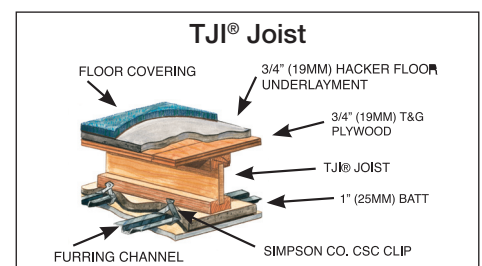
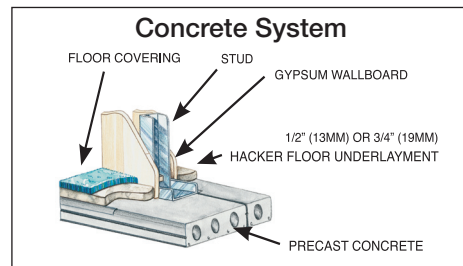
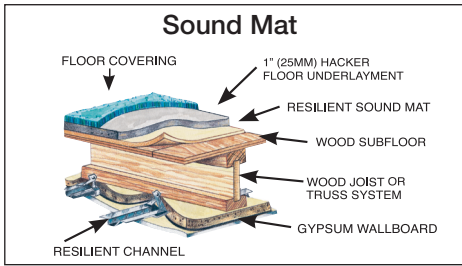
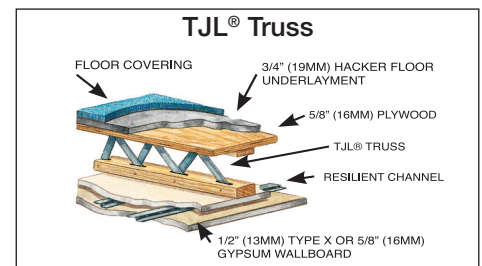
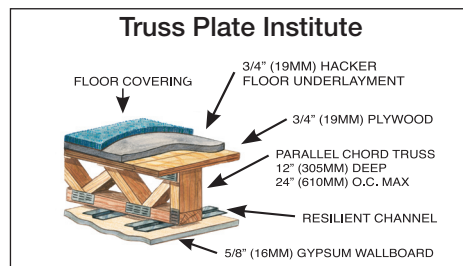
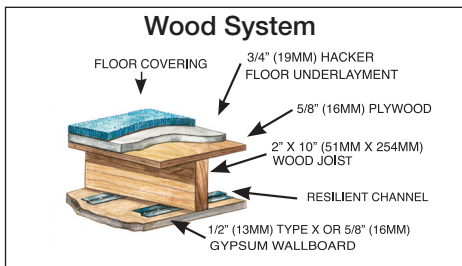




# **Firm-Fill<sup>®</sup>** **3310**

*Hacker Industries, Inc.'s premium gypsum concrete floor underlayment, **FIRM-FILL<sup>®</sup> 3310**, offers an innovative formulation that decreases the amount of water used while enhancing the rock-solid floor strength, up to 3300 psi. **FIRM-FILL<sup>®</sup> 3310** helps maximize sound control and creates a smooth, flat, crack-resistant surface for finished floor coverings.*

- Easy application, fast setting; light traffic can return within hours
- Over 84 UL listings; ICC-ES Legacy Report
- Can be poured before or after drywall, as specified
- Specify with Hacker Sound Mat II for additional sound control
- Meets ASTM F2419 and Tile Council of America F180, F200
- Only available from trained, Licensed Applicators



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## Recommended Specifications

### PART I GENERAL

#### 1.1 Scope – Specify to meet project requirements

##### A. Work included:

1. **FIRM-FILL 3310**
2. Hacker Floor Primer
3. Hacker TopCoat™ SP (Surface Prep)

#### 1.2 Qualifications

- A. **FIRM-FILL 3310** shall be installed by Licensed Applicators of Hacker Industries, Inc., using approved mixing and pumping equipment with a water meter.
- B. **FIRM-FILL 3310** 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 either before or after drywall, as specified.
- D. Before, during, and after installation of **FIRM-FILL 3310**, the building interior must be continuously ventilated and heated to a minimum of 50°F (10°C).
- E. Compressive strength can be specified from 2000 to 3300 psi (13.8 to 22.8 MPa).
- F. All materials specified herein shall be approved by Hacker Industries, Inc.

### PART II PRODUCTS

#### 2.1 Materials

- A. Gypsum Concrete: **FIRM-FILL 3310** as supplied by Hacker Industries, Inc.
- B. Hacker Floor Primer
- C. Hacker TopCoat SP, if required
- D. Sand: 1/8" (3mm) or less washed plaster or masonry sand meeting requirements of Hacker Industries, Inc. Sand Guidelines.
- E. Mix Water: Potable and free from impurities.

### PART III EXECUTION

#### 3.1 Condition of Subfloor

- A. General Contractor is responsible for providing a structurally sound (L/360) subfloor, broom cleaned, dry, and free of oil, grease, paraffin, laitance or other contaminants.
  - B. Before installation, the General Contractor shall inspect and approve the condition of the subfloor and test for dryness.
- #### 3.2 Preparation of Subfloor
- A. All cracks and voids shall be filled with a quick-setting taping compound.
  - B. Plywood/OSB: Spray one coat Hacker Primer using one gallon (3.8L) per 500 square feet (46 sq.m).
  - C. Other substrata: Conditions may vary. Consult Hacker Industries, Inc. for recommended floor preparation.
- #### 3.3 Mixing Instructions
- A. 4 to 5.5 gallons (15.1 to 20.8L) of water and sand as specified per 80 pound (36.3 kg) bag of **FIRM-FILL 3310**. Do not over water. Water amount will change with wetness of sand.
  - B. **FIRM-FILL 3310** mix proportions and methods shall be in strict accordance with Hacker recommendations.
- #### 3.4 Underlayment Application
- A. Application: **FIRM-FILL 3310** can be installed at 3/4" (19mm) minimum over wood, 1/2" (13mm) minimum over concrete. Place as continuously as possible until installation is complete.
  - B. Protection: After installation, temporary wood planking shall be placed by General Contractor wherever the underlayment will be subject to wheeled or concentrated loads.
  - C. Drying: The General Contractor shall provide continuous ventilation and

- D. **FIRM-FILL 3310** is suitable for interior applications only and must be covered by a finished floor covering.
- #### 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 specified floor covering. 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 should be used as a guideline only. Also see ASTM F2419 for recommended procedures.
- #### 3.6 Field Quality Control
- A. Slump Test: **FIRM-FILL 3310** shall be tested for slump as it is being installed using a 2" by 4" (approx. 51mm by 102mm) cylinder. The patty size should be 7-1/2" (approx. 191mm) plus or minus 1/2" (approx 13mm) in diameter.
  - B. Field Samples: Testing of molded cube samples shall be in accordance with ASTM modified C472 using split brass molds. Prior to independent testing, contact Hacker Industries, Inc., to insure proper ASTM methods are followed.



610 Newport Center Drive, Suite 250  
Newport Beach, CA 92660 USA  
(949) 729-3101 FAX: (949) 729-3108  
Toll Free: (800) 642-3455 FAX: (800) 906-8548  
e-mail: info@HackerIndustries.com  
www.HackerIndustries.com

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