5900 FLEX-FLO PLUS
SELF-LEVELING UNDERLAYMENT

BASIC USES

For leveling surfaces of concrete, exterior grade plywood, or well-bonded existing flooring surfaces such as VCT and other non-cushion resilent floor-coverings*, asphalt-based "cutback" adhesive-coated floor surfaces*, or well-bonded hard floor-covering surfaces such as Portland cement-based terrazzo or ceramic tile. Produces a smooth, level surface for installation of all types of floor-covering. Produces a smooth, level surface, for installation of all types of flooring. Ceramic or stone tile can be installed in as little as 4 to 6 hours; vinyl composition tile or sheet goods, carpet or hardwood within 16-24 hours after application. Can be poured from 6mm (1/4") to 48 mm (2") in a single pour.
**Check with Flextile Ltd. as to acceptability of specific surfaces.*

FEATURES

- Ideal for fast leveling, smoothing and repair of surfaces prior to flooring installation.
- High strength and abrasion resistance.
- Ceramic tile and stone can be installed in as little as 4 to 6 hours after application.
- Resilient flooring coverings can be installed after 16 to 24 hours application.
- Can be applied in thickness of 6 mm (1/4") to 48 mm (2").
- Up to 30 minutes working time.
- Easy to use - just mix with water and apply.
- Saves time - finds its own level without troweling.

LIMITATIONS

Not intended for use as an exposed traffic surface. Not intended for exterior use. Do not use over particleboard, Masonite, chipboard, gypsum-based products, or similar unstable materials. Do not use over cushioned resilient flooring, rubber, plastic, paint, asphalt, plywood surfaces or in wet areas. Do not overwork the material, and supply sufficient material to cover high spots. Do not cover existing expansion or control joints.
Use only on surfaces, which are maintained at a temperature above 10°C (50°F) and below 35°C (95°F) during application and for at least 72 hours after application.

COMPOSITION AND MATERIALS

A polymer modified, cementitious self-leveling underlayment, which cures rapidly to provide a smooth level surface.

LEED Points Contribution

	LEED Points
MR Credit 5, Regional Materials*	Up to 2 points
IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants	1 point
IEQ Credit 4.3, Low-Emitting Materials – Flooring Systems	1 point

**May be eligible*

TECHNICAL DATA

Exceeds ANSI A118.16 for Flowable Hydraulic Cement Mortar/Self-leveling Underlayment specification requirements

Typical Physical Properties

Initial Flow	115 – 120 mm
Self-Healing Time	30 - 40 minutes
Initial Set	approx. 4 hours*
Final Set	4 - 6 hours
Final Cure	28 days

**depending on porosity of surface*

Compressive Strength	Typical Result	ANSI Spec
@ 1 day	11.7 MPa (1700 psi)	6.9 MPa (1000 psi)
@ 7 days	19.3 MPa (2800 psi)	
@ 28 days	33.1 MPa (4800 psi)	20.7 MPa (3000 psi)

Tensile Bond test – (rupture in concrete substrate) (CAN/CSAA23.2-6B)

@ 7 days	1.93 MPa (280 psi)
@ 28 days	2.41 MPa (350 psi)

Specific Gravity (dry)	1.78
Specific Gravity (wet)	1.89
pH (paste)	approx. 12
Cleanability:	with water before material dries
Shelf Life:	6 months from production date when stored in dry, heated conditions

Approx. coverage per 22.7 kg (50 lb) bag:
2.14 m^2 (23 ft^2) @ 6 mm (1/4") thickness

** Coverages given are for estimating purposes only. Actual coverages may vary depending on job site conditions and installation techniques used.*

Certified VOC-Free
USGBC LEED v4, BD&C, ID&C

INSTALLATION

SURFACE PREPARATION

- Surfaces must be structurally sound, well cured, dry and free or grease, oil, dirt, paint, curing compounds or sealers, or other foreign matter. Damp mop or vacuum to remove dust or surface debris.
- Where necessary, scarify or sand to remove dead or scaled concrete, or other contaminants, which could affect bond.
- Maintain temperature in areas to be leveled with 5900 Flex-Flo Plus at not less than 10°C (50°F) or more than 35°C (95°F) during installation and for at least 7 days after completion.
- In all cases, the structural design of the floor must meet National and/or Local Building Codes in terms of deflection. For ceramic tile this generally means L/360 of the span under live and dead loads, with certain large format ceramic tiles and stone requiring L/720.
- Provide for expansion and control joints where specified including the perimeter of the room, columns, supports and equipment pedestals. Do not bridge expansion and control joints.
- Skim coat existing ceramic tile or stone or cutback adhesive with a mortar mix consisting of Flextile 57 Scratch Coat Mortar mixed with Flextile 4040 Primer SL and allow to harden, or prime using Flextile 4050 Flexsil Primer.

A. CONCRETE

- Concrete surfaces should have a wood float or steel trowel with broom finish. Roughen smooth concrete surfaces.
- New concrete slabs shall be 28 days old before application; the surfaces shall be dry, and free of hydrostatic pressure: vapor emissions shall not exceed
- 1.36 kg / 92.9 m² (3 lb / 1000 ft²) per 24 hours when using the calcium chloride test kit.

B. PLYWOOD UNDERLAYMENTS

Plywood flooring, including those under resilient flooring, must be structurally sound and meet all deflection requirements.

- Exterior Grade Plywood – Plywood subfloor and underlayment consisting of 2 layers each of 5/8" (16 mm) on joists 406 mm (16") on center, or single Layer Exterior grade plywood, 19 mm (3/4") minimum thickness – on bridged floor joists up to 50 cm (20") on center. The structural design of the floor must meet National and/or Local Building Codes in terms of deflection. For ceramic tile this generally means L/360 of the span under live and dead loads, with certain large format ceramic tiles and stone requiring L/720.
- **NOTE: For installation of vinyl, LVT/SPC, carpet, and other resilient-type flooring only** - Installation of plastic or metal lath is required over single layer plywood subfloor installations. Lath should be fastened every 15 - 20 cm (6 - 8") with galvanized / corrosion resistant fasteners, minimum of 1.13 kg / 0.83 m² (2.5 lb /yd²).
- Leave a 6 mm (1/4") gap around drainpipes, conduits, posts, columns and along wall curb bases and between sheets of plywood. Subfloor long edges must be tongue and groove or supported by bridging between floor joists. Install a bond breaker on the perimeter of the installation. Block areas, patch holes and cracks from seepage to other areas with Flextile Patch.
- Presswood, particle board, chipboard, Masonite, Lauan, solid wood planks, engineered hardwood floor, asbestos board, and dimensionally unstable materials are not acceptable substrates.

APPLICATION

It is recommended to use Flextile 4040 SL Primer on all concrete and structurally sound exterior grade plywood floor substrates, prior to application of 5900 Flex-Flo Plus Self-Leveling Underlayment.

For structurally sound surfaces such as OSB, non-cushioned existing vinyl floorcoverings, gypsum-based products, etc. accepting resilient floorcoverings only, Flextile 4050 Flexsil Primer is recommended.

Shake or stir Primers thoroughly before using. Pour, mop or spray 4040 SL Primer, or roll 4050 Flexsil Primer onto surface. Apply an even thickness of primer to the prepared substrate to ensure the primer is absorbed in and adhered to the substrate, removing any puddles or thick areas. Allow the 4040 Primer SL to dry to a clear film that is dry to the touch but still tacky, before application of 5900 Flex-Flo Plus Self-Leveling Underlayment.. Ensure that 5900 Flex-Flo Plus is poured within 24 hours of priming the floor surface, and that the primed surface is not exposed to excess contamination from dust or debris from other trades. A test installation is always recommended prior to installation, to confirm job site parameters.

Add approximately 4.0 - 4.25 L (1.1 - 1.2 US gallons) of cool, clean water to a clean mixing container. While mixing, slowly add 22.7 kg (50 lb) bag of 5900 Flex-Flo Plus Self-Leveling Underlayment powder. Avoid using high speed mixers. Mix until smooth and lump free. Pour the mixed material immediately on the floor surface and spread with a straight edge or squeegee. Material should be mixed to permit a continuous supply to the mechanics spreading the material. On larger applications, this can most easily be accomplished using continuous mixing and pumping equipment. DO NOT overwork the material, and supply sufficient material to cover high spots. DO NOT cover existing expansion or control joints.

CURING

DO NOT walk over material until it has been allowed to cure. Foot traffic may be allowed, and floor coverings installed after 4-6 hours under recommended environmental conditions as listed in Surface Preparation.

Protect from direct sunlight, moisture, excessive heat or draft during cure.

SAFETY

Refer to Flextile Safety Data Sheet for detailed health and safety information.

AVAILABILITY

Flextile 5900 Flex-Flo Plus Self-Leveling Underlayment is available from Flextile Ltd. and its distributors in 22.7 kg (50 lb) bags.

CAUTION

Freshly mixed cement, mortar, concrete or grout may cause skin injury. Avoid extended contact with skin where possible and wash exposed skin areas promptly with water. If any cement or cement mixtures get into the eye, rinse immediately and repeatedly with water and get prompt attention. Keep out of reach of children.

WARRANTY

Flextile warrants that this product is of merchantable quality and is suitable for the purpose for which it is intended. Flextile's liability under this warranty shall be limited to the replacement of its product found to be defective or, at its option, a refund of the purchase price.

MAINTENANCE

No maintenance is required except where damages result from unforeseen circumstances. Repair procedures shall be directed by Flextile or its distributors.

TECHNICAL SERVICES

Flextile maintains a well-equipped laboratory able to test its products in conjunction with the products with which they are used. Technical assistance for use of Flextile products is available upon request.

RELATED REFERENCES

Current editions of: Ceramic Tile Installation Manual (09 30 00) from the TTMAC & TCNA Ceramic Tile Installation Handbook.

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