5400

MAXIFLEX SUPERIOR-GRADE, POLYMER-MODIFIED MORTAR

DESCRIPTION

Flextile 5400 MaxiFlex is a superior-grade, high-performance, one component, polymer-modified thin-set mortar.

Unique, high polymer modification provides the superior bonding characteristics and exceptional flexibility required for installation of tile and stone over difficult to bond surfaces such as exterior grade plywood, vinyl and laminates, and is suitable for use with submerged applications and freeze/thaw conditions (see "Limitations" section).

INDUSTRY STANDARDS

Meets or Exceeds ANSI A118.4E, A118.11 and ANSI A118.15E specification requirements.

ISO 13007: Classification C2ES1P2

BASIC USES

- Installation of ceramic, porcelain, mosaic, glass, quarry and paver tile.
- Installation of most natural stone, marble, granite, slate and precast terrazzo tile.

RECOMMENDED SURFACES

- Interior or exterior floor and wall installations.
- Vertical or horizontal surfaces of concrete, masonry, terrazzo cement backer boards.
- Installation over cement mortars and leveling compounds.
- Existing surfaces of properly prepared tile, stone or cementitious terrazzo.
- Exterior grade plywood or gypsum board, in interior dry areas only.
- Existing surfaces of properly prepared non-cushion sheet vinyl flooring, VCT or cutback adhesive residue.
- Flextile waterproofing, crack-isolation and sound reduction membranes.

FEATURES

- High polymer content for high performance and flexibility.
- Ideal for high traffic areas.
- Can be used in both thin-set and medium-bed applications.
- Can be used for submerged applications and freeze/thaw conditions (see "Limitations" section).
- Excellent for most difficult tiles and substrates.
- Excellent workability.
- Available in Grey and White.
- Rated as suitable for extra heavy service by ASTM C627-70 on concrete substrates.
- Rated as a light performance commercial and residential mortar by ASTM C627-70 on plywood substrates.

LIMITATIONS

- Do not use over particleboard, Masonite, chipboard, OSB or similar unstable materials.
- Do not use over cushioned resilient flooring, rubber, plastic, paint, asphalt, or plywood surfaces in wet areas.
- 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.
- Do not use over single layer plywood floors.
- On exterior applications, protect from rain until thoroughly dried and protect from freezing for at least 14 days after installation.
- When installing light-coloured stones and translucent marble use Flextile MaxiFlex White.
- Installations over nonporous surfaces may require extended setting/curing times.
- Consult local building code requirements for use on exterior commercial facades.

TECHNICAL DATA at 23°C (73°F) and 50% humidity

Description	ANSI Spec.	Typical Result
ANSI A118.15E - (extended open time)	> 0.52 MPa (75 psi) at 30 minutes	Pass
ANSI A118.15	Shear Strength	Shear Strength
Glazed Wall Tile	> 3.1 MPa (450 psi) at 7 days	3.11 to 4.14 MPa (450 to 600psi)
Impervious Ceramic Tile (Porcelain)	> 2.76 MPa (400 psi) at 28 days	2.76 to 3.45 MPa (400 to 500 psi)
Quarry Tile	> 1.0 MPa (150 psi) at 28 days	2.42 to 3.45 MPa (350 to 500 psi)
ANSI A118.11 Quarry Tile / Plywood	> 1.0 MPa (150 psi) at 28 days	2.07 to 2.93 MPa (300 to 425 psi) (wood failure)

Typical Physical Properties

Description	
Pot Life	2 hours*
Open Time	30 minutes*
Initial Cure	24 - 48 hours
Final Cure	28 days
Cleanability:	With water before material dries
VOCs	0 g/L
Shelf Life:	1 year from production date when stored in dry, heated conditions

***Depends on job site conditions.**

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

Approx. coverage per 22.7 kg (50 lb) bag:
6 x 6 x 6 mm (1/4" x 1/4" x 1/4") - square-notch trowel - 7.1 m^2 (77 ft^2)
6 x 10 x 6 mm (1/4" x 3/8" x 1/4") - square-notch trowel - 5.11 m^2 (55 ft^2)
12 x 12 x 12 mm (1/2" x 1/2" x 1/2") - square-notch trowel - 4.2 m^2 (45 ft^2)
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") - round-notch trowel - 3.8 m^2 (30 ft^2)

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

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*

INSTALLATION

PREPARATORY WORK

Surfaces must be sound, even, dry and free of grease, oil, dirt, paint, curing compounds or sealers, or other foreign matter. Surfaces must be true to a tolerance of ±3 mm (1/8") in 2.4 meters (8 ft.) for walls and 6 mm (1/4") in 3 meters (10 ft.) for floors. Concrete surfaces should have a wood float or steel trowel with broom finish, to a minimum CSP (Concrete Surface Profile) of 2 - 3. Roughen smooth concrete surfaces using mechanical abrasion such as grinding or shot/sand blasting or prime using Flextile 4050 FlexSil Primer. Plywood floors should be designed for maximum deflection of L/360 of span. This normally requires an over- lay of 16 mm (5/8") exterior grade plywood, or Flextile FlexMat Uncoupling Membrane over 25 mm (1") nominal boards or 16 mm (5/8") plywood when on joists 40 cm (16") O.C. Fasten overlay with screw type nails and glue where possible. Leave a 3 mm - 6 mm (1/8"-1/4") gap be- tween sheets of overlay and next to all vertical surfaces to allow for expansion. Refer to current editions of TTMAC 09 30 00 Tile Installation Manual, or TCNA Handbook For Ceramic Tile Installation for information regarding placement of movement or expansion joints, or for further substrate acceptability information. Per TTMAC and TCNA, floor systems, including the framing system and subfloor panels, over which the tile will be installed shall be in conformance with the Canadian National Building Code 2020, the International Residential Codes for residential applications, the International Building Codes for commercial applications, or applicable local building codes taking into consideration anticipated live and dead loads.

APPLICATION

Mix with approximately 4.5 - 5 liters (1.19 - 1.32 US gallons) of water per 22.7 kg (50 lb) bag. Avoid using high-speed mixers. Allow mixed mortar to slake for at least 10 minutes, then re-mix without adding further water. Spread a thin layer of mixed mortar with flat side of trowel to wet out the substrate; then reapply sufficient material with a suitable notched trowel that will leave enough mortar to give at least 95% coverage to the backs of tile. Back buttering of tile is recommended for porcelain tile, large format or high lugged tile, ungauged slate, stone, etc. and for all exterior applications. Comb that area which can be covered with tile before skinning occurs. Mortar should be troweled with notches running in straight lines so as to achieve maximum coverage. Press or beat in tile to achieve a finished thickness of mortar of at least 3 mm (1/8"). Do not adjust tiles after they have been set for more than 25 minutes.

CURING AND GROUTING

Protect from all traffic and delay grouting until cured at least 24 hours, and preferably 48 hours. On exterior or cold weather applications, or when a larger format or impervious tile is installed over an impervious membrane, extended curing is recommended to ensure that mortar is sufficiently cured prior to grouting. Do not allow heavy traffic for at least 5 days following installation, and do not allow heavy construction equipment such as scissor lifts, etc. for a minimum of 14 days following installation. Protection of installation with 13 mm (1/2") plywood sheets prior to allowing heavy construction equipment is recommended until installation is fully cured. Grout using Flextile Polymer Modified Grout, Flextile 1600UPG Ultra Performance Grout or Flextile FlexEpoxy100 - 100% Solids Epoxy Grout.

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 mixture gets into the eye, rinse immediately and repeatedly with water and get prompt medical attention.
Keep out of reach of children.

SAFETY

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

AVAILABILITY

Flextile MaxiFlex Superior-Grade, Polymer-Modified Mortar is available from Flextile Ltd. and its distributors in 22.7 kg (50 lb).

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 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 TTMAC 09 30 00 & TCNA Ceramic Tile Installation Manuals.

Notice: The information herein is the best information we have relating to our products and the recommended uses of our products are based on tests believed to be reliable. Flextile warrants each of its products is of merchantable quality and suitable for the purpose for which it is intended BUT DOES NOT MAKE ANY OTHER WARRANTY, EXPRESSED OR IMPLIED. This Warranty may not be enlarged or extended by our sales representatives, written sales information or drawings. Liability of Flextile under this warranty shall be limited to replacement of its product found to be defective or, at its option, a refund of the purchase price. All advice given and structural specifications supplied by Flextile representatives shall be used at the sole risk of those receiving the same and Flextile assumes no responsibility for the design or construction of any works in which its products are used. Any review or inspection of plans, buildings or product applications by Flextile representatives is not to be construed as approval thereof by Flextile. This information supersedes all previous issues and is subject to change without notice.