

HYGIENIC WALL + CEILING SYSTEMS for cultivation facilities





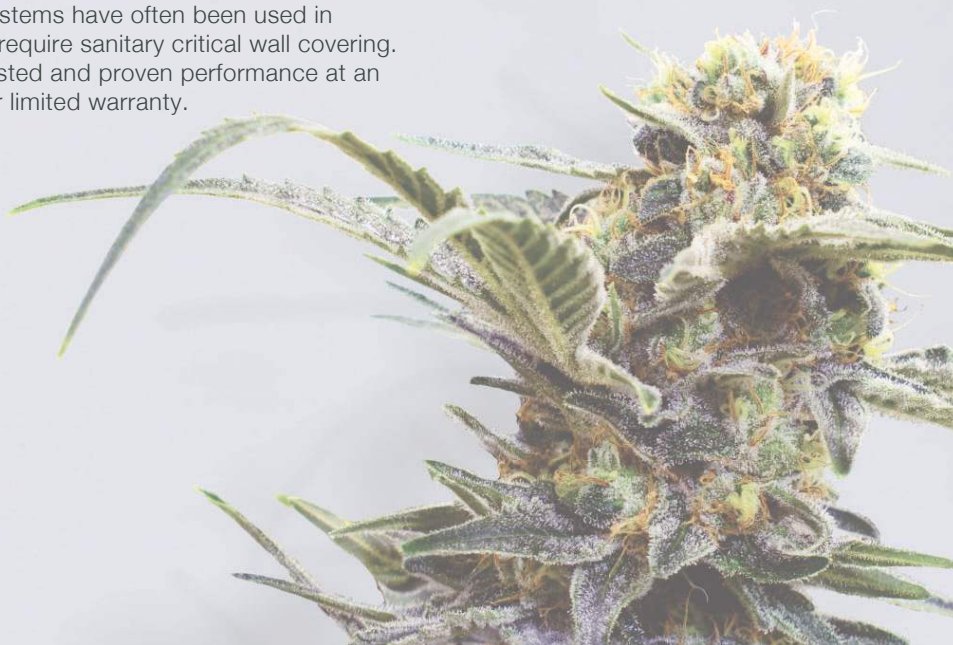
why **frp**? where **frp**?

protect your facility

Have a clean environment with Crane Composites resilient wall coverings. Our Glasbord with Surfaseal offers unsurpassed hygiene and durability for cultivation applications, including cannabis grow facilities.

Creating a protective envelope for critical areas demands high-performance finishes when handling, processing, packaging, storing, or testing cannabis material. That's where Glasbord from Crane Composites comes in. Made of fiberglass reinforced plastic (FRP), Glasbord with Surfaseal is extremely moisture-resistant and non-porous. The Surfaseal film finish, found only on Glasbord, provides a barrier that's highly resistant to impact and scratching. Because of its unique process, the Surfaseal finish will not trap soil or bacteria on the panel. The robust panels hold up in high moisture and humidity applications, providing walls unsurpassed vapor barrier protection.

Crane Composites Hygienic Wall Systems have often been used in pharmaceutical applications, which require sanitary critical wall covering. Glasbord with Surfaseal provides tested and proven performance at an affordable price point with a 10-year limited warranty.



THERE'S NO BETTER OPTION

The Crane Composites Hygienic Wall Solution delivers superior overall performance in the following categories:



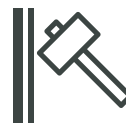
**BULK WATER
MANAGEMENT**



**VAPOR BARRIER
PROTECTION**



**CHEMICAL
RESISTANCE**



**IMPACT
DURABILITY**



**FIRE RATED
WALL INTEGRITY**



**MOLD +
MILDEW FREE**



**SIMPLE
ASSEMBLY**



**LOW
MAINTENANCE**



**EASY TO
CLEAN**

protect your facility with the complete **CRANE** hygienic wall + ceiling panel system

Glasbord Panels

embossed + smooth, wall + ceiling panels

It's a dirty world out there. Protect your facility with Crane resilient wall coverings. Our Glasbord with Surfaseal creates surfaces that deliver unsurpassed hygiene and durability. Available in a Class A or Class C per ASTM E-84 fire rating and FM Approved formula.



Seam Sealant

two-part polyurethane seam sealant

Seam Sealant is an equal-mix, two-component bright white urethane sealant system used to bond and seal a variety of plastics. Use for a seamless Glasbord installation that is easy to clean.



Sani-Base™

seamless wall to floor transitions

Use Sani-Base stainless accessories for innovative moisture mitigation solutions for seamless wall to floor transitions. Our Sani-Base accessories are available in five different profiles to fit your application needs.



Stainless Trims

steel trims for corners and window frames

Stainless steel trim pieces are the answer to having a sanitary, durable and clean transition while providing increased impact resistance and longevity to develop a more aesthetically pleasing finish.



Crane Adhesive

two frp adhesive options

Crane's Fast Grab and Advanced Polymer adhesive offers professional strength and is specifically formulated for the installation of FRP panels over most porous surfaces. It offers quick grab and strength development that requires minimal bracing.



Sanigrid Ceiling Grid System

fire-rated fiberglass ceiling system

Sanigrid is known for its moisture and corrosion resistance in high humidity installations. It won't rust, pit, dent, or peel like metal grid systems.



discover the difference

For indoor cultivation facility owners that need to control the spread of moisture, mold and pest contaminants in fire rated buildings, Crane Composites' Hygienic Wall Solution provides enhanced durability, bulk water and air infiltration resistance unlike PVC plank and IMP alternatives. This superior solution is comprised of a sealed wall solution, complete with wall panels, steel transitions and urethane sealants.



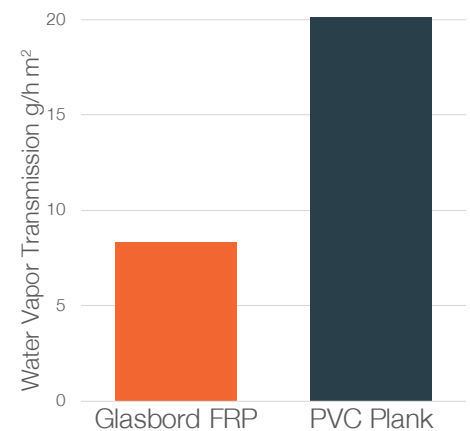
Vapor Barrier Protection

HALF THE VAPOR TRANSMISSION vs. PVC

While bulk water management is critical to maintaining the longevity of building components, preventing uncontrolled air & vapor transmission throughout cultivation facilities can have a dramatic impact on crop integrity and yield. When interior wall solutions allow air-flow to pass from one cultivation room to another, they unintentionally carry a variety of potentially harmful airborne contaminants. Mold, mildew and pests can wreak havoc on precious crops, causing damage and diminished crop yield.

ASTM offers a method to test the air and vapor transmission rate of a given wall cladding through its "E96 Vapor Transmission of Materials" test. This test method determines the water vapor transmission (WVT) of materials through which the passage of water vapor may be of importance, such as plastic paneling, gypsum and other sheet materials.

Water Vapor Transmission



Vinyl Plank



**AVERAGE UNSEALED SEAM FOOTAGE
IN CULTIVATION FACILITIES:
~1,700 Linear feet**

REAL WORLD TESTING

We tested walls using a smoke machine to simulate air flow between rooms. While our Glasbord walls prevented vapor transmission with our sealed solution, PVC walls did not prevent vapor transmission and air released through the seam.



Scan to Learn More

Impact Durability 10X MORE DURABLE

Cultivation facilities are busy places with heavy carts, workers, and plant materials moving from room to room. These activities can cause wear-and-tear and even damage to materials. Vinyl Plank products are more vulnerable to cracking when impacted or stressed, which can lead to contamination and costly repairs.

Per ASTM D256 testing, Glasbord over gypsum is more impact durable to protect your walls than Vinyl Plank. Protect facilities that are busy places with rigorous activity from damage with durable FRP panels.

10x more durable

IZOD IMPACT

GLASBORD FRP
OVER 5/8" GYPSUM

15.3 ft/lb/in

VINYL PLANK
PANEL

1.57 ft/lb/in

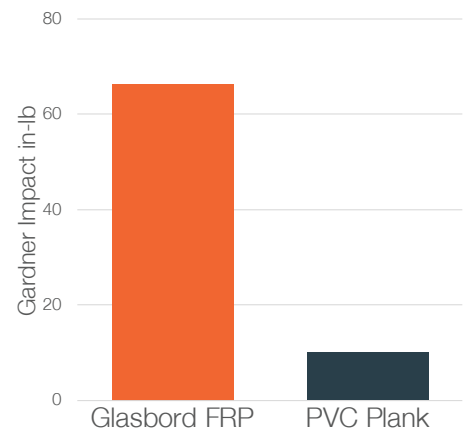
PER ASTM D256, GLASBORD FRP OVER GYPSUM HAS
10X THE IMPACT RESISTANCE OF VINYL PLANK.



IMPACT RESISTANCE WALL TEST WITH FLATBED CART



Gardner Impact Test



PER ASTM D5420, GLASBORD FRP
OVER GYPSUM IS 5X STRONGER
RESISTANCE THAN VINYL PLANK.

discover the difference

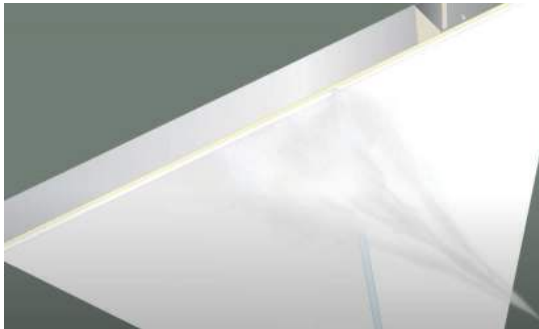


Bulk Water Management ASTM E331 CERTIFIED

For indoor cultivation facility owners that need to control the spread of moisture, mold and pest contaminants in fire rated buildings, Crane Composites' Hygienic Wall Solution provides enhanced durability, bulk water and air infiltration resistance unlike PVC plank and IMP alternatives. This superior solution is comprised of a sealed wall solution, complete with wall panels, steel transitions and urethane sealants.

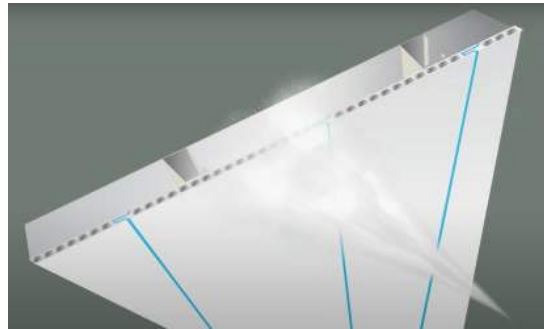
Crane Composites passed the ASTM E331 standard using both embossed & smooth FRP + seam sealant + Sani-Base stainless steel accessories – with zero leaks observed.

GLASBORD FRP OVER 5/8" GYPSUM



**Water Transmission
is Blocked**

VINYL PLANK PANEL



**Unsealed Seams are Vulnerable
to Water Intrusion + Potential Damage**

PVC PLANK PANELS ARE VULNERABLE TO WATER INFILTRATION

PVC plank panels consist of mainly white, fluted vinyl sheets that interlock with a tongue and groove connection at each edge. This provides protection from moisture across the field of each panel, however the seams are not water proof. PVC planks are most commonly installed 16" apart, creating numerous vertical seams along the wall – with nothing behind the planks to control moisture. The tongue and groove connections are not airtight, nor are they waterproof – instead they allow both to pass through joints.



Scan to Learn More



Chemical Resistant 10X MORE DURABLE

Chemical resistance is an important factor when considering the longevity and durability of wall solutions in cultivation facilities. Cultivation facilities must endure constant cleaning cycles with abrasive cleaners, frequent wash cycles, and harsh chemicals. Crane Composites has conducted extensive chemical compatibility testing on a variety of commonly used cleansers in the cultivation and chem/pharma industries to ensure fit-for-use in these applications.

Based on an internal chemical exposure test, Glasbord FRP is more than 100 + more resistant to harsh chemicals such as hydrogen peroxide than IMP. Crane Composites' tests consisted of exposing

Glasbord FRP samples to several chemical cleansers for a period of 5 days at 77°F +/- 10°F. Ratings were based on a combination of visual observations and mechanical strength test results.

100x+

more resistant

CHEMICAL EXPOSURE TEST

GLASBORD FRP
OVER 5/8" GYPSUM

0.5%

INSULATED
METAL PANEL

88.7%

**PER INTERNAL STANDARD OPERATING PROCEDURE
WHEN SUBMERSED IN 30% DILUTION OF HYDROGEN
PEROXIDE FOR 114 HOURS, IMP LOST 88% MORE GLOSS**



REAL WORLD TESTING

We tested panels samples in chemical solutions to simulate exposure to chemicals over time. The IMP did not resist the hydrogen peroxide and after only seven hours of exposure, paint peeled off while our Glasbord panel fully resisted the hydrogen peroxide.

IMP when submersed in H2O2



Fire Rated Wall System Integrity FIRE RATED PER ASTM-E84

Fire ratings provide an important guide to ensuring safety and code compliance for wall solution in buildings. Cultivation and processing facilities often perform unique extraction techniques involving flammable chemicals like ethanol, propane and butane that should be done in a controlled environment. Fire rated walls are commonly required in these processing areas to ensure adequate fire protection for building occupants and workers.

Installing our Glasbord panels directly over gypsum substrate ensures that both materials are validated UL components of the overall fire rated wall assembly.

PVC installed directly to the stud cavity may not qualify as a rated wall system, despite the plank itself achieving a fire rating.





Glasbord panels with Surfaseal finish

Cultivation Facility and Cleanroom Suitable Material testing quantifies the value that Surfaseal adds to the FRP product. Surfaseal creates surfaces that deliver unsurpassed hygiene and durability. The Surfaseal film finish, found only on Glasbord, provides a barrier that's highly resistant to impact and scratching. Because of its unique process, the Surfaseal finish will not trap soil or bacteria on the panel. Glasbord with Surfaseal panels protect your walls and keep them looking clean.

Glasbord panels are the first FRP panels that are HACCP certified. Hazard Analysis Critical Control Point (HACCP) certifies that Glasbord panels are suitable for use in food and beverage facilities that operate in accordance with a HACCP based Food Safety Program. Orientation of embossed panels must be installed/ run vertically for any areas that require a sanitary finish under HACCP certification.

The Hygienic System is completed with the use of biological and chemically tested adhesive and seam sealant. Replacing traditional FRP moldings, the seam sealant creates a monolithic surface, eliminating potential for penetrating moisture, bacteria, mold, viruses and other agents causing healthcare associated infections. The end result is a total wall covering system you can trust to protect your clean environments.

Test	CHEMICAL CLEANABILITY	MOLD AND MILDEW FREE
Standard	ISO 2812-1	ATSM D3273 & ASTM D3274
Testing Laboratory	Independent 3rd Party Testing	Biological Lab Services
Results for FSFM Product	20% NAOH ONLY ISSUE	ATSM D3273 & ASTM D3274

who we are

Crane Composites Inc., a subsidiary of Crane Co. (NYSE:CR), is the world's leading provider of fiber-reinforced composite materials.

Since 1954, we have continued to pioneer numerous patented technologies for industrial and commercial product applications. Crane Composites fiber-reinforced panels (FRP) can be found in virtually every type of vertical market, from highly industrialized environments to stylish retail and hospitality settings.

No matter what the application, our products and team reflect our mission statement: we are a performance

driven organization committed to global leadership and products of high-quality composite materials.

Customers benefit not only from the outstanding performance characteristics of our products, but also from our extensive support programs. Our expert product teams are focused on the needs of customers to provide unparalleled service and expertise.



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Form 7869 | Rev. 3 | 08.22 (10158)

