



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?

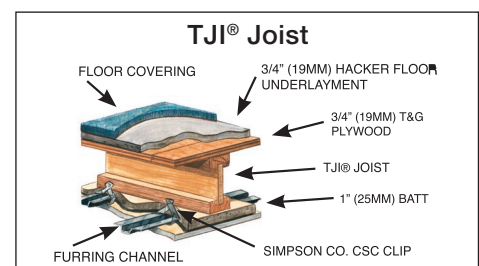
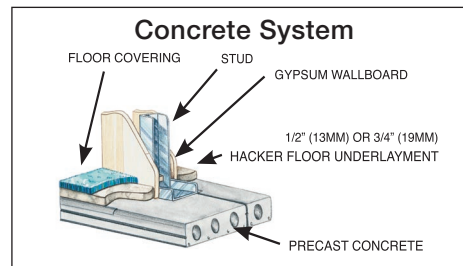
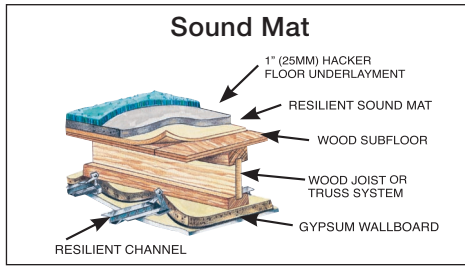
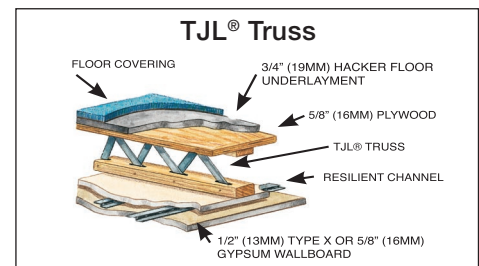
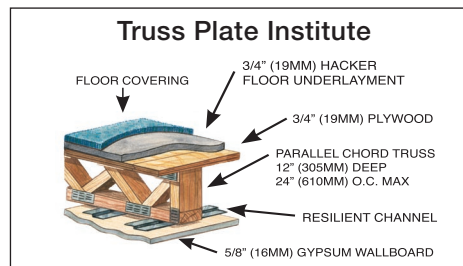
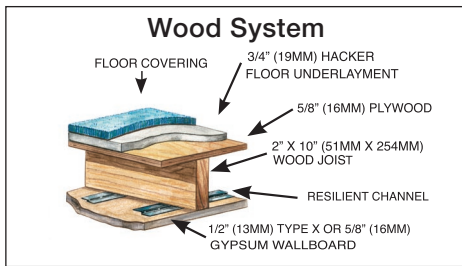
How do I meet the structure's fire ratings?

How can I flatten a substrate with a crack-resistant surface that can be covered with virtually any floor covering?

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

The versatile and durable solution to these questions is FIRM-FILL Gypsum Concrete, which meets ASTM F2419 Standard Practice for Installation of Thick Poured Gypsum Concrete Underlayments.

- Flattens subfloors
- No shrinkage cracks
- Lightweight; high-strength
- Superior STC and IIC ratings
- Over 84 UL Design Listings
- Code approvals from ICC-ES
- Methods listed in TCA Handbook
- Specify with Hacker Sound Mat II
- Fast setting; can be walked on in 90 minutes
- 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
 3. Hacker Floor Sealer
 4. Hacker TopCoat SP (Surface Prep)
- 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. Do not allow bags to get wet.
 - 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 (10°C).
 - E. Compressive strength can be specified from 1200 psi to 2000 psi (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** supplied by Hacker Industries, Inc.
 - B. Hacker Floor Primer
 - C. Hacker Floor Sealer
 - D. Hacker TopCoat SP, if required
 - E. Sand: 1/8" (approx. 3mm) or less washed plaster or mortar sand meeting requirements of Hacker Industries, Inc. Sand Guidelines.
 - F. 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, dry, 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. 46 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 (22.7 to 26.5L) of water and sand as specified per 80 pound (36.3 kg) bag of **FIRM-FILL GYPSUM CONCRETE**. Do not over water. 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" (19mm) minimum over wood frame, 1/2" (13mm) minimum over precast or poured in place 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 adequate heat to rapidly remove moisture from the area until the underlayment is dry. Prior to the installation of finished floor goods, **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 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. 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 GYPSUM CONCRETE** shall be tested for slump as it is being installed using a 2" by 4" (51mm by 102mm) cylinder. The patty size shall be 8" (203mm) plus or minus 1/2" (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.



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.