



# PermaBond® NonSag 903

## Dry-Set Mortar For Large Unit Tiles

### PRODUCT DESCRIPTION

PERMABOND® NONSAG is a special blend of Portland cement, sand and special chemical additives which produce a dry-set mortar with a long open time for the installation of various tiles on vertical surfaces. PERMABOND's NONSAG properties limit lippage.

PERMABOND NONSAG is used as a bond coat for setting absorptive, semi-vitreous and vitreous tiles on vertical surfaces for service in residential and commercial use. It is used in a mortar bed as thin as 3/32" to 3/16" (2.4 to 5 mm) after the tiles have been properly embedded. PERMABOND NONSAG has excellent water and impact resistance, is water cleanable, non-flammable. No presoaking of tiles is required. PERMABOND NONSAG mortar is not affected by prolonged contact with water, but does not form a waterproof barrier. PERMABOND NONSAG provides a permanent installation with higher bond strength and allows vertical installations to be completed with substantial savings on materials and labor when compared with normal dry-set mortars. PERMABOND NONSAG is designed for interior or exterior applications.

### ▶ 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 NONSAG must not be applied directly over wood, asphalt sheeting, vinyl covered wall board, Masonite®, cement asbestos board, metal, glass, plastic 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.) 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 COLORSET EPOXY 931.

### ▶ LIMITATIONS ON TILES

Tiles with a surface area of 1 sq. ft. (30 cm<sup>2</sup>) or less shall not exceed 5 lbs. (2.27 kg) per 1 sq. ft. (30 cm<sup>2</sup>).

Tiles with surface area greater than 1 sq. ft. (30 cm<sup>2</sup>) should be tested to determine suitability of product by installing 3 test areas with actual tiles on the actual substrate

### ▶ APPLICABLE STANDARDS

Conforms to requirements for dry-set mortars found in ANSI A118.1, ANSI A108.5 and C.T.I.64-1. When mixed with CUREMIX® 937 and CURECRYLIC® PREMIUM 939 conforms to requirements for ANSI A118.4.

Colors — Gray and White.

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

### ▶ PACKAGING

50 lb. (22.7kg) multi-wall bags.

## 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 (*use proper precautions*) if thoroughly flushed and neutralized. It is advisable to dampen dry porous concrete before installing ceramic tile with PERMABOND NONSAG. Smooth, steel troweled concrete must be roughened to ensure a good bond.

### ▶ NON-CEMENTITIOUS SUBSTRATES

Surfaces such as wood and old plaster or painted surfaces that render bonding problems should be covered with a cleavage membrane topped with a 3/8" (9.5 mm) to 3/4" (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 EJ171 in TCA Handbook for detailed specifications. Expansion joints, control joints and cold joints shall never be bridged with setting material.

### ▶ MIXING

PERMABOND NONSAG dry powder should be added to clean, potable water, CUREMIX 937 or to CURECRYLIC PREMIUM 939 at the rate of approximately 1 1/2 gal. (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 in 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. Then, 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 5 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 to obtain good transfer of mortar to tile 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 3 or more separate 12 square inch (.3 m<sup>2</sup>) 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 3 to 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. Normal grouting should be done 48 hours later.

PermaBond® NonSag 903

**GUARANTEE**

The recommendations, suggestions, statements and technical data are based on the best knowledge available to C-Cure and are given for informational purposes ONLY and without any responsibility for their use.

C-Cure MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE PRODUCT SOLD HEREIN except that the quality of the ingredients shall be in accordance with C-Cure specifications. It is expressly understood and agreed that the buyer's sole and exclusive remedy shall be replacement of defective products and under no circumstances shall C-Cure be liable for incidental or consequential damages. C-Cure neither assumes nor authorizes any others to assume for it any liability with respect to furnishing of the product. Handling and use of the product are beyond the control of C-Cure, therefore, no warranty is made, expressed or implied, as to the results obtained from the use of the product or against any claims for infringement of patents resulting from the use of the product.

This writing constitutes a complete and exclusive statement of the understanding between C-Cure and buyer. There were no oral agreements or warranties, expressed or implied, collateral to or affecting the furnishing of the product. This understanding shall not be modified except in writing by an officer of C-Cure.

# PermaBond® NonSag 903

## Dry-Set Mortar For Large Unit Tiles

PERMABOND NONSAG 903 TECHNICAL DATA			
TEST	REQUIREMENT		TYPICAL VALUES
*A. Open Time @ 70°F (21°C)			12 Minutes
*B. Adjustability @ 70°F (21°C)			15 - 20 Minutes
*C. Bucket Life @ 70°F (21°C)			8 Hours
D. Compressive Strength ASTM C-109			>3000 psi (211 kg/cm <sup>2</sup> )
E. Shear Bond ANSI A118.1 Non-Vitreous Tile	7 Days	200 psi (14 kg/cm <sup>2</sup> ) min	>400 psi (28 kg/cm <sup>2</sup> )
	28 Days	250 psi (18 kg/cm <sup>2</sup> ) min	>500 psi (35 kg/cm <sup>2</sup> )
Vitreous (Paver) Tile	7 Days	50 psi (4 kg/cm <sup>2</sup> ) min	>200 psi (14 kg/cm <sup>2</sup> )
	28 Days	100 psi (7 kg/cm <sup>2</sup> ) min	>300 psi (21 kg/cm <sup>2</sup> )
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 <sup>2</sup> ) 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® NONSAG 903	88 (8.7)	76 (7.06)	46 (4.28)

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

NOTICE: The information in this bulletin is presented in good faith, but no warranty, express or implied, is given nor is freedom from any patent. In as much as any assistance furnished by C-Cure with reference to the safe use and disposal of its products is provided without charge, C-Cure assumes no obligation or liability therefore, except to the extent that any such assistance shall be given in good faith.

**C-CURE**  
Seal Beach, CA 90740  
800-895-2874  
www.c-cure.com