the following conditions exist:**

1. Areas to receive heavy- or medium-texture (spray or hand-applied) finishes before painting
2. Heavy-grade wall coverings are to be applied as a final decoration
3. Wall coverings to be applied

**Note:** Where rough surfaces are acceptable USG Boral Durock base coat to be applied as outlined in option 3 page 15.
When glass-mat panels transition to a dissimilar substrate material(s) and a textured wall pattern is specified that leaves a portion of said wall surface exposed (without texture) prior to painting: apply a skim coat\(^2\) of all purpose joint compound at a trowel-applied consistency to entire surface and let dry. The skim-coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT [Wet Film Thickness]) of a high quality primer or equivalent to cover surface. Allow surface to dry prior to decorating.

**Level 4 finish - Recommended in areas where one or more of the following conditions exist:**
1. Flat paints and smooth wall applications
2. Light textures to be applied
3. Wall coverings to be applied

*Note:* In critical lighting areas, flat paints applied over light textures tend to reduce joint photographing. Paints with sheen levels other than flat and enamel paints are not recommended over this level of finish.

Apply a skim coat\(^2\) of all-purpose joint compound at a trowel-applied consistency to entire surface and let dry. The skim-coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT) of a high quality primer or equivalent to cover surface. Allow surface to dry prior to decorating.

**Level 5 finish - Recommended in areas where one or more of the following conditions exist:**
1. Exposure to critical or severe lighting
2. Paints with sheen levels other than flat are specified
3. High-value spaces exist where the highest quality finish is expected

Apply a skim coat\(^2\) of all-purpose joint compound at a trowel-applied consistency to entire surface and let dry. The jobsite standard(s) shall dictate if additional skim coat(s) are required. The skim-coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one full coverage coat (5-10 mils WFT) of a high quality primer or equivalent to cover surface. Allow surface to dry prior to decorating.

*Note:* USG Boral Sheetrock® Brand Tuff-Hide™ Primer-Surfacer may be used in lieu of a second skim coat of USG Boral Sheetrock® Brand All Purpose Joint Compound and the application of USG Boral Sheetrock® Brand First Coat Primer. Refer to USG Boral Technical Literature J613 and J810 for more information regarding USG Boral Sheetrock® Brand Tuff-Hide™ Primer-Surfacer benefits and application.

The treated surface should be inspected for acceptance prior to installing the final decorative finish or top coat paints. For inspection methods, refer to the Drywall Finishing Council document “Method for Inspecting Interior Joint Treated Gypsum Panel Surfaces” (dwfc.org).

1. This ASTM test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.
2. When applying a skim coat, use only USG Boral Sheetrock® Brand All Purpose Joint Compound - DO NOT use USG Boral Sheetrock® Brand Plus 3™ Lightweight All Purpose Joint Compound or USG Boral Sheetrock® Brand Midweight™ All Purpose Joint Compound on glass-mat panels.

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USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™

- High-performance glass-mat panels with moisture and mold resistance for use in USG Boral shaftwall and area separation wall systems
- Direct substitute for USG Boral Sheetrock® Brand gypsum liner panels and USG Boral Sheetrock® Brand Mold Tough™ gypsum liner panels when prolonged weather exposure is anticipated
- UL Classified as to fire resistance, surface burning characteristics and non-combustibility
- Comprehensive product and system testing ensures long-term performance and safety

DESCRIPTION

USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ have a non-combustible, moisture- and mold-resistant gypsum core that is encased in a moisture- and mold-resistant glass mat. The panels are UL Classified as to fire resistance (Type SLX) and feature double-beveled edges for easy installation. Panel may be substituted for USG Boral Sheetrock® Brand gypsum liner panels and USG Boral Sheetrock® Brand Mold Tough gypsum liner panels in all USG Boral Sheetrock® Brand shaft wall and area separation wall systems.

Note: These USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ have been tested for fire resistance, structural performance and sound control only when used with USG Boral Sheetrock® Brand shaft wall and area separation wall framing components. All USG Boral Sheetrock® Brand shaft wall and area separation wall system components must be used together to ensure superior system performance and safety. Substitutions of any components are not recommended and are not endorsed by USG Boral.

ADVANTAGES

Mold-resistant: Scores a 10 (highest) when tested in accordance with ASTM D3273.

Resists Water: Glass-Mat Sheathing facer on both sides sheds water.

Quick and Dry Installation: Quick score-and-snap, with no sawing or special tools needed.

Exposure: Can be exposed to weather for up to 12 months after application.

Warranted Performance: USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ is guaranteed for five years against manufacturing defects and has a 12-month limited-exposure warranty.
1. Avoid exposure to sustained temperatures exceeding 50°C.

2. USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ offer resistance to normal weather conditions but are not intended for constant exposure to water. Protect this and all similar materials from immersion in water and the eroding effects of cascading water.


5. Not for use in unlined air-supply ducts.

**PRODUCT DATA**

**Size:** Panels are 1" (25.4mm) thick x 24" (610mm) wide and available in 8’ (2438mm), 10’ (3048mm) and 12’ (3658mm) standard lengths; other lengths available by special order.

**Weight:** Approx. 4.0 lbs/sf (4000 lbs/msf)

**Labeling:** Each panel bears the Underwriters Laboratories, Inc. mark as evidence of UL Classifications as to fire resistance, surface burning characteristics and non-combustibility.

**FLEXURAL STRENGTH**

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<tr>
<td>Parallel</td>
<td>&gt;200 lbf, per ASTM test method C473</td>
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<tr>
<td>Perpendicular</td>
<td>&gt;400 lbf, per ASTM test method C473</td>
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<tr>
<td>R Value</td>
<td>0.65, per ASTM test method C518</td>
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**TEST DATA**

**Moisture and Mold Resistance:** USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ comply with ASTM C1177 section 5.2.5 for water resistance.

In independent lab tests conducted on 1” (25.4mm) USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ at the time of manufacture per ASTM D3273, “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber,” the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

**COMPLIANCE**

- USG Boral Sheetrock® Brand Glass-Mat Liner Panels Mold Tough™ comply with ASTM C1658, C1396
- Per ASTM E136, non-combustible gypsum core

Surface Burning Characteristics: Class A, as defined in IBC Section 803.1 - flame spread is 20 and smoke developed is 0, when tested in accordance with ASTM E84.

**SUBMITTAL APPROVALS**

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<thead>
<tr>
<th>Job Name</th>
<th>Contractor</th>
<th>Date</th>
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