50
PROFESSIONAL-GRADE POLYMER-MODIFIED MORTAR

DESCRIPTION
Flextile 50 is a professional-grade, high-performance, one-component, polymer-modified thin-set mortar. Unique, high polymer modification provides superior bonding characteristics and improved flexibility for installation of tile and stone over most surfaces.

INDUSTRY STANDARDS
Meets or Exceeds ANSI A118.4 and A118.11 specification requirements.

BASIC USES
Installation of ceramic and porcelain tile, quarry tile, pavers, and many types of marble, granite and natural stone.

RECOMMENDED SURFACES
- Interior and most exterior floor and wall installations*.
- Vertical or horizontal surfaces of concrete, masonry, terrazzo, cement backer boards.
- 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.

**For commercial exterior wall installations use Flextile 51 / 44 or Flextile 58XT systems.*

FEATURES
- Excellent flexibility and bond strength.
- Excellent workability.
- Easy to use - just mix with water and apply.
- Water resistant when cured.
- Rated as a light performance commercial and residential mortar by ASTM C627-70 on plywood substrates.
- Rated as suitable for extra heavy service by ASTM C627-70 on concrete 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.
- Do not use over single layer plywood floors.
- 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.
- To use directly over gypsum-based patching or leveling substrates, mix with Flextile 43 Thin-Set Mortar Additive or Flextile 44 High Solids Thin-Set Mortar Additive, also, apply suitable primer before use.
- On exterior applications, protect from rain until thoroughly dried and protect from freezing for at least 14 days after installation.
- When installing light-colored stones and translucent marble, use Flextile 50 White.
- Installations over nonporous surfaces may require extended setting/curing times.
- For heavy service exterior or water immersion applications, or where extreme freeze/thaw conditions are present, use Flextile 5400 Maxi-Flex or Flextile 51/44 or Flextile 58XT Fast Set, two-component latex Portland cement mortar systems.
- Do not use for moisture-sensitive stone such as green marble, certain limestone and granite, agglomerate tiles, cultured marble or resin-backed tiles.

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 (at 23°C (73°F) and 50% humidity)

Description	ANSI Spec.	Typical Result
7 Day Shear Strength	MPa (psi)	MPa (psi)
Glazed Wall Tile	>2.07 (300)	2.93 to 4.14 (425 to 600)
28 Day Shear Strength	MPa (psi)	MPa (psi)
Porcelain Mosaics Tile	> 1.38 (200)	2.24 to 3.11 (325 to 450)
Quarry Tile	> 1.03 (150)	2.42 to 3.45 (350 to 500)
Quarry Tile / Plywood	> 1.03 (150)	1.38 to 1.79 (200 to 250)

Typical Physical Properties

Pot Life	2 hours
Open Time	20 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

Approx. coverage per 22.7 kg (50 lb) bag:
5 mm (3/16") notched trowel - 10.0 m² (105 ft²)
6 mm (1/4") notched trowel - 7.1 m² (77 ft²)
10 mm (3/8") notched trowel - 5.5 m² (60 ft²)

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

VOC FREE

STT SMOOTH TROWEL TECHNOLOGY

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 between 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 4.75 – 5.0 liters (1.25 - 1.3 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 re-apply 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, 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 3mm (1/8") for thin-set applications. 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 1600 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 mixtures get 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 50 Professional-Grade Polymer-Modified Mortar is available from Flextile Ltd. and its distributors in 22.7 kg (50 lb) bags.

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.

TTMAC ACTTM

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.