

# 51

## PREMIUM FLOOR AND WALL THIN-SET MORTAR

### DESCRIPTION

Flextile 51 is a premium floor and wall thin-set mortar providing superior bond strength. Premium quality blend of Portland cement, mineral fillers and special additives provides sag resistance, ease of application, long open time and adjustability.

### BASIC USES

- Installation of ceramic, mosaic, quarry and paver tile.
- Installation of natural stone, marble, granite and precast terrazzo tile.
- For installation of porcelain and glass tiles, gauged slate, polished back marble or granite tile mix with Flextile 43 Thin-Set Mortar Additive or Flextile 44 High Solids Thin-Set Mortar Additive.

### RECOMMENDED SURFACES

- Vertical or horizontal surfaces of concrete, masonry, terrazzo, cement backer boards.
- Installation over cement mortars and leveling compounds.
- Existing surfaces of properly prepared tile or cementitious terrazzo.
- For exterior installations, for installation of tile over exterior grade plywood surfaces (dry interior areas only), over impervious membranes and existing surfaces of properly prepared no cushion sheet vinyl flooring, VCT or cutback adhesive residue mix with Flextile 43 Thin-Set Mortar Additive or Flextile 44 High Solids Thin-Set Mortar Additive.

### FEATURES

- Finer texture for use with mosaic tile or another thin wall tile.
- Good slip resistance on vertical applications.
- High cement content.
- Excellent workability.
- Water resistant when cured.

### 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.
- For exterior applications, mix with Flextile 44 or Flextile 43 latex additives, protect from excessive moisture until thoroughly dried and protect from freezing for at least 14 days after installation.
- 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.
- Do not use for moisture-sensitive stone such as green marble, certain limestone and granite, agglomerate tiles, cultured marble or resin-backed tiles. Instead, use Flexepoxy 100 mortar.

### 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

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

Exceeds A118.1 specification requirements

| Description   | ANSI SPEC.  | TYPICAL RESULT   |
|---|---|--|
| <b>28 Day Shear Strength</b>  | <b>MPa (psi)</b>  | <b>MPa (psi)</b>                                       |
| Glazed Wall Tile  | > 1.73 (250)  | 1.73 to 2.42 (250 to 350)                              |
| Impervious Ceramic Tile<br>(Porcelain) Mosaics<br>Quarry Tile   | > 1.04 (150)<br>> 1.04 (150)                                      | 1.21 to 1.38 (175 to 200)<br>1.73 to 2.07 (250 to 300) |
| <b>Typical Physical Properties</b>  |   |  |
| 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 |  |
| <b>Approx. coverage per 22.7 kg (50 lb) bag:</b>  |   |  |
| 5 mm (3/16") notched trowel - 10.0 m <sup>2</sup> (105 ft <sup>2</sup> )  |   |  |
| 6 mm (1/4") notched trowel - 7.1 m <sup>2</sup> (77 ft <sup>2</sup> )   |   |  |
| 10 mm (3/8") notched trowel - 5.5 m <sup>2</sup> (60 ft <sup>2</sup> )  |   |  |
| <i>* Coverages given are for estimating purposes only. Actual coverages may vary depending on job site conditions and installation techniques used.</i> |   |  |



## ■ 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. New concrete should have a wood float or steel trowel with broom finish. Roughen smooth concrete surfaces. 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 Flextile 51 Floor and Wall Mix by adding dry powder to approximately 5.7 Liters (1.5 U.S. gallons) of cool, clean water or Flextile 43 Thin-Set Mortar Additive, or Flextile 44 High Solids Thin-Set Mortar Additive. Avoid using high-speed mixers. Allow mixed mortar to slake for at least 10 minutes, then re-mix without adding further liquid. Resulting mortar should be of a thick, easily spreadable consistency. 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, 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"). Bed tile carefully over gypsum board to avoid excess deflection in the base. 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 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 51 Premium Floor and Wall Thin-Set Mortar is available from Flextile Ltd. and its distributors in 22.7 kg (50 lb), and 11.3 kg (25 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.

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 0930 00 & TCNA Ceramic Tile Installation Manuals.



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