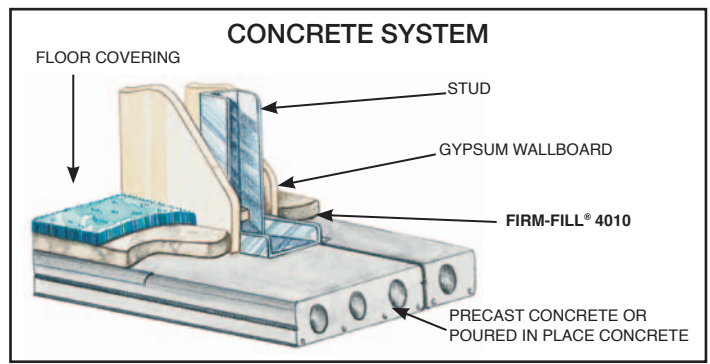
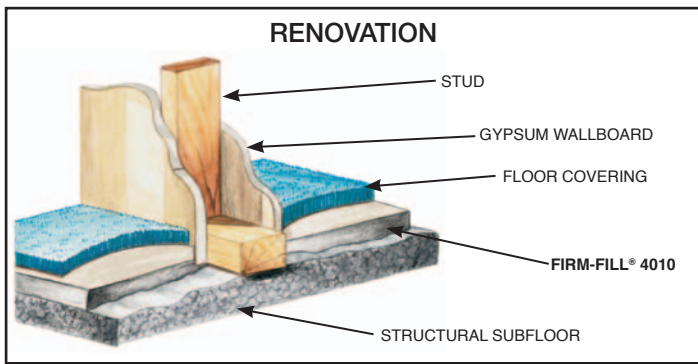




# **Firm-Fill<sup>®</sup>** **4010**

**FIRM-FILL 4010** is a high-performing, versatile, commercial underlayment from Hacker Industries, Inc. designed for thin capping concrete in new construction or resurfacing damaged concrete in renovation projects.

- Meets ASTM F2419 Standard Practice for the Installation of Thick Poured Gypsum Concrete Underlayments...
- Smooth, rock-hard surface suitable for finished floor goods
- Compressive strengths up to 5500 psi; no shrinkage cracks
  - Superior bonding characteristics; no shotblasting
  - Quick installation; up to 40,000 sq. ft. per day
  - Installed by trained, Licensed Applicators
  - Listed in over 83 UL Assemblies



## Recommended Specifications

### PART I GENERAL

- 1.1 Scope – Specify to meet project requirements
- A. Work included:
1. **FIRM-FILL 4010**
  2. Hacker Floor Primer
  3. Hacker Floor Sealer
  4. Hacker TopCoat
- 1.2 Qualifications
- A. **FIRM-FILL 4010** shall be installed by Licensed Applicators of Hacker Industries, Inc., using approved mixing and pumping equipment.
- B. **FIRM-FILL 4010** shall be delivered in original, unopened bags and protected from exposure to the elements after delivery. Do not allow bags to get wet.
- C. Install before or after drywall as specified.
- D. Before, during, and after installation of **FIRM-FILL 4010**, the building interior shall be continuously ventilated and heated to a minimum of 50°F (10°C).
- E. Compressive strength may be specified from 3500 psi to 5500 psi (approx. 24.1 to 37.9 MPa).
- F. All material specified herein shall be approved by Hacker Industries, Inc.

### PART II PRODUCTS

- 2.1 Materials
- A. Gypsum Concrete: **FIRM-FILL 4010** as supplied by Hacker Industries, Inc.
- B. Hacker Floor Primer
- C. Hacker Floor Sealer
- D. Hacker TopCoat
- E. Sand: 1/8" (3mm) or less washed plaster, mortar sand, or silica sand meeting the requirements of Hacker Industries, Inc.'s Sand Guidelines.
- F. Mix Water: Potable and free from impurities.

### PART III EXECUTION

- 3.1 Condition of Subfloor
- A. The General Contractor shall provide a structurally sound (L/360) subfloor, broom cleaned, dry and free of oil, grease or other contaminants. The concrete substrate shall be 28 days or older.
- B. Before installation, the General Contractor shall inspect and approve the condition of the subfloor.
- 3.2 Preparation of Subfloor
- A. All cracks and voids shall be filled with a quick-setting taping compound.
- B. Prime the subfloor using Hacker Floor Primer and/or Sealer. Priming requirements vary according to the subfloor. Multiple coats may be necessary.
- 3.3 Mixing Instructions
- A. 4 to 6 gallons (approx. 15.1 to 22.7L) of water and sand as specified per 80 pound (approx. 36.3kg) bag of **FIRM-FILL 4010**. Do not overwater. Water amount will change with wetness of sand.
- B. **FIRM-FILL 4010** mix proportions and methods shall be in strict accordance with Hacker recommendations.
- 3.4 Underlayment Application
- A. Scheduling: Application shall not begin until the building is enclosed, including windows, doors, and roof.
- B. Application: The minimum thickness of **FIRM-FILL 4010** varies with the type of floor system. **FIRM-FILL 4010** can be feather edged in low traffic areas over all concrete subfloors. The maximum thickness of **FIRM-FILL 4010** shall be 1-1/2" (approx. 38mm) in one lift.
- C. Protection: After installation, temporary wood planking shall be placed wherever the underlayment will be subject to

- heavy wheeled or concentrated loads.
- D. Drying: The General Contractor shall provide continuous ventilation and adequate heat to rapidly remove moisture from the area until the underlayment is dry. Prior to the installation of finished floor goods, the **FIRM-FILL 4010** shall be tested for dryness by the floor covering installer.
- E. **FIRM-FILL 4010** is suitable only for interior applications and shall be covered by a finished floor material.
- 3.5 Preparation for Installation of Floor Coverings
- A. Sealing: Any areas where the underlayment surface has been damaged shall be cleaned and sealed regardless of the specified floor covering. The floor covering manufacturers' specifications and requirements supercede these recommendations.
- B. Floor Covering Procedures: Please see Hacker Industries, Inc.'s "Guidelines for Installing Finished Floor Coverings." The guideline is not a warranty and shall be used as a guideline only. Also see ASTM F2419 for recommended procedures.
- 3.6 Field Quality Control
- A. Slump Test: **FIRM-FILL 4010** shall be tested for slump as it is being installed using a 2" by 4" (approx. 51mm by 102mm) cylinder. The patty size shall be 7" (approx. 178mm) plus or minus 1/2" (approx. 13mm) in diameter.
- B. Field Samples: Testing of molded cube samples shall be in accordance with ASTM C472 modified using split brass molds. Prior to independent sampling and/or testing, contact Hacker Industries, Inc., to insure proper ASTM methods are followed.

## Hacker Industries, Inc.

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For the Licensed Applicator in your area, please call our toll-free number, (800) 642-3455.