

FIRM-FILL® 4010

FLOOR UNDERLAYMENT

Technical Data	Properties	ASTM
Weight	5.3 lbs/ft ² at 1/2"	C472 M
Thickness	Feather edge in transition areas to 2" (50.8mm)	F2419
Compressive Strength	4000 - 5000 psi (27.5 - 34.4 MPa)	C472 M
Fire Hazard Classification	Flamespread index 0; Fuel Contribution 0; Smoke Density 0	E84
Sand	1/8" (3mm) or less washed plaster, masonry sand or silica sand	E11



- Designed for use over concrete slabs or pre-cast concrete
- Integral part of over 90 UL design listings
- Lightweight and crack-resistant
- Ideal for commercial, institutional and renovation projects
- Minimal shot-blasting or surface preparation required
- Helps contribute points to LEED® project certification
- Creates a flat, durable surface for finished floor coverings
- Installed only by Licensed Applicators across North America

Product Description

FIRM-FILL® 4010 is a cementitious floor underlayment from Hacker Industries, Inc. designed for thin-capping concrete in new construction or renovation projects with little shot-blasting required. FIRM-FILL® 4010 sets in 90 minutes and is suitable for light foot traffic the following day. Installed from feather-edge to 2", FIRM-FILL® 4010 is widely used over existing concrete, precast, and damaged or cracked lightweight concrete to create a strong, flat surface for finished floor coverings. FIRM-FILL® 4010 provides compressive strengths from 4000 to 5000 psi (27.5 to 34.4 MPa).

FIRM-FILL® 4010 is mixed on the job site with local washed plaster, masonry or silica sand (per ASTM E-11) and water to create a lightweight slurry. At 1/2" thick, the underlayment weighs approximately 5.3 lbs/ft² with a dry density range of 125-130 pcf.

For new construction or renovation, FIRM-FILL® 4010 is a cost-effective way to maximize sound control and provide high fire ratings. FIRM-FILL® 4010 is a suitable surface for a variety of finished floor coverings.

Limitations

- Shall not be used in exterior locations, below grade, or where continuous exposure to moisture is likely.
- Shall not be used as a wear surface; must be covered by a finished floor covering.
- Structure shall be designed so that deflection does not exceed L/360 live or dead load. Certain floor coverings such as marble, limestone, travertine and wood may have more restrictive deflection limits. Consult the appropriate floor covering manufacturer for recommendations.
- If installed above a crawl space, subfloor must be protected by a vapor barrier.
- No single application of FIRM-FILL® 4010 shall exceed 2" in depth.
- FIRM-FILL® 4010 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. Published acoustical and fire system tests were conducted under controlled laboratory or field conditions and reflect results applicable only to those specific assemblies.

Installation

Before, during, and after the installation of FIRM-FILL® 4010, the building must be enclosed and the temperature maintained at a minimum of 50°F (10°C). Prior to the installation of FIRM-FILL® 4010, the subfloor shall be structurally sound (L/360) and broom clean, dry and free from oil, grease, paraffin, laitance, wax or other contaminants. Concrete subfloors shall be 28 days or older. For on-grade applications over concrete, measure the Moisture Vapor Emission Rate (MVER) per ASTM F1869. After installation, temporary wood planking shall be placed by the GC wherever the floor underlayment will be subject to wheeled or concentrated loads. MVER shall not exceed 3lbs./1000 sq. ft. per 24 hours. MVER shall not exceed 3lbs./1000 sq. ft. per 24 hours.

If required, prime concrete subfloors per recommended specifications before installing underlayment. Multiple coats may be required. Adequate ventilation shall be provided by the General Contractor (GC) to ensure proper drying of FIRM-FILL® 4010. If necessary, the GC shall provide mechanical ventilation. Depending on thickness and drying conditions, the underlayment shall dry within 7 to 12 days. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s Drying Conditions Flyer and information contained on Hacker Industries, Inc.'s website for additional information concerning drying of this product.

Finished floor coverings can be installed when the FIRM-FILL® 4010 is completely dry. Consult flooring contractor for recommended procedures to test for dryness and acceptable levels of moisture. Reference Hacker Industries, Inc.'s Guidelines for Installing Finished Floor Coverings. This guideline is not a warranty and shall be used as a guideline only. See ASTM F2419.

Product Data

Approximate Compressive Strength (aggregated) ASTM C472 (modified): 4000 to 5000 psi
(27.5 to 34.4 MPa)
Approximate Dry Density (aggregated): 127 to 130 pcf

Note *Compressive strengths published herein were achieved under controlled laboratory conditions. Actual field results may differ due to environmental conditions, regional sand variations, inconsistent proportioning of field applied water, sand and Hacker Floor Underlayment, as well as differences in mixing/pumping equipment.

Compliance

- ICC-ES ER-4147 • City of Los Angeles Research Report No. 24540 • ASTM F2419
- FHA - HUD MR 1255 Tile Council of America (F180, F200, RH111, RH122)

UL Designs

G565	G568	J917	J919	J920	J924	J927	J931	J957	J966	J991	J994
K906	L001	L004	L005	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	L531	L532	L533	L534	L535
L536	L537	L538	L539	L540	L541	L542	L543	L544	L545	L546	L547
L548	L549	L550	L551	L552	L553	L555	L556	L557	L558	L559	L570
L574	L560	L562	L563	L571	L585	L590	L592	L593	L598	M502	M506
M508											

Ancillary Products

Hacker Floor Primer, Hacker TopCoat SP and Hacker Floor Sealer are available for use with FIRM-FILL® 4010. Contact Hacker Industries, Inc. at (800) 642-3455 for more information.

Warranty

Subject to express warranty stated on Hacker Industries, Inc.'s website.

Submittal Approvals

Project Name: _____
Contractor/Architect: _____
Date: _____

Product Information

See HackerIndustries.com and bags for current recommended product specifications, literature and warnings.

WARNING!

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. Failure to follow these instructions may cause severe burns that may require surgical removal of affected tissue or amputation of limb. Portland cement is strongly alkaline. Direct contact can be corrosive and cause severe damage or chemical

burns to eyes and wet, moist skin. Avoid contact with eyes and skin. Wear protective glasses and clothing. If eye contact occurs, immediately flush thoroughly with water for 30 minutes and seek medical advice. Inhalation of dust may be corrosive or cause chemical burns or irritation to nose, throat and respiratory tract.

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. Product safety, call (800) 642-3455. **KEEP OUT OF REACH OF CHILDREN.**

TRADEMARKS

FIRM-FILL, GYP-SPAN, Let Our Products FLOOR You and the associated logos are trademarks of Hacker Industries, Inc. LEED is a registered trademark of the U.S. Green Building Council.

NOTICE

We shall not be liable for incidental 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 claim shall be deemed waived unless made in writing to us within 30 days from date it was or reasonably should have been discovered.

SAFETY FIRST

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

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