



CERAMAFLEX

Flexible Latex-Portland Cement
Mortar Bond Coat

Product Information

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

BASIC USE

CeramaFlex is used as a bond coat for setting absorptive, semi-vitreous, vitreous and impervious ceramic, porcelain and glass tile for service in residential and commercial use. It is used in a mortar bed from 3/32"-3/16" thickness 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. It has excellent water and impact resistance, is water cleanable, non-flammable and requires no soaking of tiles.

AREA OF USE

Suitable backings, when properly prepared, include plumb and true masonry, concrete, cementitious backer units, cured Portland cement mortar beds, brick, ceramic tile, marble and cement based terrazzo. In interior dry areas only, **CeramaFlex** may be used over gypsum board, exterior glue plywood and high pressure laminate. **CeramaFlex** may also be used 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 water-proofing 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, cement asbestos board, metal, glass, plastic, lauan plywood or gypsum mortar beds. Improperly cured or wet plywood, particle board, OSB or strip wood surfaces are not considered suitable substrates. Apply in temperature range above 40° F. (Do not allow mortar to freeze for the first 72 hours). Some green or red marble may warp when installed with setting materials that contain water causing loss of bond and/or damage to the finish. This marble must be set using EpoxyPlus 2002TS. This product is not effected by prolonged water contact but it does not form a water-proof barrier.

APPLICABLE STANDARDS

Meets and exceeds requirements for dry-set mortars found in ANSI A118.1, A118.4, A118.11, A108.5, A108.11, A108.12.

PACKAGING

COLOR: Gray or white.
TEXTURE: Powder, consisting of Portland cement, graded sand, organic and inorganic chemicals.
PACKAGING: 50 lbs. Multi-wall bags.

INSTALLATION

Preparatory Work

All surfaces on which ceramic tiles are to be set must be dry, structurally sound, and not subject to temperatures below 40° F or above 90° F during its initial (72 hours) cure.

Cementitious Substrates

Area must be dry and free of efflorescence, grease, oil, dirt, dust, paint, sealers, curing compounds, asphalt, cut back residue, old adhesives and other foreign matter. Cleaning may be accomplished via mechanical sanding, scraping, chipping or shot blasting. Smooth steel troweled concrete must be scarified or shot-blasted to provide a roughened surface. It is advisable to dampen dry porous concrete before installing ceramic tile with **CeramaFlex** mortar. Do not leave puddles or standing water on the surface. Substrate deflection shall not exceed 1/240 that of the span.

Plywood Substrates

Floor systems, including the framing system and subfloor panels, over which underlayment and tile will be installed shall be in conformance with the IRC for residential applications, the IBC for commercial applications, or applicable building codes. Further, the underlayment to receive the **CeramaFlex** mortar should be exterior glue plywood only, secured with screw-type nails and glued where possible. A gap of 1/8"-3/16" shall be left between sheets of plywood and remain empty after the installation to allow for expansion. In addition, all plywood surfaces must be for interior use only and protected from exposure to water.

Non-Cementitious Substrates

Surfaces such as strip wood and old plaster or painted surfaces that provide bonding problems should be covered with a cleavage membrane topped with a 3/8" to 3/4" reinforced mortar bed for walls and a 1 1/4" 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.

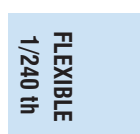
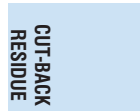
Tile Over Tile and Other Surfaces

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

Expansion Joints

Expansion joints shall be installed in accordance with local building codes. See EJ171 in T.C.N.A. Handbook for detailed specifications. Never bridge an expansion, contraction, or construction joint.

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TEXAS CEMENT PRODUCTS, INC.

4000 Pinemont
Houston, Texas 77018 USA

Phone: 713-682-8411
Toll Free: 800-669-0115
Fax: 713-688-2448
texrite.com & texascement.com

Remove all thinset, mortar grout and debris from joints before sealant is placed.

Mixing

Blend with water only (60°-80°F) to the desired paste consistency. Mix approximately 5 1/2 quarts per 50-pound bag. Never add another latex liquid to this product. Mix with slow RPM (300) mixer. Do not use a high speed drill to mix mortar. Mix thoroughly until smooth. Allow mix to slake for 15 minutes, then remix before using. Mix only enough mortar that 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. Some stiffening of the mortar may occur prior to 30 minutes; restir occasionally. Do not use mortar after initial set in bucket.

Application

Spread mortar with flat side of trowel to key-in substrate; then, reapply additional mortar to a depth sufficient to be notched with a suitable trowel that will leave only enough mortar to give 100% contact with back of tile and a subsequent mortar bed of 3/32" - 3/16". Comb mortar with notched side of trowel in one direction only. Set the tile in the mortar and move the tile back and forth perpendicular to the trowel ridges to collapse the ridges and "embed" the tile in the mortar establishing complete coverage. With high lug tiles, "back buttering" may be required to ensure 100% coverage of back of tiles. During the setting of tile, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer is 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", void of any setting material or tile, to allow for expansion. Fill the 1/4" 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 72 hours 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

Suitable for providing a minimum 3/32" bed thickness after embedding the tile.

Coverage

Per 50 lbs. 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.

Working Time

Approximately 2 to 3 hours, depending on ambient temperature.

Cleaning

Water is all that is needed to remove uncured mortar.

Curing and Grouting

A minimum cure is obtained in 12-24 hours, depending on ambient temperatures. Normal grouting should be done 48 hours later (ANSI A-108.5).

SPECIFICATIONS

Technical Data: CeramaFlex

Test	Requirement	Typical Values
*Open time @70°F	-	20 minutes
*Adjustability @ 70°F	-	25 minutes
*Bucket life @ 70°F	-	9 hours
*Compressive Strength (PSI)	-	3500 psi
ASTM C-109		
Shear Bond (PSI) ANSI A118.4		
Non-Vitreous	7 Day >300 psi	525 psi
	28 Day >300 psi	640 psi
Porcelain Tile	7 Day N/S	265 psi
	28 Day N/S	375 psi
Non-Vitreous (Over Wood)	7 Day >100 psi	250 psi
ANSI A118.11	28 Day >150 psi	350 psi***
Flexible properties		
Elastic Modules	<1.5 x 10 ⁶	3.4 x 10 ⁵
Flexural Strength	N/S	850

*These values reflect the results of practical testing methods closely associated with applications in the field.

***Plywood delaminates

Safety – CAUTION: May cause eye, skin or lung injury. Contain free silica. Prolonged exposure to dust may cause delayed lung disease (silicosis). Eliminate exposure to dust. Recommend use of a NIOSH approved mask for silica dust. Contains Portland cement. If any cement or cement mixture gets into the 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.

Storage Life - One year if kept dry in sealed bag.

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