A quiet living space is our business. Established in 1983, Hacker Industries, Inc. offers a full line of FIRM-FILL® Sound Control Mats (SCM) and pourable FIRM-FILL® Gypsum Concrete Underlayments to meet demanding sound-attenuating and fire-resistance specifications. More than three billion square feet of FIRM-FILL® SCM and FIRM-FILL® Gypsum Concrete Underlayments have been installed in residential, multi-family, and commercial projects across North America; demonstrating proven performance over plywood, OSB, corrugated steel deck, concrete or any structurally sound substrate.

FIRM-FILL® SCM are the only sound control mats that are color coded for quality control. These durable, lightweight sound control mats are engineered to limit impact and airborne sound transmission between units when used in conjunction with FIRM-FILL® Brand Gypsum Underlayments. FIRM-FILL® SCM can improve IIC ratings 15-25 points and carry a Class-A fire rating under ASTM E84.

All FIRM-FILL® Gypsum Underlayments are quick drying and offer a flat, durable surface for finished floor coverings. They meet ASTM F2419; Standard Practice for the Installation of Thick Poured Gypsum Concrete Underlayments, as well as ICC-ES ER-4147, and Los Angeles City RR 24540.

Hacker Industries, Inc. does not sell its products directly to the general public. Rather, it provides distribution through a network of trained, Licensed Applicators.

Applications for Multi-Family, Commercial and Hospitality

**Fire Attenuation**
FIRM-FILL® Gypsum Underlayments are an integral component of over 105 UL-rated floor/ceiling assemblies with one to four hour fire ratings.

**Sound Attenuation**
FIRM-FILL® SCM sound control mats, working in conjunction with FIRM-FILL® Gypsum Underlayments, create a sound attenuation system to reduce the spread of IIC/STC sound between units.

**Concrete Topping & Self-Levelers**
Among the line of FIRM-FILL® Gypsum Concretes are cost effective solutions to most topping and leveling problems.

**Corrugated Metal Decking**
Poured gypsum underlayments are lighter than concrete, making them an ideal component in light gauge steel structures where weight is a major design factor.

**Radiant Floor Heating**
GYP-SPAN® Radiant is specially formulated for use in conjunction with radiant heating products to create even heat distribution throughout the entire floor.

**Topcoats & Sealers**
Hacker Industries, Inc.’s TopCoat® and Sealer products will help create the best possible floor underlayment substrate for finished floor goods.
Gypsum Concrete Underlayments

FIRM-FILL® Gypsum Concrete
Super Blue is a cost-effective solution to satisfy acoustical ratings and fire codes in multi-family construction. Designed for application over plywood or OSB subflooring, FIRM-FILL® Gypsum Concrete delivers a smooth, flat surface for finished floor coverings.

- Compressive strength up to 2250 psi
- Meets ASTM F2419
- Minimum 3/4” (19 mm) over wood
- Helps increase sound ratings between units
- Listed in over 105 UL fire-rated designs
- Fast application and quick drying time

FIRM-FILL® 3310 Classic
Premier gypsum underlayment ideal for wood frame, light commercial, renovation, and hospitality projects. FIRM-FILL® 3310 Classic requires less water, allowing for accelerated drying time and unparalleled levels of strength and finish.

- Compressive strength from 2000–3300 psi (13.8–22.8 MPa)
- Apply from 3/4” (19 mm) to 3-1/2” (89 mm)
- UL designs with 1and 2-hour fire ratings
- Creates a durable, hard surface
- Acceptable with most flooring solutions
- Meets TCNA standards RH111 and RH122

FIRM-FILL® 2010+
Installed over wood subfloors, FIRM-FILL® 2010+ delivers optimal compressive strengths while providing improved STC and IIC ratings in multi-family and single family construction. Reengineered to create a flatter, harder, and smoother surface for finished floor coverings.

- Compressive strength from 2000–3200 psi (13.8–22 MPa)
- Apply from 3/4” (19 mm) to 3-1/2” (89 mm)
- Greater abrasion resistance
- Increased sound and fire performance
- Stiffens subfloor to eliminate squeaks

FIRM-FILL® 3310+
A unique poured floor underlayment, FIRM-FILL® 3310+ delivers best in class performance. It is ideal over wood or concrete subfloors to maximize sound control and is integral in a UL fire rated floor/ceiling assembly.

- Compressive strength from 3000–3900 psi (20.7–26.9 MPa)
- Apply from 3/4” (19 mm) to 3-1/2” (89 mm)
- Solid and crack resistant
- Acceptable with finished floor coverings, including laminates, wood, stone, tile and carpet
FIRM-FILL® High Strength
Solid, cost-effective solution for producing a durable, firm surfce for finished floor coverings. Can also correct concrete problems in light commercial, renovation and repair projects.

- Compressive strength from 2500–3800 psi (17.2–26 MPa)
- Apply from featheredge to 3-1/2” (89 mm)
- Improved sound and fire performance
- Acceptable with a variety of finished floor coverings, including laminates, stone and tile

FIRM-FILL® 4010+
Engineered for thin capping existing concrete floors that may be damaged, jagged, or uneven. FIRM-FILL® 4010+ provides outstanding bonding characteristics to give old concrete floors new life.

- Designed to provide a smooth, flat surface for finished floor coverings
- Install from featheredge to 1” (25 mm)
- Lightweight, high strength
- No shot blasting or surface prep required

FIRM-FILL® CMD
Ideal for multi-family and mid-rise commercial projects with light-gauge steel frame construction and corrugated metal deck. FIRM-FILL® CMD is an economical solution to build higher and faster and still achieve a smooth, flat surface.

- Compressive strength from 3500 psi (24.1 MPa)
- Average thickness of 1-9/16” (40 mm)
- Lightweight alternative for fast track construction
- UL designs with 1 and 2-hour fire ratings
- Provides smooth, flat and durable surface for finished floorings

GYP-SPAN® Radiant
Designed specifically for use in hydronic or electrical radiant heat systems. GYP-SPAN Radiant® is the perfect solution in custom residential housing to create a thermal mass for even distribution of heat where it matters most - under your feet.

- Compressive strength from 2000–3200 psi (13.8–22 MPa)
- Minimum 3/4” (19 mm) above tubes/cables
- Meets TCNA standards RH111 and RH122
- No shrinkage cracks
- Acceptable under a variety of finished floor coverings

Gypsum Concrete Underlayments
FIRM-FILL® SCM-125

At just 1/8” (3 mm), FIRM-FILL® SCM-125 delivers big noise reduction results, while maintaining a low profile. Ideal for multi-family construction when the gypsum concrete pour is less than 1”, FIRM-FILL® SCM-125 creates smoother floor transitions between carpet and hard surface areas.

- Quick and easy installation
- Dramatically improves IIC ratings under a variety of floor coverings
- Minimum 3/4” (19 mm) FIRM-FILL® Brand Gypsum Concrete topping

FIRM-FILL® SCM-250

FIRM-FILL® SCM-250 is a cost-effective solution to address STC/IIC requirements in multi-family construction. Tested by independent, third party test facilities, this 1/4” (6 mm) sound control mat is proven to increase STC/IIC levels in wood frame construction.

- Lightweight; Quick and easy installation
- Helps reduce noise transmission between units
- Outstanding under laminate flooring
- Minimum 1” (25 mm) FIRM-FILL® Brand Gypsum Concrete topping

FIRM-FILL® SCM-400

For luxury, high end multi-family projects, FIRM-FILL® SCM-400 delivers extraordinary IIC values. At 3/8” (10 mm) thick, FIRM-FILL® SCM-400 provides additional noise control when a thicker mat is specified. There is minimal deflection and no creep or long-term degradation.

- Lightweight; Easy to handle and install
- Helps elevate sound performance in wood-frame, steel, and concrete systems
- Minimum 1” reinforced in high traffic areas with FIRM-FILL® Brand Gypsum Concrete

FIRM-FILL® SCM-750

Provides excellent sound performance in the mid and high range frequencies. At 3/4” (19 mm), FIRM-FILL® SCM-750 has the largest air void of any sound control mat, dramatically improving sound attenuation in critical applications. Ideal in assemblies with challenging noise control requirements.

- Lightweight; Easy to handle and install
- Additional impact sound deadening when thicker mat is specified
- Minimum 1-1/2” (38 mm) FIRM-FILL® Brand Gypsum Concrete topping
### Hacker Sound Mat II

Hacker Sound Mat II is a 1/4” (6 mm), dimpled mat designed to maximize IIC ratings while meeting indoor air quality standards.

- Low compression set
- System rated for commercial & residential use per ASTM C627
- Minimum 1-1/4” (32 mm) FIRM-FILL® Brand Gypsum Concrete topping
- Withstands movement of heavy equipment

- Helps contribute points toward LEED®

### Hacker Floor Sealer

A clear, water based, vinyl acrylic copolymer sealer that is recommended over FIRM-FILL® Gypsum Concrete Underlayments when protection is needed from subsequent construction traffic.

- Used to prevent wear on underlayment during construction
- Installed by trained Licensed Applicators

### Hacker Floor Primer

Designed to enhance the bond between a FIRM-FILL® Brand Gypsum Concrete and existing structural substrate, Hacker Floor Primer also decreases moisture penetration on the existing wood subfloor. Hacker Floor Primer is available in liquid and powder form.

- Substrate primer for FIRM-FILL® Underlayments
- Meets ASTM F2419; Standard Practice for the Installation of Thick Poured Gypsum Concrete Underlayments
- Installed by trained Licensed Applicators

### Hacker TopCoat® SP

An acrylic based, film-forming surface preparation agent, which provides optimal surface bonding conditions for most floor covering adhesive products.

- Improves bond between Hacker floor underlayment and floor covering adhesives
- Meets ASTM F2419; Standard Practice for the Installation of Thick Poured Gypsum Concrete Underlayments
- Installed by trained Licensed Applicators
Floor Systems

Assemblies are offered as a guideline only. Please consult your design professional.
Choosing the Right Underlayments

<table>
<thead>
<tr>
<th>Type of Subfloor</th>
<th>Compressive Strength (psi)</th>
<th>FIRM-FILL® Gypsum Concrete</th>
<th>FIRM-FILL® 2010+</th>
<th>FIRM-FILL® 3310 Classic</th>
<th>FIRM-FILL® 3310+</th>
<th>FIRM-FILL® High Strength</th>
<th>FIRM-FILL® 4010+</th>
<th>FIRM-FILL® CMD</th>
<th>GYP-SPAN® Radiant</th>
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- **Recommended**
- **Optional**

UL Fire Rated Design Listings

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<th>Type</th>
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<td>I-JOIST</td>
<td>L518, L530, L538, L547, L556, L570, L571, L581, L583, L589, M502, M506, M512</td>
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<td>CONCRETE</td>
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For additional assistance with choosing the right underlayment, call Hacker Industries, Inc. at (800) 642-3455 or visit HackerIndustries.com
EXTRA HEAVY DUTY
• Minimum 3/4” (19 mm) of 2000 psi (13.8 MPa) FIRM-FILL® Brand Gypsum Underlayment over 1/8” (3 mm) FIRM-FILL® SCM-125
• Minimum 1” (25 mm) of 2000 psi (13.8 MPa) FIRM-FILL® Brand Gypsum Underlayment over 1/4” (6 mm) FIRM-FILL® SCM-250
• Minimum 1-1/4” (32 mm) of 2000 psi (13.8 MPa) FIRM-FILL® Brand Gypsum Underlayment over 3/8” (10 mm) FIRM-FILL® SCM-400

LIGHT COMMERCIAL
• Minimum 1” (25 mm) of 2500 psi (17.2 MPa) GYP-SPAN® Brand Gypsum Underlayment over 1/4” (6 mm) Hacker Sound Mat II

*Tested in accordance with ASTM C627-10; Standard Test Method for Evaluating Ceramic Tile Installation Systems Using Robinson-Type Floor Tester.

SCM Compression Resistance Test Results

<table>
<thead>
<tr>
<th>FIRM-FILL® SCM-125</th>
<th>Force Applied</th>
<th>Retained Thickness (%)</th>
<th>Actual Residual Thickness (in)</th>
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<tbody>
<tr>
<td></td>
<td>42 lb per ft²</td>
<td>100.00%</td>
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<td>505 lb per ft²</td>
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<th>FIRM-FILL® SCM-250</th>
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<th>Actual Residual Thickness (in)</th>
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<td></td>
<td>505 lb per ft²</td>
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<tr>
<th>FIRM-FILL® SCM-400</th>
<th>Force Applied</th>
<th>Retained Thickness (%)</th>
<th>Actual Residual Thickness (in)</th>
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<td>105 lb per ft²</td>
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<td></td>
<td>505 lb per ft²</td>
<td>99.13%</td>
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WARRANTY

HACKER INDUSTRIES WARRANTS TO ITS LICENSED APPLICATORS WHO EXCLUSIVELY INSTALL ONLY FIRM-FILL® BRAND PRODUCTS AND TO THE OWNER(S) OF THE WORK OF IMPROVEMENT AT THE TIME THE SOUND CONTROL MAT IS INSTALLED THAT THE SOUND CONTROL MATS COVERED BY THIS WARRANTY WILL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP. IF COVERED SOUND CONTROL MATS FAIL TO PERFORM WITHIN THIS WARRANTY DURING THE TWO-YEAR WARRANTY PERIOD, AND IF THAT FAILURE IS REPORTED PROMPTLY, (BUT IN NO EVENT MORE THAN THIRTY (30) DAYS AFTER DISCOVERY), HACKER INDUSTRIES, INC. WILL, AT ITS SOLE OPTION, REPLACE OR REFUND THE PURCHASE PRICE OF THE DEFECTIVE MATS. HACKER INDUSTRIES, INC. WILL NOT, HOWEVER, PAY COSTS OF LABOR, FREIGHT, FLOOR COVERING MATERIALS, CONSEQUENTIAL OR INCIDENTAL DAMAGES, OR ANY OTHER COSTS OR DAMAGES ASSOCIATED WITH THE REPAIR OR REPLACEMENT.

The preceding paragraph limits the scope of the warranty provided hereunder and the remedies for its breach. This limited warranty replaces and supersedes any and all other express or implied warranties. Except as expressly warranted herein, these FIRM-FILL® SCM Underlayments are sold "as is," without warranty.

FIRM-FILL® SCM Underlayments are one component in an overall floor/ceiling assembly designed to achieve certain sound results. The sound control mat itself has no acoustical value. Its performance is affected by every other component and the likelihood of achieving code compliance is contingent upon many other trades including framers, plumbers, drywall contractors to name a few. Accordingly, Hacker Industries, Inc. makes no warranty or representation concerning IIC or STC ratings or the overall effectiveness of the finished floor/ceiling assembly.

Developers and general contractors are responsible for building properly and testing field performance immediately in order to assure the reliability of the project.

Laboratory tests are not a guarantee of field performance because of the issues noted above and many other design errors that may occur. Please consult a professional acoustical consultant to assure plans are proper and that the floor/ceiling assembly can perform to expectations.

SAFETY FIRST

Follow good safety/industrial practices during installation. Wear appropriate personal protective equipment. Read SDS and literature prior to specification and/or installation.

TRADEMARKS

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