

FRP INSTALLATION GUIDE

SAFETY FIRST



When cutting or drilling, always wear protective glasses or goggles and a face mask which covers the face and mouth. Itching due to glass fibers may be avoided by the use of barrier creams on exposed skin.

STORAGE CONDITIONS

Panels should be stored indoors on a solid, dry, flat surface. Do not stand panels on end. Do not stack other materials on top of the FRP panels. Do not store panels in high temperature or humidity conditions, or an environment where great swings in temperature or humidity exist. Do not store directly on concrete floors.

INSPECTION

Inspect panels for any defects immediately. Do not install panels that are of questionable quality. Panolam Industries will not be responsible for installation or removal costs of unacceptable panels.

PRE-CONDITIONING

Before installing FRP panels remove the packaging and allow the panels to acclimate to the room temperature and humidity for 24 hours. Replicating your finished room operating temperature and humidity conditions is ideal.

INSTALLATION CONDITIONS

Installation should not begin until the building is enclosed, permanent heating and cooling equipment are in operation and moisture from plaster, concrete and other materials has dissipated.

TOOLS NEEDED

- Use a carbide tip, fine tooth saw blade.
- Swivel-head shears may be used for small cutouts.
- Use a carbide drill bit for drilling holes.
- If applying panels using adhesive, follow the adhesive manufacturer's instructions for their recommendation for the suggested trowel.
- Use a laminate roller to ensure maximum contact between the panels and substrate.

WALL PREPARATION

The wall substrate should be dry, even and free from dirt, grime and dust. Level high spots and fill low spots prior to adhering panels. Warped plywood or OSB should be replaced.

On surfaces that are painted, be sure to remove all loose paint. It's ideal to abrade or perforate any primed or painted surfaces to allow for better adhesive adhesion to the substrate. Be sure to remove any dust generated by this procedure. In some cases, nylon rivets may be needed in addition to adhesive to achieve an appropriate bond.

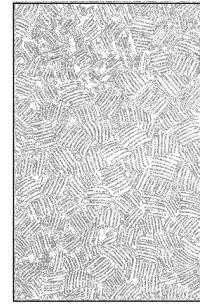
For applying FRP over concrete block or brick, the walls should be furred out with wood or metal studs and the FRP should be pre-laminated to a substrate and fastened to the stud. This method will ensure a good installation. If the FRP panels must be applied directly over concrete block or brick the panels should be installed using nylon drive rivets with no adhesive. The drill holes must be oversized and proper spacing left between and around the FRP panels to allow for normal expansion and contraction. The above also applies to installations over ceramic tile, metal surfaces and other non-porous materials. Generally speaking, FRP adhesives will not cure properly with non-porous surfaces.

FRP panels should not be installed near ovens or similar heat sources. Discoloration may occur and adhesives may be adversely affected. Stainless steel is typically used in these types of areas.

Trowel Application

ADHESIVE

If adhesive is chosen to install FRP panels, use FRP adhesive, which is readily available and formulated specifically for FRP. Follow all adhesive manufacturer's recommendations concerning specific trowel, open time, coverage, etc. The proper trowel helps ensure that the correct amount of adhesive will be applied. Too much or too little adhesive can lead to installation failure. Apply the adhesive to 100% of the backside of the panel using a crosshatch pattern. Be sure to apply the adhesive all the way out to the edges of the panel. Do not apply adhesive to the wall, only to the backside of the FRP panels.



SPACING

All FRP panels expand and contract due to changes in temperature and humidity. Adequate space must be allowed between and around the panels to allow for this expansion and contraction. Generally, allow 1/8" spacing between panels and 1/4"-3/8" gap at the floor and ceiling.

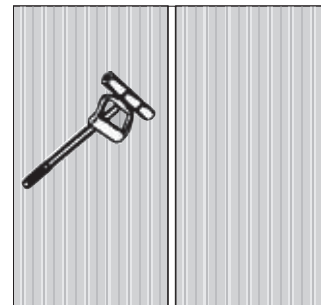
Panels longer than 12' are not recommended.



INSTALLING PANELS

- All cutting or drilling should be done prior to applying adhesive to the panels.
- Rivet holes should be predrilled in the panels using a bit that is 1/8"-1/4" larger than the rivet shaft.
- Base molding, chair rails and handrails should be installed such that the FRP panel movement is not restricted. As stated, expansion and contraction of the panels is normal and must be taken into consideration during installation.
- Begin installation in a corner. Mark a plumb line 48 1/8" from the corner.
- Install the corner molding and apply silicone sealant in the channel of the molding.
- Apply the adhesive to the backside of the FRP panels using a crosshatch pattern. Be sure to apply the adhesive all the way out to the edges of the panel. Be sure to use the adhesive manufacturer's recommended trowel to apply the proper amount of adhesive. Too little or too much adhesive can lead to installation failure.
- Set the initial panel true with the plumb line.
- Using a laminate roller, roll firmly over the panel starting at the top corner nearest the molding rolling down and away toward the opposite edge. Be sure to eliminate any trapped air pockets and roll 100% of the panel firmly for the best bond.
- Install the divider and cap molding applying silicone sealant in the channels and sliding the molding completely onto the edge of the panel, then pulling away 1/8" to ensure proper spacing for expansion and contraction. It's best to fasten the exposed edge of the molding to be sure it is not pushed tight into the panel just installed as you install the next panel.
- Continue this process, working in one direction around the entire room.
- If the panels are being installed only using adhesive, you may use finish nails or tacks to hold the panels in place until the adhesive cures (typically above the ceiling line).
- If nails or tacks are used, these must be removed once the adhesive cures so that panel movement is not restricted.
- Adhesive and residue should be removed from the face of the panels before it dries. Use soap and water or mineral spirits.

To remove trapped air roll panel with a laminate roller



INSTALLING FRP IN CAR WASH APPLICATIONS

While FRP is an excellent wall finish for car washes, the moisture conditions along with the swings in temperature and humidity call for careful planning and installation methods.

- Panels should be acclimated to the temperature, moisture and humidity conditions 24 hours prior to installation.
- In such a severe environment, expansion and contraction is more prominent and must be allowed for with proper spacing between and around panels.
- Panels should not exceed 8' in length and should be installed vertically only.
- Leave a minimum of 1" gap at floors and ceilings and 1/8"-1/4" between the panels.
- Use mechanical fasteners. Do not use adhesives.
- Oversize all drill holes for fasteners and any handling equipment, piping, etc.
- Seal all edges to prevent water from getting behind the panels.

Limited Warranty

Subject to the limitations set forth below, Panolam Industries expressly warrants that our products are reasonably free of defects in material and workmanship, and when properly handled and fabricated will conform, within accepted tolerances, to applicable manufacturing specifications as set forth in our technical brochure. This warranty shall extend to the original buyer for a period of twelve (12) months from the date of shipment of this original buyer. This warranty does not cover damage resulting from accident, misuse, alteration, abuse or lack of reasonable care.

Due to the variety of uses and applications to which this product may be put, and because the manufacturer has no control over the end products fabricated, the warranty set forth above is exclusive and in lieu of all other warranties, express or implied, in fact or by operation of law or otherwise, or arising by course of dealing or performance, custom or usage in the trade, including, without limitation, the implied warranties of fitness for a particular purpose merchantability, and Panolam Industries shall have no obligation or liability to any person or entity in connection with or arising from the furnishing, sale, installation or repair, use or subsequent sale of any product supplied by it.

The buyer's sole and exclusive remedy for any noncompliance with the express warranty set forth above shall be limited to repair or replacement of the defective product, or, in the event that repair or replacement is not feasible, return of the product and refund of the purchase price.

Under no circumstances shall the manufacturer be liable in excess of the purchase price of this product, in either tort or contract or otherwise, for any loss, damage or injury in connection with arising from the purchase, use, or inability to use this product, or for any special, indirect, collateral, incidental, consequential or exemplary damages such as, but not limited to, loss of anticipated profits or other economic loss. Because some states do not allow the exclusion or limitation of incidental or consequential damages, this limitation may not apply to you.

Retaining all documentation after purchasing laminate will significantly expedite claim resolution.

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