

PRODUCT INFORMATION

ceramaflex

Polymer modified, crack prevention, flexible mortar

CERAMAFLEX is a high performance grade, flexible, dry-set mortar providing 48% higher flexural strength than conventional mortars. It can be used over cracks up to 1/16" (3 mm) and will reduce tile cracking when used on substrates subjected to limited deflection and vibration. Mix with water only. **CERAMAFLEX** may be used to bond all types of ceramic, porcelain, stone and glass tile over variety of substrates including exterior grade plywood.

TEXTURE:

Powder, consisting of portland cement and graded sand.

COLORS:

Gray and white.

PACKAGING:

50lb (22.7 kg) bag.

BASIC USE:

- > **CERAMAFLEX** is used as a bond coat for setting absorptive, vitreous, semi-vitreous and impervious ceramic, porcelain and glass tile for service in residential and commercial use.
- > It is used in a mortar bed as thin as 3/32" - 3/16" (3-5 mm) after the tiles have been properly embedded.
- > Because of its superior flexibility and bond strength, **CERAMAFLEX** is recommended for both interior and exterior floor and wall installations, and in particular, those subjected to freeze-thaw conditions.

AREA OF USE:

Suitable backings include properly prepared, plumb and true masonry, concrete, cementitious backer units, cured portland cement mortar beds, brick, ceramic tiles, marble and cement based terrazzo. In interior dry areas only, use **CERAMAFLEX** over gypsum board, exterior glue plywood and high pressure laminate.

BENEFITS:

- > It has excellent water and impact resistance, is water cleanable, non-flammable and requires no soaking of tiles.
- > **CERAMAFLEX** can bond over properly prepared VCT, sheet vinyl flooring (excluding cushion backed) and cutback adhesive residue when prepared in accordance with the Resilient Floor Covering Institute's recommended work practices for removal of resilient floor coverings.
- > **CERAMAFLEX** may be used over waterproofing or crack isolation membranes meeting ANSI A118.10 and A118.12. Any other substrate must be approved in writing by an officer of the manufacturer.

LIMITATIONS:

- > **CERAMAFLEX** must not be applied directly to asphalt sheeting, vinyl covered wall board, masonite, luan plywood, cement asbestos board, metal, glass or plastic, curing compounds and chemically treated surfaces.
- > Improperly cured or wet plywood, tongue and groove plywood, particleboard, OSB or strip wood surfaces are not considered suitable substrates.
- > Apply in temperature range above 40 °F (4 °C). Do not allow mortar to freeze for the first 72 hours.
- > Some green or red marbles may warp when installed with setting materials containing water, causing loss of bond and/or damage to the

finish. These marbles must be set with Texrite's EPOXYPLUS® TS.

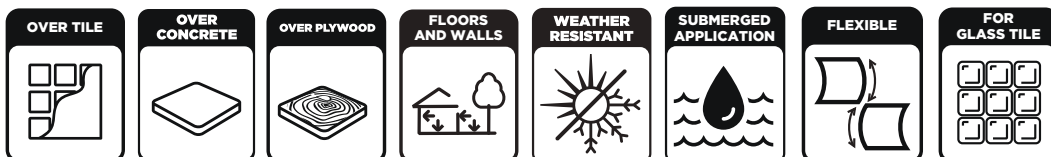
- > **CERAMAFLEX** does not form a water-proof barrier. It's not affected by prolonged water contact yet water and moisture will pass through it.

TECHNICAL DATA

*Open time @ 70 °F (21 °C)		20 minutes
*Adjustability @ 70 °F (21 °C)		25 minutes
*Pot life @ 70 °F (21 °C)		9 hours
Compressive strength (psi)		3500 psi
ASTM C-109		
Shear bond (psi) ANSI A118.4		
Non-vitreous tile 7 days	> 300 psi	525 psi
28 days	> 300 psi	640 psi
Porcelain tile 7 days	N/S	265 psi
28 days	N/S	375 psi
Non-vitreous tile 7 days	> 100 psi	250 psi
ANSI A 118.11 28 days	> 150 psi	350 psi***
*Flexible properties		
Elastic modulus	< 1.5 X 10 ⁶	3.4 X 10 ⁵
Flexural strength	N/S	850

APPLICABLE STANDARDS:

Meets and exceeds requirements found in ANSI A118.1, A118.4, A118.11, A118.15, A108.5, A108.11, A108.12.



INSTALLATION: PREPARATORY WORK

All surfaces must be dry, structurally sound and solid and be 40 °F (4 °C) - 90 °F (32 °C) during application and initial cure (72 hours).

CEMENTITIOUS SUBSTRATES

Area must be clean and dry. Remove all efflorescence, grease, oil, dirt, dust, paint, sealers, curing compounds, asphalt, cut back residue, old adhesives and other foreign matter. Failure to remove these items causes bond loss and void product warranty. Roughen smooth steel troweled concrete. Remove foreign matter and/or roughen surface by mechanical scarified or shot-blasting to prepare surface. Dampen porous surfaces with clean water before installing the mortar and leave no puddles or remaining water on surface for best conditions. Substrate deflection shall not exceed 1/240 that of the span.

PLYWOOD SUBSTRATES

Floor must be strictly built to resist flex and rigid to prevent bending with ceramic tile and stone. The surface shall comply with IRC and IBC building codes. Bond surface is exterior glue plywood only, secured with screw-type nails and glued where possible. An open gap of empty around sheets of plywood to allow for expansion. Plywood surfaces must be for interior areas only and water/moisture protected near wet areas.

NON-CEMENTITIOUS SUBSTRATES

All non conforming surfaces such as strip wood, old plaster or painted surfaces can be covered with a cleavage membrane topped with a 3/8" to 3/4" (10-20 mm) reinforced mortar bed for walls and a 1 1/4" (32 mm) reinforced mortar bed for floors. After a minimum of 20 hours, the dry-set mortar may be applied to the mortar bed. Plastic laminate shall be sanded and well bonded to its substrate.

TILE OVER TILE AND OTHER SURFACES

It is absolutely essential that the existing tile and other surfaces be well bonded. The surfaces must be prepared in accordance with the requirements for cementitious surfaces. It is also necessary to abrade the surface to assure proper bonding. Remove all waxes, sealers and coatings that would interfere with the bond.

EXPANSION JOINTS

Install expansion joints around all perimeters or restraining surfaces where possible to allow for expansion movement. Never bridge an expansion, contraction or construction joint. Add additional joints for large areas and areas subject to the sunlight, heat/cold temperatures in accordance with local building codes. See EJ171 in TCNA Handbook for detailed specifications. Remove all thinset mortar, grout and debris from joints before backer rod and sealant are placed.

MIXING

Add cool, drinkable water and **CERAMAFLEX** dry powder in a clean container.

Stir by hand tool or low RPM (less than 300) drill mixer into a lump-free, mortar paste consistency. Drill mixer paddle or wand should be "open-loop" design to not add air or weaken the mortar. Mortar should be very soft paste mixture that does not slump, slide or flow from container, tool or trowel. Allow freshly mixed mortar to slake (wait) for 15 minutes, then re-stir into a paste to get maximum working and spreading time. Do not add any additional water after this point. Mix only enough mortar than can be used within 30 minutes. The proper mortar paste consistency is such that when applied with a notched trowel to the substrate, the ridges formed in the mortar will not flow or slump. Stir mortar occasionally to prevent firm set of mortar. If a mortar sets firm in container discard it and re-mix a new batch. Mix approximately 5 1/2 quarts (5.2 liters) per 50 lb (22.7 kg) bag. There's no need to add another latex liquid to this product.

APPLICATION

Apply the wet mortar to the bond surface with flat-side of trowel in a scraping or scratching motion to drive the wet mortar into the surface. Then take additional mortar with the notched-side of trowel to form and comb the ridges. Trowel the mortar ridges in one straight direction helps to prevent hollow tiles and maximize bond contact.

Tiles with deep patterns, high lugs on or those with irregular texture on the back surface may require "back buttering" to ensure 100% coverage of back of tiles. Proper method of bonding of tiles requires embedding, pressing and sliding tiles perpendicular to wet mortar ridges to have a nominal mortar thickness of 3/32" - 3/16" (3-5 mm) and 100% coverage. During the setting of tile, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer being made.

Do not adjust tiles in mortar after they have been set past 10-15 minutes. Do not abut tile to perimeter walls or restraining surfaces. Leave a minimum spacing of 1/4" (6 mm), void of any setting material or tile, to allow for expansion. Fill the 1/4" (6 mm) spacing with caulk or sealant if exposed. NOTE: As a practical test, it is recommended that three or more separate twelve inch square areas of tile be bonded to the properly prepared surface with the actual tile and bonding materials that will be used on the finished installation. These should be allowed to cure for 3-7 days and then removed with a hammer and chisel. At this point, one can determine if adequate bond has been obtained or if a problem exists.

TROWEL RECOMMENDATION

Smaller tiles will use smaller notched trowels and larger tiles will require larger notched trowels suitable for providing a minimum thickness after embedding the tile.

CLEANING:

Water is all that is needed to remove uncured product.

COVERAGE:

A 50 lb (22.7 kg) bag using a square-notched trowel covers:

1/4" X 1/4" = 77 sq ft

1/4" X 3/8" = 66 sq ft

1/2" X 1/2" = 40 sq ft

CURING AND GROUTING:

A minimum cure is obtained in 12-24 hours, depending on ambient temperatures. Normal grouting should be done 48 hours later.

STORAGE LIFE:

One year if kept dry in sealed bag.

SAFETY - CAUTION: May cause eye, skin or lung injury. Contains free silica. Prolonged exposure to dust may cause delayed lung disease (silicosis). Eliminate exposure to dust. Use NIOSH approved mask for silica dust. Contains portland cement. If any cement or cement mixtures get into eye, flush immediately and repeatedly with water and consult a physician promptly. Freshly mixed cement, mortar, concrete or grout may cause skin injury. Avoid contact with skin where possible and wash exposed skin areas promptly with water.

KEEP OUT OF REACH OF CHILDREN

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