

Product Description

Glasliner Fiberglass Reinforced Polyester (FRP) Wall Panels, manufactured by Glasteel a Division of Stabilit America, Inc. are available in textured and smooth surfaces; provide ultimate durability, satisfying the most demanding applications. Glasliner FRP panels will not mold, mildew, rot or corrode. Glasliner FRP panels are engineered to provide durability, easy cleaning and maintenance.

Purpose

Glasliner FRP panels are designed for indoors wall finishes that require a Class C fire rating product. Glasliner FRP Panels are ideal for high traffic areas in Commercial, Industrial and Agro-Industrial applications where durability, hygiene, easy cleaning, easy maintenance and abrasion resistance are required: offices, restaurants, supermarkets, food processing areas, storage areas, car washes, restrooms, and many others.

Glasliner FRP panels also recommended for Residential use like garages, play rooms, bathrooms, laundry rooms, etc.

Physical Properties - Typical Values

0.090" (inches) Nominal Thickness / 1200 Series		
PROPERTY	TYPICAL VALUE	TEST METHOD
Flexural Strength	17,000 PSI	ASTM D790
Flexural Modulus	6.0 x 10 ⁵ PSI	ASTM D790
Tensile Strength	8,000 PSI	ASTM D638
Tensile Modulus	9.43 x 10 ⁵ PSI	ASTM D638
% Elongation	1.20%	ASTM D638
Izod Impact	7.0 ft-lb/in	ASTM D256
COLTE	2.22 x 10 ⁻⁵ in/in/°F	ASTM D696
Barcol Hardness	30	ASTM D2583
Abrasion Resistance	0.293 % Wt. Loss	Taber Test
Water Absorption	0.17% - 72 hr @ 77 °F	ASTM D570
Specific Gravity	1.6138	ASTM D792
Water Absorption (%)	≤ 200	ASTM E84
Specific Gravity	< 450	ASTM E84



Selections

NOMINAL THICKNESS	SERIES	FINISH	COLOR	SIZES
0.125" (inches)	1600	Embossed / Smooth	Bright White Almond Ivory Beige Light Gray Silver Black	4 ft x 8 ft 4 ft x 9 ft 4 ft x 10 ft 4 ft x 11 ft 4 ft x 12 ft
0.090" (inches)	1200			
0.060" (inches)	180			
0.045" (inches)	160			
0.035" (inches)	150			

***Custom Capabilities: other sizes and colors are available, minimum order requirements and other terms apply**

Standard Specifications

Glasliner FRP panels conform to the specification set on ASTM D5319:

- Flammability Classification: Class C - Flame spread index 76 to 200, smoke development index of 450 or less.
- Thickness classification: Grade 6 - 0.081 to 0.099 in. (2.06 to 2.51 mm); 0.090 in. nominal (2.29 mm) (data valid only for 1200 series panels).
- Size (Length and Width): Specified length and width $\pm 1/8$ in.
- Squareness: $\pm 1/8$ in.
- Thickness: Specified thickness ± 10 %.

Color: Panel color shall be per specification. Within 1 dE of the specified color using the CIELab scale.

Panels shall have a pebble texture or smooth surface front side. Smooth surfaced panels shall have a clear gel coating on front side for added protection. Panel back side is smooth and may possess slight imperfections that do not adversely affect performance or physical properties and are not cause for rejection.

Panels shall be installed in strict accordance with Glasliner FRP panel Installation Instructions (D-SA-01).

Approvals and Certifications

- Manufactured on an ISO 9001 Certified plant (TÜV Rheinland of North America, Inc.; Certificate Registration No. 74 300 3629).
- Certified Product under Greenguard and Greenguard Gold criteria (Certificates Number: 23966-410 and 23966-420).
- Meets USDA/FSIS requirements.
- Canadian Food Inspection Agency and Agriculture Canada approved.
- Meets minimum requirements of major model building codes for Class C interior wall and ceiling finishes of flame spread ≤ 200 , smoke developed index 450 or less (per ASTM E84).
- Mold & Mildew Resistant per ASTM D3273 and D3274 tests.

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.

Installation Overview

Safety: Use eye protection. Wear filter mask to cover nose and mouth, especially when cutting panels.

Tools Required: Power saw (carbide tip), saber saw (metal cutting blade), caulking gun, tape measurer, drill, file, hammer, level, saw horses and supports.

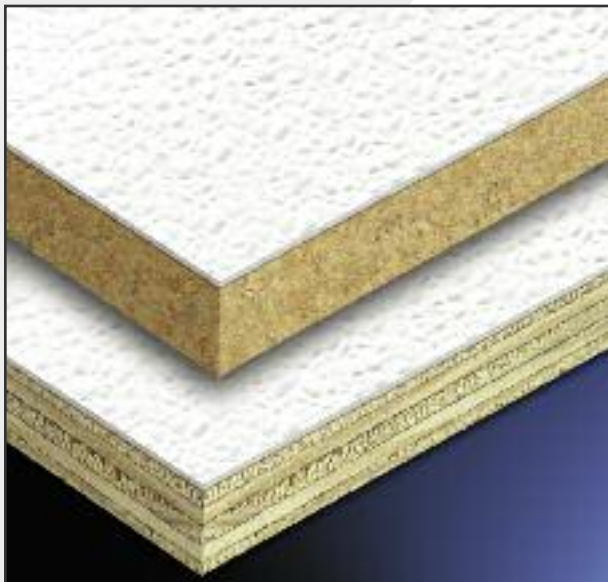
Preparation: It is important to store Glasliner FRP flat, on a clean, dry surface for 24 hours before installation. It is preferable to store them inside the actual area of installation or, at least, under similar climate conditions. Walls must be clean and free of all substances. Level any high or low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

Inspection: Carefully inspect all panels prior to installation. If any portion of material does not provide an acceptable appearance, Stabilit America, Inc should be notified immediately. Upon verification of unacceptability, that portion of material will be replaced by Stabilit America, Inc. Stabilit America, Inc's responsibility is for the replacement of defective materials but not for labor or other handling or installation expenses.

Limitations: Glasliner FRP panels shall maintain its performance characteristics and physical properties in temperatures ranging from -40°F to 130°F. Glasliner FRP panels may discolor near heat sources such as: ovens, fryers, heat lamps and toasters, where temperatures exceed 130°F.

DISCLAIMER: Stabilit America Inc., provides these results data for material comparison purposes only. The information offered herein is offered without charge and is accepted at recipient's sole risk. The results expressed of this document pertain only to the specific sample(s) evaluated. Stabilit America, Inc. Testing Laboratory is not a certified testing lab, however all equipment used is calibrated using traceable standards. Because conditions of use vary and are beyond our knowledge and control, Stabilit makes no representation about and is not responsible for the accuracy of data, nor with toxicological effect or industrial hygiene requirements associated with particular uses of any product or process described herein. Stabilit requests that customers test and inspect our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of Stabilit materials only. **FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS:** the numerical flame spread and smoke development ratings are not intended to reflect alleged hazards presented by Stabilit America Inc., products under actual fire conditions and this product has not been tested by Stabilit America, Inc., except as set forth below. These ratings are determined by small-scale tests conducted by independent testing facilities using the ASTM E84 test standard. 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.

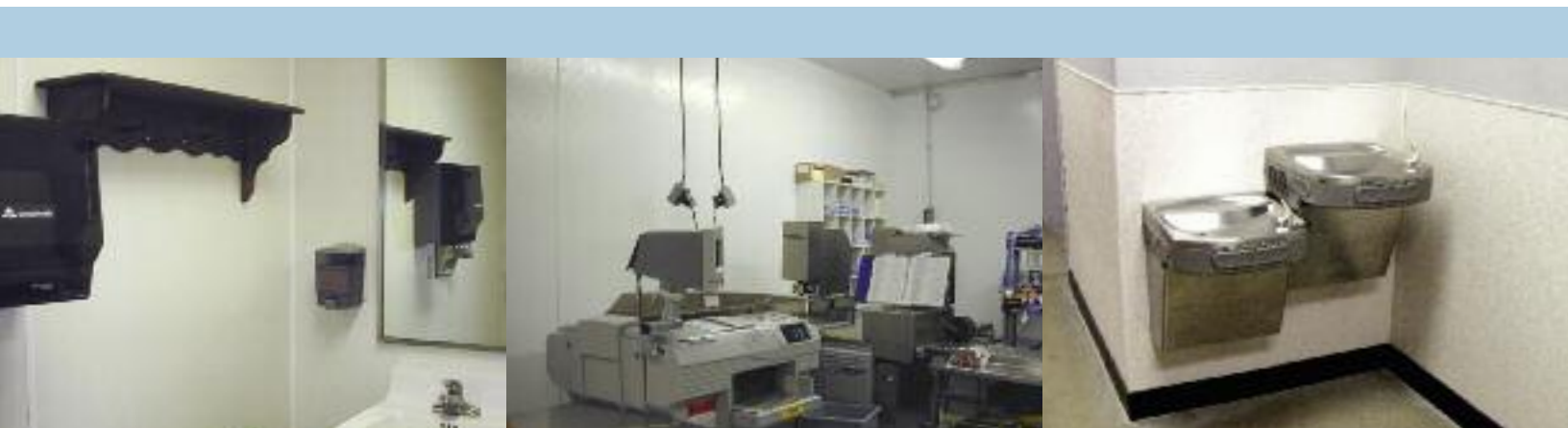
WALL, CEILING & LAMINATED LINER PANELS



Quality, commitment and innovation

Graham, 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.

Graham 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. Graham'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**

Exceliner® FRP

Wall, Ceiling & Laminated Liner Panels

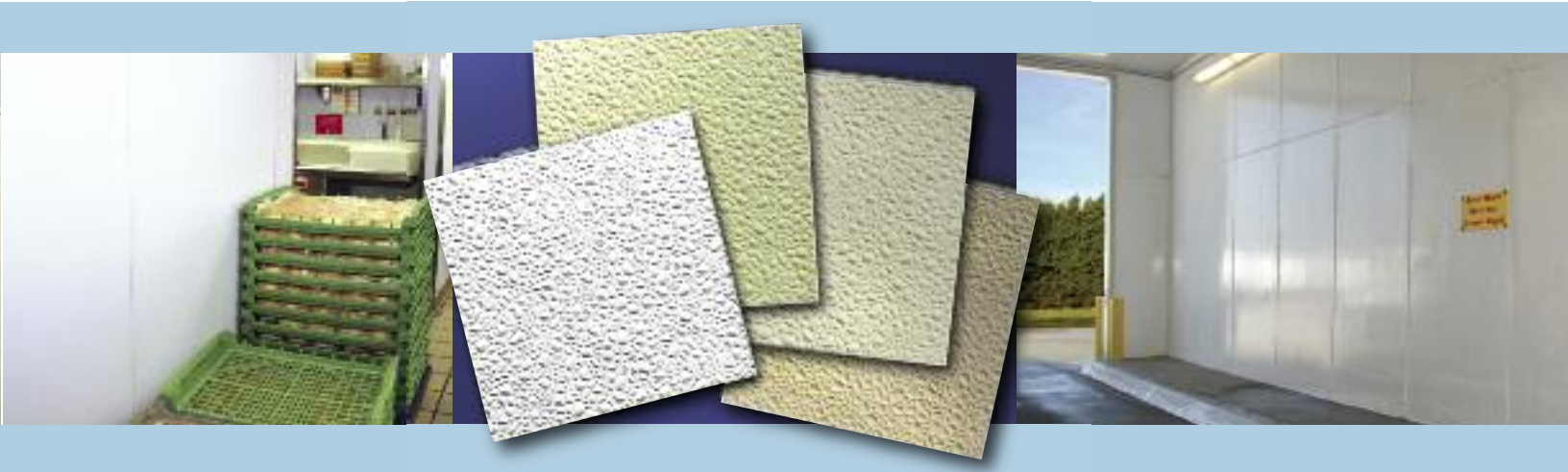
Resin rich surfaces that are tough, strong and easy to clean.

Maximum Sanitation Protection

- Meets CFIA and 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 mould 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

Exceliner FRP is available in the following sizes:

Series	Nominal Thickness
1600	.125"
1200	.090"
180	.060"
160	.045"
150	.035"

Width Standard 4 Feet

Length 8, 9, 10 and 12 Feet

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

Approvals & Certifications

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

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

Typical Physical Properties for .090" Contractor Grade

Property	Test Method	Unit	Graham Class C General Purpose Result	Graham Class A Fire Retardant Result
Flexural Strength	ASTM D-790	PSI	17,000	10,000
Flexural Modulus	ASTM D-790	PSI	6.0 x 10 ⁵	3.1 x 10 ⁵
Tensile Strength	ASTM D-638	PSI	8,000	7,000
Tensile Modulus	ASTM D-638	PSI	9.43 x 10 ⁵	3.1 x 10 ⁵
% Elongation	ASTM D-638	%	1.20	1.80
Water Absorption 21 °C @ 72 hrs.	ASTM D-570	%	0.17	0.72
Izod Impact Strength	ASTM D-256	ft.-lbs./in.	7.0	7.16
Coef. of Linear Thermal Expansion	ASTM D-696	in./in./°F	2.22 x 10 ⁻⁵	2.39 x 10 ⁻⁵
Barcol Hardness	ASTM D-2583	Avg.	30	35
Specific Gravity	ASTM D-792	N/A	1.6138	1.5743
Abrasion Resistance	TABER	% WT Loss	0.293	0.391
Flash Ignition Temp.	ASTM 1929	°C	430	400
Self Ignition Temp.	ASTM 1929	°C	450	430
Flame Spread	ASTM E-84	N/A	≤200	≤25
	ULC S102	N/A	≤150	≤25



Storage Recommendations

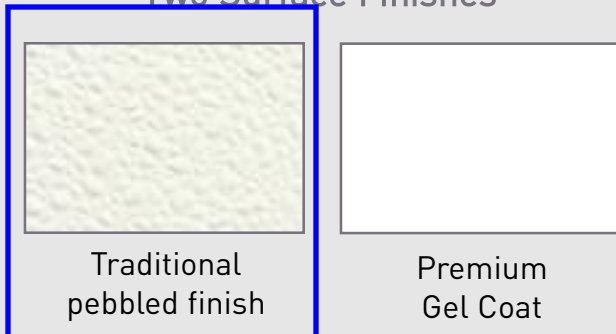
- Store panels indoors in a cool, dry, well-ventilated area
- Panels should be stacked on skids not more than 5 skids high
- Do not allow moisture to collect on or in-between panels



Colour Selections



Two Surface Finishes



Installation Instructions

Safety:

- Use eye protection.
- Wear filter mask to cover nose and mouth, especially when cutting.
- Use manufacturer's 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 caulking gun
- Vinyl mouldings and 3/4" nylon fasteners



Preparation:

- It is important to store Exceliner 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.

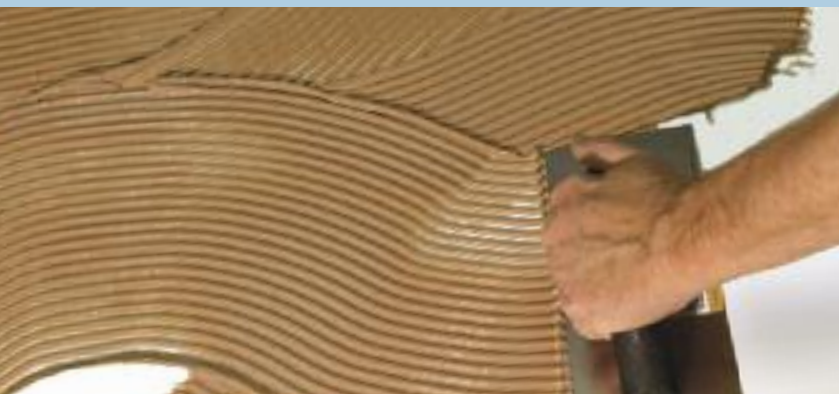
Installation of FRP Laminated Panels, in any application, should be approved by local building code officials before panels are ordered. Graham cannot ensure local code compliance in any or all situations. **NOTICE:** Panels and components made of fiberglass (FRP), wood, vinyl or foam may be combustible. **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 Exceliner 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 mouldings, silicone, nylon rivets and adhesive for best installation.
5. Apply adhesive per manufacturer's instructions.
6. Install panels and mouldings.
7. Seal edges and mouldings.
8. Remove excess silicone.
9. Clean panels after installation with light detergent.

905-838-2944

Accessories



Inside Corner



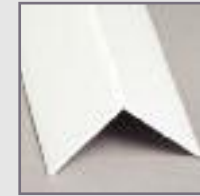
End Cap



Divider Bar



Outside Corner



Outside Corner Angle



Nylon Rivets



FRP Adhesive

Applying Adhesive

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

Actual requirements may vary. Call Graham for complete installation instructions.

www.graham.com



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 mould or mildew
- Rust proof - will not corrode
- Stain resistant
- High strength-to-weight ratio
- Easily removable for cleaning

Ceiling Panel Specifications

Sizes 23 3/4" x 23 3/4"
23 3/4" x 47 3/4"

Thickness 0.100"

Finishes Textured or Smooth

Colour Standard Colours

Sag Tolerance < 0.25"

Fire Rating

- Class C: General Purpose
- Class A: Fire Retardant

Laminated Panels

Why use Laminated FRP panels?

- Ease of installation
- Reduced labour costs
- Durable
- Sanitary
- Easily Maintained

FRP Panels are laminated to:

- Plywood
- OSB

Laminated Panel Specifications

Sizes 4' x 8' and 4' x 10'
 Substrate Thickness 3/8" standard
 Colour Bright White



Ideal for:

- Agricultural buildings
- Kitchens
- Restrooms
- Storage areas
- Laboratories
- Food processing plants
- Health care facilities
- Convenience stores
- Kennels and veterinary clinics
- Walk-in coolers and freezers

For other substrates, colours or sizes, please contact Graham.

Mouldings



3/8" Cap
(.460 opening)



3/8" Divider
(.460 opening)



3/8" ISC/Cove
(.460 opening)



3/8" OSC
(.460 opening)



1-1/4" OSC Angle



1-1/4" ISC Angle

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

Independent Laboratory Test Results

REASON FOR ANALYSIS: Evaluation of the **White Glasteel FRP Panel** from the viewpoint of overall stain resistance properties as well as resistance to chemical cleaners and high intensity UV light.

EXECUTIVE SUMMARY: The **White Glasteel FRP Panel** demonstrates good overall stain resistance properties both before and after surface abrasion tests. In addition the **White Glasteel FRP Panel** demonstrates good resistance to high intensity UV light and general household cleaning chemicals such as bleach, ammonia, alcohol and acetone with no material degradation noted after exposure tests..

EVALUATION OF FINDINGS:

Stain Resistance Properties: The **White Glasteel FRP Panel** demonstrates good overall stain resistance properties on the original surface with all stains being removed after cleaning tests. The abraded surface demonstrates generally good stain resistance with only the ink stain remaining visible after cleaning tests. The stain resistance test consists of applying generous amounts of a variety of stains, including red fruit drink, ketchup, mustard and barbecue sauce as well as some very aggressive stains such as blue ink and permanent marker. These stains were applied to the original as received surface and to a surface which was abraded with sandpaper to remove any surface coatings. The stains were then allowed to set for a period of 48 hours. The stained areas were then cleaned with a variety of cleaning chemicals to determine overall cleanability. The ketchup, fruit drink and barbecue sauce were all easily removed with a typical household cleaner on both the abraded and original surfaces. The mustard and permanent marker did require use of a stronger chemical such as alcohol and acetone to fully remove the stains. It should be noted the blue ink stain was not completely removed on the abraded test surface when using all the listed cleaning chemicals.

UV Resistance: The **White Glasteel FRP Panel** exhibits no discolouration or other surface degradation after 60-hours of exposure to high intensity UV light.

Chemical Resistance: The **White Glasteel FRP Panel** surface showed no evidence of material degradation after exposure to household cleaner, ammonia cleaner, bleach (1% solution), alcohol (70% isopropyl) and acetone.



Before Stain Cleaning Test



After Stain Cleaning Test

All Glasliner FRP Products are Greenguard Certified

Improving Indoor Air Quality

What is GREENGUARD Certification?

Simply put, GREENGUARD Certification ensures that a product is low-emitting. Products carrying the GREENGUARD mark have been independently tested and re-tested to demonstrate that they meet GREENGUARD's rigorous third-party chemical emissions standards.

GREENGUARD's standards are based on established emissions criteria used by the U.S. Environmental Protection Agency (EPA), the State of California, Germany's Blue Angel Program and reputable public health agencies.



Why is Indoor Air Quality Important?

Whether inside a home, school, business or hospital, people expect their indoor environments to be healthy and safe. Unfortunately, indoor spaces are often filled with potentially harmful pollutants.

Volatile organic compounds (VOCs) are chemicals that are released into the air from everyday furnishings, building materials and products – items like furniture, flooring and cleaners. Once airborne, VOCs can be easily inhaled by building occupants and trigger a number of health problems.

Benefits of GREENGUARD Certified Products

- Furnishing your building with GREENGUARD Certified low-emitting products allows you to create a healthier indoor environment by improving the indoor air quality.
- GREENGUARD Certified products meet some of the most stringent chemical emissions requirements in the world. Products have been independently, scientifically screened for more than 10,000 chemicals, and they are regularly monitored and retested to ensure they comply with GREENGUARD's standards.
- Selecting third-party certified, independently tested products helps ensure you are choosing healthier products for your building (and the air you breathe).

For more information on creating a healthier indoor environment, go to www.greenguard.org and take the interactive tour on the Consumer page.

Additional Product Lines Offered by  Graham.



◀ **Scan the QR Code to Access our Website: www.grahamfrp.com**

U.S. Headquarters & Distribution Centers

**285 Industrial Drive
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800-238-5546
Fax: 901-877-1388
www.glasteel.com**

**2495 N.E. 36th St.
Ft. Worth, TX 76111
817-831-0505
Fax: 817-831-2001**

**1279 Corporate Center Dr.
Eagan, MN 55121
651-452-0150
Fax: 651-452-0376**

Canada

**Graham / Stabilit Canada, Inc.
64 Maple Ave
Caledon, ON L7C 1J5
905-838-2944
Fax: 905-838-3386
www.grahamfrp.com**

Ten Year Limited Warranty



1. Properties covered and duration of Glasliner FRP panels, nominal .090" & .100", are warranted to the original building owner for a period of ten years from the date of sale. Panels covered under this warranty are, for the life of this warranty guaranteed to:
 - a. Be free of substantial defects in material and workmanship.
 - b. Remain structurally sound.
 - c. Maintain a good surface condition (loss of gloss and fiber exposure expected).
 - d. Remain free of rust, rot, and corrosion nor develop structural cracks.
 - e. Will not require painting or refinishing.

These properties are warranted subject to the specific exceptions set forth below. This warranty is not transferable.

2. Installation - In accepting this warranty, building owner agrees to follow Glasteel installation instructions. Utilize only Glasliner PVC moldings and rivets. Substitution of panels, moldings, or rivets will void this warranty.
3. Maintenance Provision - In accepting this warranty, building owner agrees to perform minimum maintenance, consisting of washing panels at least three (3) times per year, at regular intervals, using a non-abrasive soap or cleanser. Failure to perform the minimum maintenance will void this warranty.
4. Exceptions - This warranty does not cover damage to panels from effects or causes other than ordinary wear and tear. Specifically, this warranty does not cover damage resulting from the effects of vandalism, fire, natural disasters, sleet hail, improper storage or installation, installation on structures not conforming to recognized standards of construction, improper treatment, accident, misuse including direct impact on or scoring of panels which impairs surface integrity, negligence, abrasion by windswept sand, or failure to perform the minimum maintenance described above.
5. Replacement of Panels - Should any panel covered by this warranty fail to perform as warranted, Stabilit America Inc. will, upon verification of failure, provide the necessary material to replace the defective panel or panels. The building owner is responsible for the cost of installation of the replacement panels. Panels will be replaced at 100% of material cost for the first year and on a prorated basis thereafter.
6. Claims - If a claim covered by this warranty arises, written notice of that claim must be sent to: Stabilit America Inc., 285 Industrial Drive, Moscow, Tennessee 38057, Attention: Plant Manager. Claims must be made within 30 days of failure and be accompanied by a dated proof of purchase, evidence that the claimant is the building owner, a photograph of the panel or panels which have failed, and the original purchaser's address and telephone.

NOTE: THIS LIMITED WARRANTY IS THE ONLY WARRANTY PROVIDED BY STABILIT AMERICA INC. WITH RESPECT TO STABILIT PANELS, NOMINAL 5 OZ. GRADE AND HEAVIER, AND STABILIT AMERICA INC. HEREBY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, WHICH IS NOT CONTAINED HEREIN, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. STABILIT AMERICA INC. WILL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM INCONVENIENCE OR THE COST OF FABRICATION AND INSTALLATION OF ANY REPLACEMENT.

Some states do not allow (a) limitations on how long an implied warranty lasts, (b) exclusion or limitation of consequential or incidental damages. Accordingly, the above exclusions or limitations may not apply to you.

Questions about the warranty may be directed to the Plant Manager, (901) 877-3010, 8:30 a.m. to 5:00 p.m. (Central Time) Monday through Friday.

"DISCLAIMER AND LIMITATION OF LIABILITY"

Since Stabilit America Inc. exercises no control over building owners application or use of the product manufactured by Stabilit America Inc. ("products") and since materials used with the products may vary, it is understood that:

- (a) THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.
- (b) While all data presented in Stabilit America Inc. technical data sheets are based on the best information available to Stabilit America Inc. and believed correct, such data is not to be construed as a warranty that the products will conform to such specifications. Such technical data sheets are subject to change without notice.
- (c) The liability of Stabilit America Inc. shall not exceed the purchase price of the products and the building owner shall not be entitled to nor Stabilit America Inc. be liable for any consequential, incidental, indirect or special damages resulting in any manner from the furnishing of the product or for any damages of any kind arising from the use of the products.

