

Premium Dry-Set Mortar

PRODUCT DESCRIPTION

PERMABOND® 902 is a dual purpose — floor and wall — premium dry-set mortar. It features high bond strengths, extended open time, creamy consistency and additional coverage over standard dry-set mortars. Best used for cost effective interior and exterior applications. Meets ANSI A118.1 and A108.5. It is particularly suited for tile installations in hot and dry parts of the country.

▶ BASIC USE

PERMABOND is used as a bond coat for setting absorptive, semi-vitreous and vitreous ceramic tile for service in residential and commercial use for both floor and wall installations. It is used in a mortar bed from 3/32" to 3/16" (2.4 to 4.8 mm) after the tiles have been properly embedded. PERMABOND 902 has excellent water and impact resistance, is water cleanable, non-flammable, good for exterior work and requires no soaking of tiles. PERMABOND 902 mortar is not affected by prolonged contact with water, but does not form a waterproof barrier. PERMABOND 902 provides a permanent installation with higher bond strength and lower material and labor costs than conventional Portland cement mortar beds.

▶ AREAS OF USE

Suitable backings, when properly prepared, include plumb and true masonry, concrete, gypsum board (dry interior walls only), cementitious backer units, cured Portland cement mortar beds, brick, unglazed ceramic tile and marble.

▶ LIMITATIONS

PERMABOND 902 must not be applied directly over wood, asphalt sheeting, vinyl covered wall board, Masonite®, cement asbestos board, metal, glass, plastic, luan plywood or gypsum mortar beds. Apply in temperature range of 40°F to 90°F (4°C to 32°C). Do not allow mortar to freeze for the first 72 hours. Green or red marbles may warp when installed with water. This causes loss of bond and/or damage to the finish. These marbles must be set with COLORSET EPOXY 931.

▶ APPLICABLE STANDARDS

Conforms to requirements for dry-set mortars found in ANSI A118.1, ANSI A108.5 and C.T.I. 64-1. Conforms to ANSI A118.4 when mixed with CUREMIX® 937, CURECRYLIC PREMIUM 939 or PORCELAIN STONE & TILE 948 (in lieu of water).

Colors — White or Gray.

Texture — Powder, consisting of Portland cement, graded sand, organic and inorganic chemicals.

▶ PACKAGING

50 lb. (22.7 kg) bags, 5 lb. (2.27 kg) and 10 lb. (4.54 kg) boxes.

INSTALLATION

▶ PREPARATORY WORK

All surfaces on which tiles are to be set must be dry, structurally sound and not subject to temperatures below 40°F (4°C) or above 100°F (38°C). Detailed installation procedures may be found in the TCA Handbook and ANSI A108.5. Surfaces must be dry and free of all grease, oil, dirt, dust, curing compounds, sealers, coatings, efflorescence, old adhesive residues, gypsum based underlayments and any other foreign matter.

▶ CEMENTITIOUS SUBSTRATES

Cleaning may be accomplished via mechanical sanding, scraping or chipping. Surfaces may be cleaned with muriatic acid if thoroughly flushed and neutralized. (*Use proper precautions.*) Smooth, steel troweled concrete floors must be roughened to ensure a good bond. It is advisable to dampen dry porous concrete before installing ceramic tile with PERMABOND 902 mortar. Do not leave puddles or standing water on surfaces.

▶ NON-CEMENTITIOUS SUBSTRATES

Surfaces such as 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" (9.5 to 19 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.

▶ CERAMIC TILE SUBSTRATES

It is absolutely essential that the existing tile 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.

▶ EXPANSION JOINTS

Expansion joints shall be installed in accordance with local building codes. See EJ 171 in TCA Handbook for detailed specifications. Expansion joints, control joints and cold joints shall never be bridged with setting material.

▶ MIXING

PERMABOND 902 dry powder should be added to clean, potable water, CUREMIX 937, CURECRYLIC PREMIUM 939 or PORCELAIN STONE & TILE 948 at the rate of approximately 1 1/2 gallons (5.68 L) per 50 lb. (22.7 kg) bag. Mix thoroughly until smooth and let mortar slake for 15 minutes, then remix. If a mechanical mixer is used, it must be done at a low RPM (300) so as not to entrap air into the mortar. Do not add water, latex or additional powder after slaking period.

The proper mortar consistency is such that when applied with a notch trowel to the substrate, the ridges formed in the mortar will not flow or slump.

Do not use mortar after initial set in bucket. During use, remix mortar occasionally.

▶ APPLICATION

Spread mortar with flat side of trowel to key into substrate. Next, apply additional mortar to a depth sufficient to be notch 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" to 3/16" (2.4 to 4.8 mm). With high lug tiles, "back buttering" may be required to ensure 100% coverage to 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. It is also required that tiles be embedded for good mortar to tile transfer and for proper alignment. Do not adjust tiles in mortar after they have been set past 10 - 15 minutes.

NOTE: As a practical test it, is recommended that three (3) or more separate 12 inch square (.3 m²) areas of tile be bonded to the properly prepared surface with the actual tile and bonding material that will be used on the finished installation. These should be allowed to cure for three (3) to seven (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.

▶ 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. Grouting can be done before the mortar takes its final set if caution is used not to break the plastic mortar bond to the tile. Normal grouting should be done 48 hours later.

GUARANTEE

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PermaBond® 902

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PERMABOND 902 TECHNICAL DATA		
TEST	REQUIREMENT	TYPICAL VALUES
*A. Open Time @ 70°F (21°C)		12 Minutes
*B. Adjustability @ 70°F (21°C)		10 - 15 Minutes
*C. Bucket Life @ 70°F (21°C)		8 Hours
D. Compressive Strength ASTM C-109		>3000 psi (211 kg/cm ²)
E. Shear Bond ANSI A118.1 Non-Vitreous Tile		
	7 Days	200 psi (14 kg/cm ²) min
	28 Days	250 psi (18 kg/cm ²) min
		>400 psi (28.13 kg/cm ²) >500 psi (35.16 kg/cm ²)
Vitreous (Paver) Tile		
	7 Days	50 psi (4 kg/cm ²) min
	28 Days	100 psi (7 kg/cm ²) min
		>200 psi (14.16 kg/cm ²) >300 psi (21.10 kg/cm ²)
F. 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		
G. Storage Life—One year if kept dry in sealed bag.		

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

COVERAGE			
PRODUCT	SQUARE FEET (M ²) PER 50 LB. (22.7 KG) BAG		
	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) Square-Notch Trowel	1/4" x 3/8" x 1/4" (6 x 9.5 x 6 mm) Square-Notch Trowel	1/2" x 1/2" x 1/2" (13 x 13 x 13 mm) Square-Notch Trowel
PERMABOND® 902	88 (8.7)	76 (7.06)	46 (4.28)

Members of National Tile Contractors Association,
Materials & Methods Standards Association, Ceramic Tile Distributors Association.

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