

# 51 / 44 SYSTEM

## PREMIUM, FLEXIBLE LATEX TILE MORTAR

### DESCRIPTION

Flextile 51/44 System is a high-performance, latex Portland cement mortar: Flextile 44 is a High Solids Thin-Set Mortar Additive for use with Flextile 51 Premium Floor & Wall Thin-Set Mortar in installing most ceramic tile and stone on properly prepared interior or exterior surfaces. The high latex solids content of Flextile 44 High Solids Thin-Set Mortar Additive increases safety margins on exterior applications where thermal expansion / contraction of tiles is a concern, where extreme freeze / thaw conditions exist, in water immersion applications and in other critical or extra-heavy service situations.

### BASIC USES

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

### RECOMMENDED SURFACES

- Interior or exterior floor and wall installations, exterior cladding and water immersion 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 and most other waterproofing, crack-isolation and sound reduction membranes.

\* Check with Flextile Ltd. as to acceptability of specific surfaces

### FEATURES

- Extra high latex solids content for use in extreme conditions.
- Recommended for exterior cladding installations.
- Recommended for water immersion installations.
- Flextile 51 & 53 Dry Set Mortars mixed with 44 High Solids Thin-Set Mortar Additive are rated as suitable for extra heavy service by ASTM C627-70 on concrete substrates.

### LIMITATIONS

- Do not use mortars modified with 44 High Solids Thin-Set Mortar Additive 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.
- On exterior applications, protect from rain until thoroughly dried and protect from freezing for at least 14 days after installation.
- To use directly over gypsum-based patching or leveling substrates, apply suitable primer before use.
- When installing light-colored stones and translucent marble use Flextile 51 white with Flextile 44.

- Installations over nonporous surfaces may require extended setting/curing times.
- Some glass tile backings may not be suitable for use with Flextile 51/44, system consult the recommendations of the glass tile manufacturer.
- For translucent or transparent glass tile, use white Flextile 51/44.
- Do not use for installation of green marble and similar moisture sensitive tile. Use Flextile 58XT Fast Setting System or FlexEpoxy 100 Mortar.
- Consult local building code requirements for use on exterior commercial facades.

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

Exceeds ANSI A118.4E, A118.11, ANSI A118.15E specifications when mixed with Flextile 51. ISO 13007: Classification C2ES2P2

Description	ANSI Requirement	Typical Result
ANSI A118.15E - (extended open time)	> 0.52 MPa (75 psi) at 30 minutes	Pass
ANSI A118.15 Glazed Wall Tile	Shear Strength > 3.1 MPa (450 psi) at 7 days	Shear Strength 3.11 to 4.83 MPa (450 to 700psi)
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	3.45 to 5.52 MPa (500 to 800 psi)
ANSI A118.11 Quarry Tile/ Plywood	> 1.0 MPa (150 psi) at 28 days	1.73 to 2.42 MPa (250 to 350 psi) (wood failure)

### Typical Physical Properties (of mortars mixed with Flextile 44):

Pot Life	2-3 hours
Open Time	20-30 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

### Approx. coverage per 22.7 kg (50 lb) bag:

5mm (3/16") notched trowel - 10.0 m<sup>2</sup> (105 ft<sup>2</sup>)  
 6mm (1/4") notched trowel - 7.1 m<sup>2</sup> (77 ft<sup>2</sup>)  
 10mm (3/8") notched trowel - 5.5 m<sup>2</sup> (60 ft<sup>2</sup>)

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



## LEED Points Contribution

MR Credit 5, Regional Materials\*  
IEQ Credit 4.1, Low-Emitting  
Materials – Adhesives & Sealants  
IEQ Credit 4.3, Low-Emitting  
Materials – Flooring Systems  
\*May be eligible

## LEED Points

Up to 2 points  
  
1 point  
  
1 point

## 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 6mm (1/4") in 3 meters (10 ft.) for floors. Concrete surfaces should have a wood float or steel trowel with light broom finish. Roughen smooth concrete surfaces. Plywood floors should be designed for maximum deflection of L/360 of span. This normally requires an overlay of 16 mm (5/8") exterior grade plywood 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 expansion or control joints, or for further substrate acceptability information.

### APPLICATION

Mix approximately 6.5 L. (1.7 US Gallons) of Flextile 44 High Solids Thin-Set Mortar Additive with 22.7 kg (50 lb) of 51 thin-set mortar. Mix powder into latex. Avoid use of high-speed mechanical mixers. High speed mixing entrains air, resulting in reduced strength. Allow mixed material to stand for 10 minutes and then re-mix without adding further liquid.

Spread a thin layer of mortar with the straight edge of the trowel to wet out the substrate; then re-apply sufficient material to be distributed with a suitable notched trowel that will leave enough mortar to give at least 95% contact with the back of the tile. Back buttering of tile is recommended for all exterior installations, for large-sized tiles, for high-lugged or grooved tiles, or for ungauged slate, etc. Comb that area which can be covered with tile before skinning of mortar 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 tile 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 an 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 protect installation with 13 mm (1/2") plywood sheets prior to allowing construction equipment such as scissor lifts, etc. for a minimum of 7 days. Grout using 1600 Ultra Performance Grout or Flextile Polymer Modified Grout, Flextile Premium Rapid-Set Polymer-Modified Sanded Grout, Flextile Flex-Epoxy 100 100% Solids Epoxy Grout, or Flextile ColourMax Plus Pre-Mixed Urethane Grout.

## SAFETY

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

## AVAILABILITY

Flextile 51 / 44 System is available from Flextile Ltd. and its distributors in the following sizes:

Flextile 51 (Grey or White)  
11.3 kg (25 lb)  
22.7 kg (50 lb)  
Flextile 44  
3.8 L (1 U.S. Gallon)  
7.6 L (2 U.S. Gallon)  
20 L (5.3 U.S. Gallon)  
1000 L (264 U.S. Gallon)

## 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.