



# Firm-Fill<sup>®</sup>

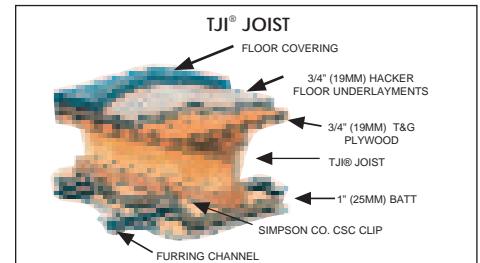
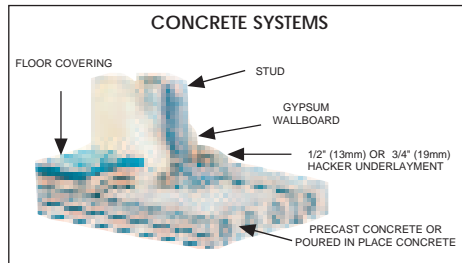
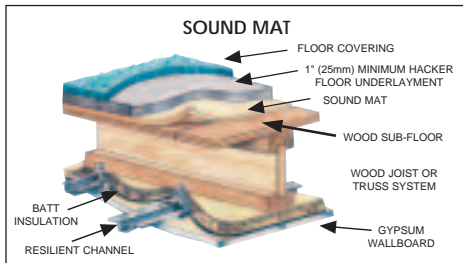
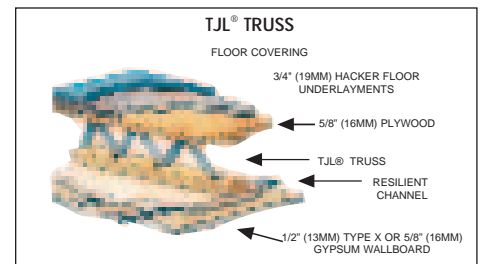
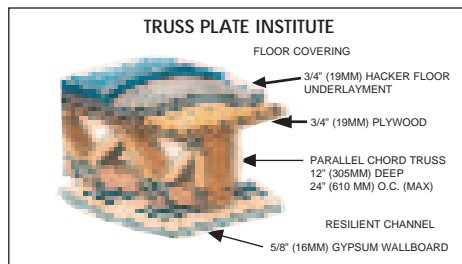
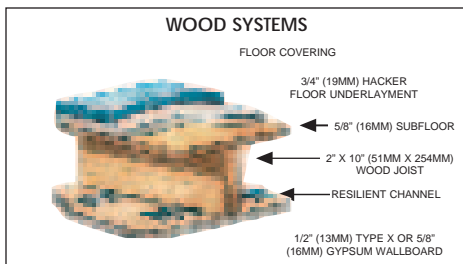
## 3310

An innovative new product  
from Hacker Industries, Inc.  
that elevates gypsum concretes to  
an unprecedented level of rock-solid  
performance. **FIRM-FILL<sup>®</sup> 3310** delivers:

- **Unparalleled levels of strength and finish** providing exceptional compressive strengths up to 3300 psi. Poured before or after drywall, FIRM-FILL<sup>®</sup> 3310 flows evenly over the subfloor creating a smooth, flat, crack-resistant surface for virtually all types of finished floor coverings.
- **Unequaled quality of installation**, FIRM-FILL<sup>®</sup> 3310's fast setting surface and low water demand rapidly eliminates water allowing for accelerated drying time. FIRM-FILL<sup>®</sup> 3310 is only available from expertly trained, Licensed Applicators who have installed nearly a billion square feet of Hacker Floor Underlayments in residential and commercial projects across North America.
- **With the proven benefits of Hacker Floor Underlayments**, FIRM-FILL<sup>®</sup> 3310 will deliver fire resistance, improved sound performance and resilient surfaces for finished floor coverings in both new construction and renovation projects. Since 1983, Hacker Industries, Inc. has supplied value by delivering only the highest quality floor underlayments and will continue to set the standard for reliable, cost-effective solutions for the most demanding project specifications.



NEW  
PRODUCT



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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

#### 1.2 Qualifications

- A. Firm-Fill 3310 shall be installed by Licensed Applicators of Hacker Industries, Inc., using approved mixing and pumping equipment.
- B. Firm-Fill 3310 shall be delivered in original, unopened bags and protected from exposure to the elements after delivery. Do not allow material to get wet.
- C. Install 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 (approx. 10°C).
- E. Compressive strength can be specified from 2000 psi to 3300 psi (approx. 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 Floor Sealer
- D. Sand: 1/8" (approx. 3mm) or less washed plaster or mortar 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, and free of oil, grease or other contaminants.
- 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 should be filled with a quick-setting taping compound.
- B. Plywood/OSB: Spray one coat Hacker Primer using one gallon (approx. 3.8L) per 500 square feet (approx. 46 sq.m).
- C. Other substrata: Conditions may vary. Consult Hacker Industries, Inc. for recommended floor preparation.

#### 3.3 Mixing Instructions

- A. 4 to 6 gallons (approx. 15.1 to 22.7 L) of water and sand as specified per 80 pound (approx. 36.3 kg) bag of Firm-Fill 3310. Do not overwater. 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" (approx. 19mm) minimum over wood frame, 1/2" (approx. 13mm) minimum over precast or poured in place concrete. Can be feather edged to zero over concrete. Place as continuously as possible until installation is complete.
- B. Protection: After installation, temporary wood planking shall be placed wherever the underlayment will be subject to heavy wheeled or concentrated loads.

- C. 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 3310 must be free from any moisture. Consult flooring contractor for recommended procedures to test for dryness.
  - D. Firm-Fill 3310 is suitable for interior applications only and must 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 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
- #### 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: C472 modified using split brass molds. Prior to independent sampling, 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.