



MIRACLE® FRP-1168
Guide Specification

SECTION 068001
FRP PANEL ADHESIVES

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PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes Fiber Reinforced Plastic (FRP) panel adhesives.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certificates:
 - 1. SCAQMD (South Coast Air Quality Management District), Rule 1168.
 - 2. California Air District Regulations.
 - 3. Ozone Transport Commission (OTC) model Rule for Adhesives and Sealants.

1.3 REGULARY REQUIREMENTS

- A. SCAQMD (South Coast Air Quality Management District), Rule 1168
- B. California Air District Regulations.
- C. Ozone Transport Commission (OTC) model Rule for Adhesives and Sealants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. FRP Panel Adhesives:
 - 1. 1. Miracle ® FRP-1168 manufactured by ITW Polymers Sealants NA (Basis of Design).
 - a. 111 S. Nursery Rd., Irving TX 75060
 - 2. Or equal.

2.2 STRUCTURAL ADHESIVE

- A. Description: VOC compliant (SCAQMD rule 1168) multi-purpose, nonflammable, mastic-type adhesive especially formulated for FRP panels. May also be used for wallboard, paneling and drywall applications. Must have one porous surface.

B. Uses:

1. Installing FRP panels.
2. Installing wallboard, paneling and drywall.
3. Wood and Plywood.
4. Concrete and Stone.
5. Gypsum Board.
6. Paneling.
7. Polystyrene and polyurethane rigid foam boards.

C. Advantages:

1. High performance.
2. Water Resistant.
3. Strengthens construction.
4. Water clean-up.
5. VOC compliant – 49.4 g/l SCAQMD rule 1168.

D. Physical Properties:

1. Base: Acrylic latex.
2. Type: Water.
3. Color: Light brown.
4. Weight/gallon: 11.3 lb.
5. Flammability: Non-Flammable.
6. Aging: Retains flexibility after 500 hours accelerated aging in oxygen bomb at 300 psi and 158° F by ASTM D572-61.
7. Mildew Resistance: Excellent.
8. Water Resistance: Excellent.
9. Storage Temperature: 60°F to 80°F.
10. Application temperature: 60°F to 110°F.
11. Service Temperature: -30° to 160° F.
12. Open Time: Up to 20 minutes at 75°F and 50% relative humidity.
13. Dry Time: 48-72 hours.
14. Shelf Life: 12 months.

E. Contributes to LEED and other green building rating system credits:

1. LEED-NC and LEED-CI EQ Credits 3.2 and 4.1, and ID Credit 1.1-1.4.
2. LEED for Homes MR Credit 2.2 Environmentally Preferable Materials.
3. LEED Core & Shell EQ Credit 4.1 and ID Credit 1.1-1.4.
4. LEED-EB MR Credit 3.

F. Method of Use: Trowel method. Apply only the amount of adhesive that will be covered in 20 minutes.

G. Coverage: Refer to the FRP manufacturer's installation instructions for proper coverage. Typically coverage should be 50-60 square feet per gallon. Several trowel sizes can give the appropriate coverage and depending on the particular application may include: V-notch 3/16th, 3/16th, 5/16th or V-notch 7/8th, 7/8th or V-notch 3/16th, 1/4th, 1/2.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface shall be sound, clean, dry and free from grease, dirt, loose paint, wallpaper or foreign material that will impair adhesion.
- B. Level all high spots and fill all cracks and depressions with a quality grade patching compound.
- C. Prime joint compound and allow to thoroughly dry prior to panel installation.
- D. Adhesive, wall surface and panels shall be conditioned at minimum of 60°F for 24 hours before installation.
- E. If installation is over concrete or block walls where moisture will penetrate, use furring strips with mechanical fasteners and adhesive. For best results, only adhere panels to solid surfaces.

3.2 APPLICATION, GENERAL

- A. Comply with adhesive manufacturer's written instructions for installation.

3.3 ADHESIVE APPLICATION

- A. Cut and pre-fit panels. Lay panels flat and let them acclimate to room temperature.
- B. Spread adhesive over entire back of Panel (100% coverage), using the recommended notched trowel. Press firmly to keep area between ridges from accumulating adhesive.
- C. Immediately place panel against wall. Press and knead panels to ensure contact with the wall at all points.
- D. Install panel within 15 – 20 minutes after applying adhesive.
- E. Follow panel manufacturer's instructions for molding and mechanical fasteners. Do not fit panels tightly into moldings. Allow 1/16" in molding channels for expansion.
- F. Special Conditions:
 - 1. Fiberglass panels have a relatively high rate of linear thermal expansion. By following these installation guidelines, and those of the panel manufacturer, serious problems can be eliminated.
 - 2. Non-porous substrates such as ceramic tile, metal, foam board, etc. are not suitable substrates for the installation of FRP panels. Mechanical fasteners are best for installations involving these substrates.
 - 3. Although water base adhesives provide excellent bonds to exterior grade plywood, under conditions of high humidity or low temperatures, the dry time can be much longer and this can cause bulging problems due to panel expansion. For temperatures lower than 60°F, a solvent base product is recommended.
 - 4. For fire rated plywood, use a solvent base adhesive.

END OF SECTION 068001