



Firm-Fill®

Gypsum Concrete

*As a construction professional,
you have a lot to think about:*

How can I reduce sound transmission in my multi-family housing project to increase the residents' privacy?

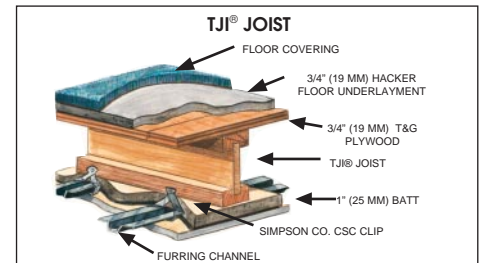
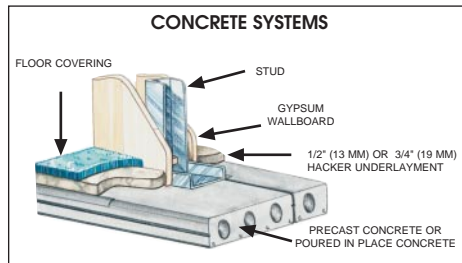
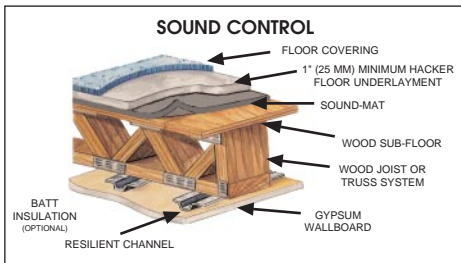
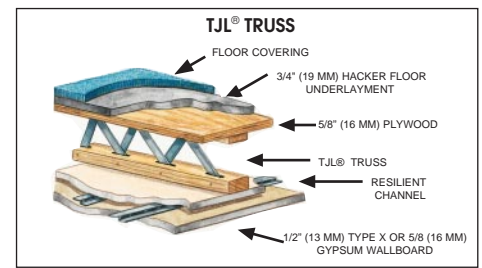
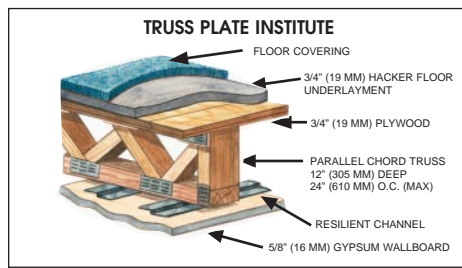
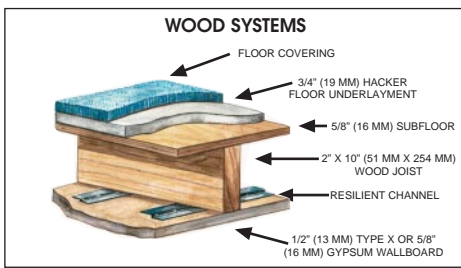
How do I improve the structure's fire resistance?

How can I flatten a substrate with a crack-free surface so it can be covered with virtually any floor covering?

How do I get compressive strengths up to 2000 psi while keeping costs low?

The versatile and durable solution to these questions is FIRM-FILL Gypsum Concrete. For new construction, repair or renovation, FIRM-FILL Gypsum Concrete provides multiple benefits all in one application:

- Flattens subfloors
- No shrinkage cracks
- Lightweight; high strength
- Easy application; no troweling
- Superior STC and IIC ratings
- Over 82 UL Design Listings
- Code approvals from ICC-ES
- Smooth, durable, joint-free surface
- Rapid installation: up to 40,000 sq. ft. per day
- 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 GYPSUM CONCRETE**
2. Hacker Floor Primer

1.2 Qualifications

- A. **FIRM-FILL GYPSUM CONCRETE** shall be installed by Licensed Applicators of Hacker Industries, Inc., using approved mixing and pumping equipment.
- B. **FIRM-FILL GYPSUM CONCRETE** shall be delivered in original, unopened bags and protected from exposure to the elements after delivery.
- C. Install before or after drywall as specified.
- D. Before, during, and after installation of **FIRM-FILL GYPSUM CONCRETE**, the building interior shall be continuously ventilated and heated to a minimum of 50°F (approx. 10°C).
- E. Compressive strength can be specified from 1200 psi to 2000 psi (approx. 8.3 to 13.8 MPa).
- F. All materials specified herein shall be approved by Hacker Industries, Inc.

PART II PRODUCTS

2.1 Materials

- A. Gypsum Concrete: **FIRM-FILL GYPSUM CONCRETE** as supplied by Hacker Industries, Inc.
- B. Hacker Floor Primer and Sealer
- C. Sand: 1/8" (approx. 3mm) or less washed plaster or mortar sand meeting requirements of Hacker Industries, Inc. Sand Guidelines.
- D. Mix Water: Potable and free from impurities.

PART III EXECUTION

3.1 Condition of Subfloor

- A. The 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 shall 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. 47 sq.m).
- C. Other substrata: Conditions may vary. Consult Hacker Industries, Inc. for recommended floor preparation.

3.3 Mixing Instructions

- A. 6 to 7 gallons (approx. 22.7 to 26.5 L) of water and sand as specified per 80 pound (approx. 36.3 kg) bag of **FIRM-FILL GYPSUM CONCRETE**. Do not overwater. Water amount will change with wetness of sand.
- B. **FIRM-FILL GYPSUM CONCRETE** mix proportions and methods shall be in strict accordance with Hacker recommendations.

3.4 Underlayment Application

- A. Application: **FIRM-FILL GYPSUM CONCRETE** 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 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 GYPSUM CONCRETE** must be free from any moisture. Consult flooring contractor for recommended procedures to test for dryness.

D. **FIRM-FILL GYPSUM CONCRETE** is suitable for interior applications only 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 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.

3.6 Field Quality Control

- A. Slump Test: **FIRM-FILL GYPSUM CONCRETE** 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 8" (approx. 203mm) 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.



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