



5100 PORCELAIN BOND FLOOR AND WALL THIN-SET MORTAR

BASIC USES

For interior installation of porcelain tile, marble, slate, and all types of ceramic tile on vertical or horizontal surfaces of concrete, concrete block, masonry, brick and, in dry interior areas only, gypsum wallboard. For exterior installations or for installation of tile over exterior grade plywood surfaces (dry interior areas only), mix with Flextile 43 Thin-Set Mortar Additive or Flextile 44 High Solids Thin-Set Mortar Additive.

COMPOSITION AND MATERIALS

A dry-set mortar consisting of a blend of Portland Cement, mineral fillers and water retentive additives packaged in dry powder form to be mixed with water or latex mortar additive just prior to use. Cures to provide good bond strength with minimal shrinkage. Available in Grey & White.

FEATURES

- Good bonding of porcelain tile to interior concrete surfaces.
- 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 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.

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. MPa (psi)	TYPICAL RESULT MPa (psi)
28 Day Shear Strength		
Glazed Wall Tile	> 1.73 (250)	1.73 to 2.42 (250 to 350)
Impervious Ceramic Tile (Porcelain) Mosaics	> 1.04 (150)	1.21 to 1.38 (175 to 200)
Quarry Tile	> 1.04 (150)	1.73 to 2.07 (250 to 300)

Typical Physical Properties

Description	
Pot Life	2 hours
Open Time	20 mins.
Initial Cure	24-48 hrs.
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 M² (105 ft²)
6mm (1/4") notched trowel - 7.1 M² (77 ft²)
10mm (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.*

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. 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 5100 Porcelain Bond by adding dry powder to approximately 6 Liters (1.6 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 3mm (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, extended curing is recommended to ensure that mortar is sufficiently cured prior to grouting. Grout using Flextile Polymer Modified Grout or Flextile FlexEpoxy 100 100% Solids Epoxy Grout, or Flextile ColourMax Plus Pre-Mixed Urethane Grout.

SAFETY

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

AVAILABILITY AND COSTS

Flextile 5100 Porcelain Bond is available from Flextile Ltd. and its distributors in 22.7 kg (50 lb) bags.

Cost: Data supplied upon request.

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.

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.

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