SOLHYDFLOW FS

Smooth and Durable
Self-leveling

SOLHYDFLOW FS is a self-leveling underlayment that provides a flat, smooth, durable surface with minimum effort, installation time and cost. It is a single component, high strength, non-shrink, regulated setting underlayment using a polymer modified binder system to level and smooth floors. SOLHYDFLOW FS can be poured or pumped (no trowel required) in one single step to thicknesses from 3mm (1/8") to 100mm (4")* (Refer to "Product Application" section). SOLHYDFLOW FS will accept foot traffic within 3 to 4 hours and floor coverings 16 hours after application.

USES

Specially designed for interior use in leveling uneven rough damaged, unfinished, frozen or rained on concrete slabs. Provides a smooth and even finish to existing wooden, vinyl tiles, ceramic or terrazzo floors.

TYPICAL USES:

- Floors covered by carpeting, hardwood, tiles, VFT or polymer coatings
- Showroom floors
- Office and condo building floors
- Shopping center floors
- School and gymnasium floors
- Hospitals and correctional institutions
- Heated flooring

PRODUCT FEATURES

- Economical and easy to use
- Superior bond
- Self-leveling, no trowel work required, use a smoother
- Installable from 3 mm (1/8") to a 100mm (4") thickness* (Refer to "Product Application" section)
- Non-shrink and non-dusting
- Ideal for pouring and pumping
- Maintains workability for 25 to 35 minutes at 21ºC (70ºF)
- No sanding or grinding required
- Adhesive compatible
- Not a gypsum based product
- Rapid early strength gain

PRODUCT MIXING

- For each 22.7 kg (50 lbs) bag add 5.0 L of clean potable water into the SOLHYDFLOW mixing drum.
- Then add the SOLHYDFLOW FS bags, while mixing at full speed with a paddle mixer attached to a heavy duty 1/2" drill (min. 650 rpm).
- Always add the product to the mixing water.
- Mix completely for a minimum of 2 to 3 minutes until mixture is homogeneous and lump free.
- Do not add any additional water once the homogeneous mix has been obtained.
- Over wood, cutback and non-porous subfloors the addition of SOLHYDFLOW EMULSION is required to increase the resiliency of SOLHYDFLOW FS.
- Mix 1.4 L of SOLHYDFLOW EMULSION with 3.8 L of clean potable water for each bag of SOLHYDFLOW FS.
- Add this mixture into the SOLHYDFLOW mixing drum followed by the addition of SOLHYDFLOW FS bags and mix as outlined above.
- It is also recommended to use two (2) SOLHYDFLOW mixing drums simultaneously, mixing one (1) drum while the other is being poured.
- In this manner, we avoid slowing down the pours while respecting the 2 to 3 minutes mixing time.
- SOLHYDFLOW FS can also be pumped affording high productivity and continuous smooth placement. Contact your local BMQ SOLUTIONS representative for the recommendations concerning specific equipment to be used.

PHYSICAL MATERIAL PROPERTIES

COMPRESSIVE STRENGTH ASTM 109-93, 50MM (2") CUBES		
4 hours	10.0 MPa	1,450 psi
16 hours	13.0 - 16.0 MPa	1,885 - 2,320 psi
3 days	13.0 - 16.0 MPa	1,885 - 2,320 psi
7 days	18.0 - 20.0 MPa	2,610 - 2,900 psi
28 days	22.0 - 24.0 MPa	3,190 - 3,480 psi

FLEXURAL STRENGTH ASTM C348		
7 days	5.4 MPa	783 psi
28 days	7.2 Mpa	1,044 psi

HARDENING	
Working time (Heal time)	25 to 35 minutes
Initial set time ASTM C191	30 to 45 minutes
Final set time ASTM C191	40 to 75 minutes
Curing	self-curing
Foot traffic	3 to 4 hours
Floor covering	16 hours

TENSILE STRENGTH ASTM C190		
28 days	3.6 MPa	522 psi

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SURFACE PREPARATION

CONCRETE FLOORS

Surface must be solid, completely clean, free of oil, wax, grease, sealers, curing compounds, asphalt, paint, dirt, loose surface material and any contaminant that will act as a bondbreaker. Weak concrete surfaces must be cleaned down to sound concrete by mechanical means like Blastrac® or light grinding. Acid etching or chemical cleaning is not acceptable. Joints in the substrate must be reflected through the applied underlayment.

WOOD SURFACES

Wooden sub floors must be clean, free of varnish, shellac or any contaminant that hinders bond. If needed, sand down to bare clean wood. Do not use chemical cleaners. Substrate must be solid and secure to provide a rigid base. The subfloor must be free of deflection and should be less than L/360 taking into account for live and dead loads. Any moving boards should be renailed and open joints filled with SOLHYDPATCH.

The wooden substrate must be solid hardwood flooring minimum of 20 mm (3/4") tongue and groove, APA rated Type 1, Exterior Exposure plywood. Prime the substrate as outlined in "Substrate Priming". Then anchor a thin galvanized expanded diamond 20 mm (3/4") metal lath mesh (plaster lath) to the subfloor, securing every 150 mm (6") to prevent movement, overlapping adjacent pieces by 25 mm (1").

When placing SOLHYDFLOW FS over wood, cutback and nonporous floors the addition of SOLHYDFLOW EMULSION is required to increase the performance of SOLHYDFLOW FS (see "Mixing").

OVER CUTBACK AND ADHESIVE RESIDUE

Do not use SOLHYDFLOW FS over coal tar and asphalt waterproofing systems. Cutback and adhesives may contain asbestos fibers whose inhalation is harmful, resulting from the sanding/grinding of adhesive residue. Consult government agencies for rules concerning the removal of asbestos containing flooring and adhesives. The Resilient Floor Covering Institute's booklet "Recommended Work Practices for the Removal of Resilient Floor Coverings" is recommended. Thick accumulations, brittle or powdery residue of weak and unbonded adhesive must be removed using the wet-scrape and wet-sweep method as outlined by the Resilient Floor Covering Institute booklet. What remains should be a translucent clean well bonded film suitable for primer application. Installation of SOLHYDFLOW FS over non-asbestos adhesives is possible if the residue is solid, well bonded to the substrate and not affected by water. Avoid applications where heat may soften the adhesive causing delamination.

NON POROUS SUBSTRATES

Ceramic tile, terrazzo, quarry tile and stone must be solid, well bonded, clean and free of any bond breaking contaminates such as glazes, wax, oil, sealers etc. Surfaces must be mechanically sanded or Blastracked® until a "profile" is obtained for the maximum bonding of SOLHYDFLOW FS. Vacuum the floor surface, removing all debris, dust and loose material prior to installing the primer.

PRODUCT APPLICATION

SOLHYDFLOW FS will level itself for 25 to 35 minutes at 21ºC (70ºF) with no trowel work required. Pour the blended SOLHYDFLOW FS on the floor and disperse with the SOLHYDFLOW spreader, followed by smoothing the material with the SOLHYDFLOW smoother or similar floating tool. Cleated shoes must be worn to avoid leaving marks.

*SOLHYDFLOW FS can be applied from 3 mm (1/8") up to a 100 mm (4") thickness in one step. **NOTE:** For all placements of product exceeding 50mm (2"), the addition of aggregate is required. Contact your local BMQ SOLUTIONS representative to determine recommended.

PRIMING

ALL SURFACES

All substrates must be clean, dry and primed before SOLHYDFLOW FS is applied. Subfloor temperature must be at least 10ºC (50ºF). Mix 3.8 L (1 US gal) of a SOLHYDFLOW PRIMER with 3.8 L (1 US gal) of clean potable water. That volume will cover approximately 35 m^2 to 40 m^2 (350 ft^2 to 400 ft^2) of floor area. SOLHYDFLOW PRIMER must be applied evenly with a nylon pushbroom with exploded tips. Do not use paint rollers, mops, or spray equipment. Apply a thin layer leaving no bare spots, puddles or excess primer. Allow to dry to a clear, thin film (usually 2 hours, but less than 24 hours before applying SOLHYDFLOW FS).

VERY POROUS CONCRETE

Precaution: To avoid the development of bubbles and pinholes in the SOLHYDFLOW FS, very absorbent concrete may require two applications of SOLHYDFLOW PRIMER. Apply the first coat of SOLHYDFLOW PRIMER diluted (1 part of SOLHYDFLOW PRIMER with 3 parts of clean potable water). Let this coat completely dry and install a second application of primer (1 part of SOLHYDFLOW PRIMER mixed with 1 part of clean potable water). Let dry, then apply SOLHYDFLOW FS.

NON-POROUS SUBSTRATES, WOOD AND CUTBACK

Prime the above subfloors using SOLHYDFLOW PRIMER PLUS. Apply a thin layer using a pushbroom, covering all areas, and not leaving any excess primer puddles. Allow to completely dry then apply SOLHYDFLOW FS. Note: Low subfloor temperatures, or high humidity will slow primer drying. Never place SOLHYDFLOW FS until the primer is completely dry.

ESTIMATING / YIELD

SOLHYDFLOW FS: 22.7 kg (50 lbs) bag reinforced with a polyethylene liner (moisture protection). A 22.7 kg (50 lbs) SOLHYDFLOW FS bag mixed with 5.0 L of clean potable water will cover approximately 2.0 m2. When applied on concrete at a 6 mm thickness.

COVERAGE PER 22.7KG (50LB) BAG:

Nominal Thickness	*Approximate Coverage*
3 mm (1/8")	4.1 m^2 (44 pi^2)
6 mm (1/4")	2.0 m^2 (22 pi^2)
12 mm (1/2")	1.0m^2 (11 pi^2)

CURING

SOLHYDFLOW FS is self curing. The application of concrete cures is not required. All floor adhesives compatible with concrete may be used on SOLHYDFLOW FS.

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PRECAUTIONS / RESTRICTIONS

- For interior use only
- Not a wearing surface. It must be covered. For wearing surfaces use SOLHYDFLOW INDUSTRIAL
- Do not use this product if packaging is damaged
- Do not add admixtures (accelerators, etc.) or antifreeze to this product
- Do not use for repairs exceeding 100 mm (4") in thickness
- Do not place on surfaces where the temperature is above 32ºC (90ºF) or below 7ºC (44ºF)
- Provide protection from wind and direct sunlight during application
- High temperature reduces working time. The use of cold water is recommended
- Do not install over gypsum based surfaces
- Do not apply on light weight based concrete

PACKAGING

SOLHYDFLOW FS :
22.7 kg (50 lbs) bag
Qty: 56 bags per pallet

SOLHYDFLOW PRIMER PLUS :
18.9 L pail (5 US gal)
3.8 L (1 US gal) unit
Qty: 4 units per case

STORAGE

SOLHYDFLOW FS:
Store in a dry and temperate area.
Shelf life: 12 months (unopened bag).

SOLHYDFLOW PRIMER PLUS:
Avoid freezing.

RECOMMENDED TOOLS

The following tools will assure a cost effective, satisfactory installation:

- Mixing Drum
- Heavy Duty 1/2" Drill with Mixing Paddle
- Depth Gage Spreader
- Surface Smoother
- Nylon pushbroom with exploded tips

CLEANING

Use water to clean all tools immediately after use.

NOTE

SOLHYDFLOW FS is cement based and all ACI (American Concrete Institute) recommendations for concrete apply. Follow proper procedures for hot and/or cold weather placements.

SAFETY

See Material Safety Data Sheet.
This product contains Portland cement and silica sand. It may cause eye and skin irritation. Avoid contact with eyes and prolonged contact with skin. Do not breathe powder. If contact occurs, rinse thoroughly with water.

PRODUCT NOTE

All applications require the use of SOLHYDFLOW PRIMER PLUS before proceeding with the installation of SOLHYDFLOW FS. Floor preparation is crucial in obtaining a successful underlayment installation. The contractor is responsible of ensuring that all surfaces are well prepared before proceeding with application of SOLHYDFLOW FS.

BMQ SOLUTIONS WARRANTS that the product conforms to its chemical description and is reasonably fit for the purpose stated on its Technical Data Sheet when used in accordance with its directions. BMQ Solutions makes NO OTHER WARRANTY either expressed or implied.
Buyer assumes all risk in handling.

For Professional Use Only