



FIRM-FILL® High Strength Submittal Sheet

TECHNICAL DATA	PROPERTIES	ASTM
Compressive Strength	2500 to 4000 psi (17.2 to 27.6 MPa)	C472 M
Thickness	Feather-edge in transition areas to 3 1/2" (89 mm)	
Weight	7.7 lb/ft ² (37.6 kg/m ²) at 3/4" (19 mm)	C472 M
Fire Hazard Classification	Flame Spread Index 0; Fuel Contribution 0; Smoke Density 0	E84
Sand	1/8" (3 mm) or less washed plaster or masonry sand (meets requirements of Hacker Industries, Inc., <i>Sand Specification</i>)	



FIRM-FILL® High Strength Gypsum Concrete Underlayment (GCU)

- ✓ High-strength cementitious underlayment for use over concrete slabs or precast concrete
- ✓ Ideal for light commercial, renovation and repair projects
- ✓ Cost-effective way to correct damaged, uneven concrete subfloors
- ✓ Fast installation and rapid set time; walkable in 90 minutes
- ✓ Little shot blasting or surface preparation required
- ✓ Install over a FIRM-FILL® Sound Control Mat (SCM) for improved IIC Ratings
- ✓ Code Compliant; over 120 UL Listings

Product Description

FIRM-FILL® High Strength Gypsum Concrete is designed to repair and resurface cracked, damaged, and out-of-level concrete subfloors in renovation and repair projects. Installed from feather-edge to 3", FIRM-FILL® High Strength provides exceptional strength and durability with compressive strengths from 2500 to 4000 psi (17.2 to 27.6 MPa).

FIRM-FILL® High Strength is mixed on the job site with local sand, meeting Hacker Industries, Inc., *Sand Specifications*, and potable water to create a lightweight slurry. At 3/4" (19mm) thick, the underlayment weighs approximately 7.7 lb/ft² (37.6 kg/m²) with an approximate dry density range of 120-125 pcf.

For new construction or renovation, FIRM-FILL® High Strength provides a cost-efficient way to create a fire-resistant, sound-rated and smooth floor surface. FIRM-FILL® High Strength is suitable for a variety of finished floor coverings. To achieve additional sound isolation, use with Hacker sound attenuation products.

Related Products

FIRM-FILL® High Strength is used in conjunction with: Hacker Floor Primer, Hacker Reinforcement, FIRM-FILL® Sound Control Mats, FIRM-FILL® SCM Tape, EnkaSonic® Plus, Hacker Floor Sealer, Hacker Perimeter Isolation, and Hacker TopCoat® SP (Surface Prep). For more products, visit www.hackerindustries.com/products.shtml.

UL FIRE RATED DESIGNS
L003, L006, L201, L202, L206, L208, L209, L210, L211, L212, L501, L502, L503, L504, L505, L506, L507, L508, L509, L510, L511, L512, L513, L514, L515, L516, L517, L518, L519, L520, L521, L522, L523, L524, L525, L526, L527, L528, L529, L530, L533, L534, L535, L536, L537, L538, L539, L540, L541, L542, L543, L545, L546, L547, L549, L550, L551, L556, L557, L558, L560, L562, L563, L564, L565, L569, L570, L573, L574, L576, L577, L579, L581, L583, L585, L587, L588, L589, L590, L592, L593, L598
M500, M501, M502, M503, M504, M505, M506, M508, M509, M511, M513, M514, M515, M517, M519, M520, M521, M525, M526, M530, M531, M536, M538, M540, M544, M545, M546, M550, M553
J917, J919, J920, J924, J927, J931, J957, J958, J991, J994

Sound Testing & UL Fire Rated Designs

Published acoustic and fire systems tests were conducted under controlled laboratory or field conditions and reflect results applicable only to those specific assemblies. For more information on acoustical assemblies, visit www.hackerindustries.com/acoustical-design-guide-download.shtml.

Compliance • ICC-ESR-3386 • IAPMO UES Evaluation Report No. 474 • HUD 1255e

Limitations

1. Do not use in exterior locations or below-grade.
2. Do not over water; do not over sand.
3. Do not install where continuous exposure to moisture is likely.
4. Do not use as a wear surface; underlayment must be covered by a finished floor covering.
5. Structure shall be designed so that deflection does not exceed L/360. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits. Consult the appropriate floor covering manufacturer.
6. No single application of FIRM-FILL® High Strength shall exceed 3" in depth. Drying times must be extended to accommodate thicker pours.
7. FIRM-FILL® High Strength is but one component of an effective sound and fire control system. Care must be taken in the installation of all components to assure the ultimate design performance.

Installation

Before, during and after the installation of FIRM-FILL® High Strength, the building must be enclosed and the temperature maintained at a minimum of 50°F (10°C). Prior to the installation of FIRM-FILL® High Strength, the subfloor shall be structurally sound, broom-cleaned, dry and free from oil, grease, paraffin, laitance, wax or other contaminants. Prime the structural substrate with Hacker Floor Primer or approved equal before installing underlayment.

Adequate ventilation (and heat if necessary) shall be provided by the General Contractor (GC) to ensure proper drying of FIRM-FILL® High Strength. When necessary, the GC shall provide mechanical ventilation. Depending on thickness and drying conditions, the underlayment should dry within 8 to 14 days. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s *Drying Conditions Flyer* and Hacker Industries, Inc.'s website for additional information concerning optimal drying conditions for this product. After installation, temporary planking shall be placed by the GC anywhere the floor underlayment is subject to wheeled concentrated loads, or heavy trade traffic.

Finished floor coverings may be installed when the FIRM-FILL® High Strength is completely dry and tested for moisture content by the floor covering installer. Consult the flooring contractor for recommended procedures to test for dryness and acceptable levels of moisture (see ASTM F2419). All recommendations or instructions made by finished floor covering manufacturers supersede these recommendations. Refer to Hacker Industries, Inc.'s *Guidelines for Installing Finished Floor Coverings*. The guideline is not a warranty and shall be used as a guideline only.

WARNING

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read all specifications, SDS and literature prior to specification and installation. When mixed with water, this product hardens and becomes extremely hot. Do not attempt to make a cast enclosing any part of the body using this material. Portland cement is strongly alkaline. Direct contact can be corrosive and cause severe damage or chemical burns to eyes and wet, moist skin. Wear protective glasses and clothing. If in eyes, immediately flush thoroughly with water and seek medical attention. Avoid breathing dust. Use a NIOSH/MSHA-approved dust respirator. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call a physician. For product safety, call (800) 642-3455. **KEEP OUT OF REACH OF CHILDREN.**

NOTES

The information in this document is subject to change without notice. Hacker Industries, Inc., and/or its affiliates assume no responsibility for any errors that may inadvertently appear in this document. Consult Hacker Industries, Inc., for updated information.

WARRANTY

Hacker Industries, Inc. shall not be liable for incidental, special, or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claims shall be deemed waived unless made in writing to us within 30 days from the date it was discovered. Extended Warranty is available on the Hacker Industries, Inc. website.

TRADEMARKS

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