

ATTENTION: FRP PANELS MUST BE ACCLIMATIZED FOR 24 HOURS BEFORE INSTALLATION. PLEASE READ ALL INSTRUCTIONS PRIOR TO INSTALLATION

The guidelines provided herein have been established in good faith to help prevent installation problems. MDC Interior Solutions believes all information contained herein to be correct. It is the responsibility of the fabricator/customer to completely test the adhesives and methods of fabrication to ensure that the results are satisfactory. Failure to comply with the following instructions, as well as the adhesive manufacturers' instructions, may result in significant installation problems. MDC is not responsible for any fabrication or ancillary costs involved with using MDC FRP products.

INSPECTION: Please inspect FRP panels for any imperfections prior to installing; once installed, panels may be very difficult to remove.

STORAGE

Panels should be stored inside in a cool, well-ventilated, dry area on the original shipping pallet. Do not place panels on a concrete floor or any other surface that emits moisture. Panels should be laid flat, not on edge. Panels should be climatized in the area they will be installed for a minimum of 24-48 hours.

TOOLS REQUIRED

In order to cut MDC FRP panels most effectively, a fine-tooth saw blade is recommended. Swivel-head shears may be utilized for small cutouts or trims. For pre- drilled fastener holes, a diamond-coated or carbide drill bit is recommended. If the installation requires adhesive, it is recommended to utilize the trowel with the notch pattern suggested by the adhesive manufacturer, since, the trowel used to apply the adhesive can have a great effect on the success or failure of the installation.

PANEL TRIMMING

If not using trim strips, it is recommended that the edges be properly trimmed with a router. This will mitigate showing "white lines" from the factory edges of the panel. A commercial high speed router using a Bosch 3/8" Laminate Trim Bit with ball bearing, carbide tip, and roller tip (when appropriate) is recommended.

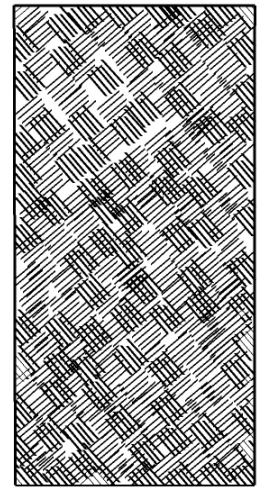
MATERIALS REQUIRED

- MDC FRP Panels
- FRP formulated adhesive.
- PVC Moldings
- Silicone Sealant
- Soap, Water, & Damp Cloth for Panel Clean-Up
- Mineral Spirits to Remove Excess Adhesive or Silicone Sealant

ADHESIVE

For applications requiring adhesive, suggestions include (*Titebond fast grab FRP*) adhesive or (*Titebond® Advanced Polymer*) Panel Adhesive (applied with a notched trowel). Titebond® Panel Adhesive should be applied in a crosshatch pattern to the wall, enabling even distribution of substrate. For best results, Titebond® panel adhesive should be stored above 50°F.

Due to the abrasive nature of the adhesive, it is highly recommended that those working with the adhesive, wear protective safety equipment which include, but are not limited to the following: safety glasses, gloves, and a filter mask.



Trowel Application

FASTENERS

Nylon drive rivets, or corrosion resistant screws are appropriate fastener options. If fasteners will be used in the installation, panels should be pre-drilled using a drill bit that is 1/8"-1/4" larger than the fastener. During installation, holes drilled into the substrate should also be made 1/8"- 1/4" larger. This is required to allow room for expansion and contraction of the panels.

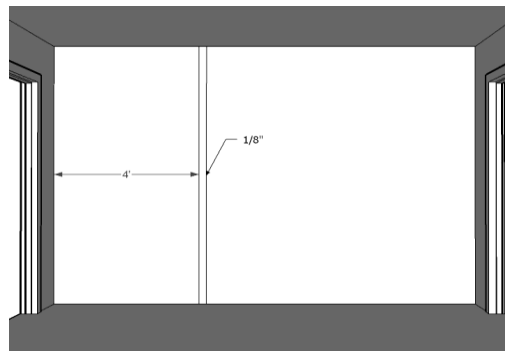
EXPANSION JOINTS

As temperature and humidity levels fluctuate, MDC FRP panels will expand and contract. Therefore, adequate space must be allowed around panel edges, holes drilled in panels, and around fixtures attached to the panel/wall. Please refer to the expansion joint chart below for spacing at ceiling, floor and between panels.

EXPANSION JOINT CHART

PANEL SIZE	4 X 8	4 X 9	4 X 10	4 X 12
Gap at ceiling	1/4"	1/4"	3/8"	3/8"
Gap at floor	1/4"	1/4"	3/8"	3/8"
Gap between panel and center of 1 piece molding	1/8"	1/8"	3/16"	3/16"
Gap between panel and center of 2 piece molding	1/4"	1/4"	3/8"	3/8"
Gap between panel without molding	1/4"	1/4"	3/8"	3/8"
Gap around rivets	1/8"	1/8"	3/16"	3/16"
Gap between panels and wall fixtures	1/8"	1/8"	1/4"	1/4"

EXPANSION JOINT LAYOUT



INSTALLATION

Note: For best results, MDC FRP panels should be used in conditions which result in temperatures that are less than or exceed the allowable temperature ranges in the chart below.

ALLOWABLE TEMPERATURE RANGES CHART

		Temperature (°F)	
MATERIAL	Length	Low	High
FRP	48"	27	117
	96"	50	94

Do not use in areas exposed to temperatures exceeding 200°F for extended periods of time, or to intense or continuous direct sunlight.

STEP 1 - PLANNING AND CUTTING

- Fit each panel in advance before fastening and/or adhering in place.
- Perform all cutting and drilling prior to adhesive application.
 - If not using trim strips, it is recommended that the edges be properly trimmed with a router. This will mitigate showing “white lines” from the factory edges of the panel. A commercial high speed router using a Bosch 3/8” Laminate Trim Bit with ball bearing, carbide tip, and roller tip (when appropriate) is recommended.
- Verify that substrate surface has no bumps or uneven areas.
- Pre-drill rivet holes using a bit that is 1/8”-1/4” larger than rivet allowing for panel expansion according to the sizes in the chart on the previous page.
- Plan ahead for cove or base molding. Base molding should be installed in such a manner as not to restrict the FRP panel’s normal movement. Cut panels 1/4” short of where the base molding will extend; poured molding should be in place prior to installation.
- Mark a plumb line 48-1/8” from the corner. In areas where several courses of panels are used, such as on a high wall, use vertical and horizontal lines to assure alignment.

STEP 2 - INSTALLING ON WALL

- Install one piece of corner molding and apply silicone sealant in molding groove.
- If using rivets, drill holes into substrate through the pre-drilled holes in panel.
- If using Titebond® Advanced Polymer Panel Adhesive, or Fast Grab FRP Adhesive, apply adhesive to panel using adhesive manufacturer’s recommended notched trowel to ensure good adhesion.
- Set first panel true to plumb line.
- If using adhesive, firmly roll over the panel using a laminate roller, starting at the top corner nearest the molding rolling down and away toward the opposite edge, eliminating air pockets.
- If using fasteners, install fasteners as each panel is put into place and before the next division bar or molding strip is applied. Begin fastening at top edge and work towards the opposite end. Apply silicone sealant prior to inserting rivets or fasteners. Install fasteners one row at a time.
- Install on-piece division bar and caps or next molding piece by laying down a bead of silicone in molding groove and sliding completely onto the panel. Withdraw the molding or division bar 1/8” to provide proper spacing. The free edge of the molding or division bar may be tacked in place, if preferred, before installing the next panel.
- If using Titebond® Advanced Polymer Panel Adhesive and fasteners are not used, a few nails may be placed at the top (above the ceiling grid line) to help hold panels in place while the adhesive cures. Once cured, the nails must be removed, as they do not allow for normal panel expansion and contraction.
- Repeat the process, working in one direction around the room.

STEP 3 - COMPLETING PANEL INSTALLATION

- Be sure to apply silicone sealant in all molding and around all panel edges, fasteners, and fixtures to prevent moisture from penetrating behind panels.
- Remove any residue left by adhesive as recommended by manufacturer.
- Clean panels thoroughly prior to leaving jobsite.

CONDITIONS & WARRANTY

MDC Interior Solutions believes all information contained herein to be correct. It is the responsibility of the fabricator/customer to completely test the adhesives and methods of fabrication to ensure that the results are satisfactory. MDC is not responsible for any fabrication or ancillary costs involved with using MDC FRP products.

All shipments are to be inspected within 10 working days after delivery. We are to be informed in writing of any potential adjustment necessary. The seller's only obligation will be to replace defective sheets on a one to one basis. Neither the manufacturer nor the seller shall be liable for any additional damage or loss, directly or indirectly, arising as a result of using MDC FRP products. Slight imperfections and color variations from sheet to sheet are possible and considered normal.

Please inspect each sheet carefully before fabrication to ensure it meets your needs. Contact MDC Customer Care at 847-437-4000 should you require additional assistance.