



**MIRACLE® FOAMSEAL F2100/F2100A  
Guide Specification**

SECTION 061118  
STRUCTURAL ADHESIVE

# MIRACLE® FOAMSEAL F2100/F2100A Guide Specification

## SECTION 061118

### STRUCTURAL ADHESIVE

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes structural adhesive.

##### 1.2 SUBMITTALS

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

##### 1.3 REGULARY REQUIREMENTS

- A. SCAQMD (South Coast Air Quality Management District), Rule 1168 – Adhesive and Sealant Applications.
- B. Ozone Transport Commission (OTC) model Rule for Adhesives and Sealants.

#### PART 2 - PRODUCTS

##### 2.1 MANUFACTURERS

- A. Structural Adhesive:
  - 1. Foamseal F2100/F2100A Structural Adhesive System 2-Part polyurethane foam manufactured by Holcim Solutions and Products US, LLC (Basis of Design). a. 111 S. Nursery Rd., Irving TX 75060  
b. 56 Air Station Industrial Park, Rockland MA 02370
  - 2. Or equal.

## 2.2 STRUCTURAL ADHESIVE

- A. Description: One to one ratio polyurethane rigid foam system which provides a method of effectively bonding structural members to substrates and can completely eliminate mechanical fasteners. Also designed to act as an additional insulation, sealant, and thermal break.
- B. Features;
1. Excellent cell structure.
  2. Contains no CFC or HCFC blowing agents.
  3. Listed under ICC-ES ESR 4927 <https://icc-es.org/search-wpsolr/?q=ESR-4927>
- C. Physical Properties:
1. Base: Polyurethane.
  2. Shelf Life: 1 Year, unopened
  3. VOC (As mixed) 19.2 g/l EPA method 24
  4. Formaldehyde: No urea formaldehyde added during adhesive manufacturing
  5. Tested to: ASTM C557, ASTM E72, ASTM D6464, UL 723, and UL 1715.
  6. Flammability: ASTM E84, 2-1/2 inch wide by 1-1/2 inch thick bead. Refer to UL test report 93NK1218.
    - a. Flame Spread: 60.
    - b. Smoke: 200.
- D. Certification:
1. GREENGUARD Children & Schools Certified.
  2. GREENGUARD Indoor Air Quality Certified.
- E. Contributes to LEED and other green building rating system credits:
1. LEED-NC and LEED-CI EQ Credit 4.1.
  2. LEED for Schools EQ Credit.
  3. LEED Core & Shell EQ Credit 4.1.
  4. LEED-EB MR Credit 3.
  5. CHPS® (Collaborative for High Performance Schools) EQ Credit 2.2.
  6. Green Guide for Health Care EQ Credit 4.1.
  7. NAHB Model Green Home Bldg Guidelines – Sect 7, Global Impact 7.1.3.

## PART 3 - EXECUTION

### 3.1 APPLICATION, GENERAL

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

### 3.2 ADHESIVE APPLICATION

- A. The gypsum board being used shall meet ASTM C 1396. The nominal lumber is to be kiln dried and graded. All substrate surfaces shall be clean, dry and free of dust, wax, ice and loose particles

and shall have a surface temperature  $\geq 50^{\circ}\text{F}$ . F2100/F2100A adhesive should be applied in an ambient temperature range of  $\geq 50^{\circ}\text{F}$ . The adhesive is applied along the intersection of the gypsum or T&G pine and the nominal lumber according to manufacturer's application instructions. The adhesive temperature at the heater block should be between  $105^{\circ}\text{F}$  and  $120^{\circ}\text{F}$ . After the last bead is applied, the structure shall not be moved for a minimum of two minutes. The structure should stay in the same ambient conditions for the first 24 hours after application.

- B. Adhesive can be used on 24" and 16" o.c. framing. The fillet beads produced should measure a minimum of 1" average on the gypsum and 3/4" average on the framing. A bead should never be greater than 3" in size.
- C. The adhesive beads are applied along one side of field framing and along both sides at gypsum seams. The adhesive is applied to both sides of all framing members when applying to T&G pine.

END OF SECTION 061118