PRODUCT DATA

SILCOSEAL® 2000 F

New-generation chemically active cure and bondbreaker for tilt-up, lift slab, and precast construction.

VOLATILE ORGANIC COMPOUND (VOC) REGULATORY COMPLIANCE

	USEPA	OTC I	OTC II	AZ-MCAQMD	CARB - 2000	CARB - 2007	CARB-20/SCAQMD	CANADA
SILCOSEAL 2000 F	■	□	□	■	□	□	□	□

HOW IT WORKS

In contrast to most conventional cure and bondbreakers, SILCOSEAL 2000 F does not contain any wax or hydrocarbon resins and, as a result, does not depend on a physical barrier deposited on top of the casting slab to prevent bonding. Instead, SILCOSEAL 2000 F consists of a special formulation of organic compounds in a predominately water-based solvent system that chemically react with calcium hydroxide (a byproduct of the cement hydration reaction) present in the concrete surface pores. The reaction products are amorphous gels which, in conjunction with other combined special organic compounds in SILCOSEAL 2000 F, effectively seal concrete surface pores. Moisture entry or exit is restricted, allowing good retention of concrete mixing water to assist in providing proper cement hydration and concrete curing and also minimizing concrete surface cracking and crazing. Properly applied, SILCOSEAL 2000 F positively prevents the bonding of tilt wall panels to casting slab floor surfaces.

APPLICATIONS

- Use as a cure and bondbreaker in tilt-up, lift slab, and precast concrete construction.
- Use to cure the top side of tilt wall panels to prevent the formation of shrinkage cracks.
- Use as a cure only on all types of interior, smooth-troweled concrete flatwork when the use of conventional resin-based curing compounds is impractical.

ADVANTAGES

- Resistant to the “osmotic effect” by restricting the natural tendency for water to migrate from freshly placed panel concrete through the bondbreaker film and into the less moist casting slab. Reducing the “osmotic effect” greatly improves panel concrete surface appearance resulting in a smooth, uniform surface profile, color and appearance.
- Achieves exceptional wall panel surface appearance.
- Leaves no residue or resulting staining on wall panel or casting slab floor surfaces when properly applied.
- Achieves a crisp, positive release that minimizes panel surface defects and reduces panel resurfacing/patching costs.
- Does not contain any wax or hydrocarbon resins like many conventional bondbreakers that often leave a difficult-to-remove residue on wall panel and casting slab surfaces. When this residue is not properly removed, it causes floor and exterior wall panel paint and coating adhesion problems.
- Meets the moisture retention properties of ASTM C309 when applied to a steel-troweled surface prepared in accordance with CEN/TS 14754.
- Special blend of fast-drying solvents significantly reduces drying time.
- Improved emulsion stability means SILCOSEAL 2000 F stays mixed longer than conventional water based bondbreakers.
- Resists washoff from normal rain showers and dew once dry.
- Dust, dirt and, mud can be easily removed from casting slab floor surfaces by washing with low-pressure water when SILCOSEAL 2000 F is used as both the cure and bondbreaker.
- Resistant to sunlight-induced oxidation damage that can necessitate the reapplication of competitive bondbreakers even when panel concrete placement is delayed a few days.
- Green Engineered®—better for health and the environment.
- Meets all current federal and most state* VOC requirements for tilt-up bondbreakers and curing compounds.

*Does not comply with OTC states and California VOC regulations for use as a cure or bondbreaker. Does not comply with VOC regulations for use as a cure in Maricopa County, Arizona. Use SILCOSEAL SELECT in these areas.

⚠ PRECAUTIONS ⚠

- Not recommended for use as a bondbreaker on broom-finished or rough-finished concrete surfaces.
- Not recommended for application over any other manufacturer’s inorganic silicate-based floor sealer, hardener, or organic resin-based curing, sealing, or combination cure and seal product. Failure to follow this recommendation can result in panel surface defects or panel sticking.
- If a delay of more than 2 weeks occurs between the final bondbreaker application coat and panel concrete placement, it will be necessary to check for a sufficient bondbreaker film on the casting slab. If the bondbreaker film is determined to be insufficient, additional bondbreaker coat(s) must be reapplied as necessary before concrete placement.
- Protect from freezing. If allowed to freeze, product packaging may rupture and the emulsion stability of this product may be affected, making it difficult to keep product mixed during application. Product that is suspected of freezing should not be used.
- Verify that product is within the “USE BY” date stated on product packaging. Do not use expired product. The use of expired product may result in poor product performance or failure.
- In some instances, Nox-Crete may approve the application of

Cure & Bondbreaker

CURE & SEAL 1200 E, DURO-NOX, or RES-CURE DS prior to the application of SILCOSEAL 2000 F. If so, the resistance to rain washoff is greatly reduced. Carefully inspect all casting slab surfaces prior to panel concrete placement to ensure an adequate film of bondbreaker is uniformly present. The use of CURE & SEAL 1200 E or RES-CURE DS will result in the formation of a membrane on the casting slab surface that may require removal prior to the application of some surface coatings or adhesives.

- Not recommended for application over or in conjunction with any other manufacturer's tilt-up bondbreaker.
- Not recommended for application in the rain or if rain is anticipated within 12 hours of application. Surfaces exposed to rain or running water within this time period will require reapplication.
- It is not recommended to use a pressure washer to clean the casting/floor slab surface after the application of SILCOSEAL 2000 F and prior to the wall panel concrete being placed. If necessary, a low pressure garden hose with a non-aggressive spray nozzle may be used to remove contamination and debris prior to placing wall panel concrete.
- Not recommended for bondbreaker application to casting slab surfaces previously cured with polyethylene or curing blankets without first removing all salt deposits. Failure to remove all salt deposits can result in panel surface blemishes or defects.
- Not recommended for application to casting slab surfaces that are frozen or when ambient temperatures are below 40° F (4° C) or expected to drop below 40° F (4° C) within 12 hours following application.
- Not recommended for application without the proper sprayer and correct spray tip. See USE INSTRUCTIONS for specific sprayer and tip size recommendations.
- Not recommended for cure coat application prior to saw cutting crack control joints. Best results are obtained when SILCOSEAL 2000 F cure coat is applied immediately after final finishing and joint saw cutting has been completed.
- Not recommended for use in tilt-up applications when casting slab or panel concrete mix design incorporates pozzolans such as fly ash without first contacting Nox-Crete for specific recommendations regarding application procedures and rates. Failure to do so may result in panel surface blemishes and/or panel sticking.

USE INSTRUCTIONS

- Request current product literature, labels, and safety data sheets from manufacturer and read thoroughly before product use.
- Site environmental conditions, substrate conditions, and construction have a major effect on product selection, application methods, procedures and rates, appearance, and performance. Product literature provides general information applicable to some conditions. However, an adequate site test application by the purchaser or installer in advance of field scale use is mandatory (irrespective of any other verbal or written representations) to verify that product and quantities purchased can be satisfactorily applied and will achieve desired appearance and performance under intended use conditions.
- Use the Nox-Crete DRUM AGITATOR or other suitable mechanical agitator to adequately mix product before withdrawing from container and before each use.
- Apply using the Nox-Crete PERFECT SPRAYER or quality power sprayer for larger areas. Recommended spray tip sizes are 8003-LP, 8004-LP, and 8005-LP. The coarser (8005-LP) spray tip should be used on porous casting slab surfaces where additional bondbreaker is necessary to ensure sufficient film holdout. Use the less coarse (8003-LP) spray tip for application on less porous casting slab surfaces. The use of an improper sprayer and/or incorrect spray tip generally results in either over- or under-application.
- SILCOSEAL 2000 F should be applied in accordance with recommended procedures to achieve even and uniform coverage. Equipment should be clean and dry prior to use.
- Typical drying time is 30 minutes to 3 hours, but varies with the presence or absence of a moisture barrier beneath the casting slab, climatic conditions and application rate. Extended drying times in excess of 24 hours are possible in cure coat applications when product is applied heavily during cool weather and a moisture barrier is present. Reducing the application rate and applying in multiple thin coats in lieu of one heavy coat will greatly reduce drying time.
- Avoid scouring the casting slab surface during panel concrete placement by using a deflection board.

CURE COAT APPLICATION

- Apply to the point of rejection and uniform surface film accumulation immediately after final finishing and joint saw cutting.
- **The typical application range is 200 - 400 sf/gal (5 - 10 sm/L) but can vary widely depending upon the specific conditions such as concrete mix design, type of finish and ambient weather conditions.** For example, concrete floors which are cast during cool and humid conditions require less SILCOSEAL 2000 F to achieve optimum curing than do concrete floors cast during hot, dry and windy conditions.
- Over-application can result in delays due to slow drying. Under-application can result in shrinkage cracking or crazing and excessively porous and weakened slab surfaces.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE THE VARIOUS CONDITIONS ON EACH PROJECT AND TO DETERMINE THE CORRECT APPLICATION RATE OF THE SILCOSEAL 2000 F CURE COAT. IF UNSURE, CONTACT NOX-CRETE FOR SPECIFIC RECOMMENDATIONS.
- WHEN CLIMATIC CONDITIONS ARE EXCESSIVELY HOT, DRY AND/OR WINDY DURING CONCRETE PLACEMENT OR CURING AS DEFINED BY THE AMERICAN CONCRETE INSTITUTE'S REPORT ACI 305, THE USE OF NOX-CRETE'S CURE & SEAL 1200 E AS A CURING MATERIAL OR A WET CURE CONSISTING OF BURLAP AND POLYETHYLENE IS RECOMMENDED IN LIEU OF SILCOSEAL 2000 F TO PROVIDE ADDITIONAL PROTECTION FROM SLAB OR PANEL MOISTURE LOSS.

Updated 08/05/25. This version replaces all previous versions.

1444 S. 20th St. • P.O. Box 8102 • Omaha, Nebraska 68108 United States
PHONE: (800) NOX-CRETE (669-2738) or (402) 341-2080

BONDBREAKER APPLICATION

- Casting slab areas should be well-cured, smooth, and dense.
- Remove all dust, dirt, saw-cut residue, standing water, and other contaminants prior to applying bondbreaker coats with a broom, leaf/air blower, or low-pressure garden hose. **Do not pressure wash the surface.**
- The number of bondbreaker coats and related application rate required to achieve complete, uniform coverage of casting slab varies with concrete mix design, placing and finishing procedures, weather conditions, etc. Because of this, it is not possible to prescribe application rates or procedures inclusive of all site variables.
- Best results are obtained when successive coats of SILCOSEAL 2000 F are applied at right angles (perpendicular) to each other.
- An adequate application is indicated by the presence of a dry soap-like feel uniformly apparent to touch over the entire treated area with no indication of greater accumulations in low spots or depressions. Following bondbreaker application and immediately prior to panel concrete placement, be certain casting slab surfaces evidence the dry soap-like feel, but do not evidence over-application of SILCOSEAL 2000 F as indicated by a slippery or grease-like feel to the touch. Over-application may result in retardation of panel skin or dusting, surface irregularities and/or discoloration as well as unreacted bondbreaker residue on panel and floor surfaces.
- Typically, more porous casting slab surfaces resulting from such conditions as improper curing, the addition of pozzolans such as fly ash, or which received a more open or less tight finish will require more SILCOSEAL 2000 F than slab surfaces which are less porous.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE THE VARIOUS CONDITIONS ON EACH PROJECT AND TO DETERMINE THE CORRECT APPLICATION RATE OF THE SILCOSEAL 2000 F BONDBREAKER COATS. IF UNSURE, CONTACT NOX-CRETE FOR SPECIFIC RECOMMENDATIONS.
- CAUTION: THE PRIMARY REASON FOR PANELS STICKING TO CASTING SLABS IS AN INADEQUATE FILM OF BONDBREAKER ON THE CASTING SLAB SURFACE AT THE TIME OF PANEL CONCRETE PLACEMENT. IT IS YOUR RESPONSIBILITY TO VERIFY A CONTINUOUS FILM OF BONDBREAKER CAN BE FELT ON THE CASTING SLAB SURFACE AS PREVIOUSLY DESCRIBED IMMEDIATELY PRIOR TO PLACEMENT OF PANEL CONCRETE.
- Rain occurring prior to product drying will necessitate reapplication of bondbreaker.
- Do not apply to reinforcing steel or lifting inserts.
- Avoid spray drifts, runs, or puddles. Promptly wipe up any material excesses as they can lead to subsequent adhesive failure of floor coatings and wall paints.
- When using SILCOSEAL 2000 F for sand bed casting, contact Nox-Crete for specific written recommendations.
- To avoid wood sugar-related concrete retardation and dusting at panel edges and feature strip locations, use Nox-Crete's CLEAR PRE-FORM to seal all wood that may contact panel concrete, including edge forms, blockout forms and chamfer and feature strips prior to bondbreaker application.

Casting Slabs Cured with SILCOSEAL 2000 F

- Apply successive coats of SILCOSEAL 2000 F until the casting slab surface appears uniformly dark in appearance for at least 2 - 3 hours following the last coat. If the treated slab appears light in color either generally or in spots within 2-3 hours of last application, excessive slab porosity is indicated. Reapply SILCOSEAL 2000 F to all light-colored areas. If areas of light color or dry appearance persist, thoroughly wet affected areas with water to fill concrete surface pores, squeegee off excess water and then immediately re-apply SILCOSEAL 2000 F.
- **The typical effective coverage rate for all combined bondbreaker coats applied to new casting slabs previously cured with SILCOSEAL 2000 F is 200 - 400 sf / gal (5 - 10 sm / L).** The application rate can vary widely depending upon the specific conditions. Do not over- or under-apply.

Casting Slabs Previously Cured and Sealed with CURE & SEAL 1200 E, DURO-NOX, OR RES-CURE DS

- Casting slabs previously cured or sealed with CURE & SEAL 1200 E, DURO-NOX, or RES-CURE DS will require a lesser amount of SILCOSEAL 2000 F to perform the bondbreaker function. Over-application of SILCOSEAL 2000 F can result in panel surface dusting, surface irregularities and/or discoloration.
- Application of SILCOSEAL 2000 F to CURE & SEAL 1200 E, DURO-NOX or RES-CURE DS sealed casting slab surfaces interferes with the normal chemical reaction of SILCOSEAL 2000 F and the casting slab surface. As a result, under these circumstances, SILCOSEAL 2000 F may be subject to removal by rainfall or contact with water. Verify the presence of an adequate bondbreaker film as indicated by a dry, soap-like feel uniformly apparent to the touch over the entire treated area with no indication of greater accumulations in low spots or depressions as described above before placing panel concrete.
- **The typical effective coverage rate for all combined bondbreaker coats of SILCOSEAL 2000 F applied to casting slabs sealed with CURE & SEAL 1200 E, DURO-NOX, or RES-CURE DS is 300 - 500 sf / gal (10 - 12.5 sm / L).** The application rate can vary widely depending upon the specific conditions. Do not over or under apply.

Existing Casting Slabs

- Verify concrete surface is free of substances that could adversely affect product performance.
- If a curing or sealing compound other than CURE & SEAL 1200 E, DURO-NOX, or RES-CURE DS was used, it will be necessary to remove the coating from the casting slab surface prior to applying bondbreaker. Use Nox-Crete's BIO-CLEAN PLUS to chemically remove all coating residue.
- Apply successive coats of SILCOSEAL 2000 F until the casting slab surface appears uniformly dark in appearance for at least 2 - 3 hours following the last coat. If the treated slab appears

1444 S. 20th St. • P.O. Box 8102 • Omaha, Nebraska 68108 United States
PHONE: (800) NOX-CRETE (669-2738) or (402) 341-2080

light in color either generally or in spots within 2 - 3 hours of last application, excessive slab porosity is indicated. Reapply SILCOSEAL 2000 F to all light-colored areas. If areas of light color or dry appearance persist, thoroughly wet affected areas with water to fill concrete surface pores, squeegee off excess water and then immediately re-apply SILCOSEAL 2000 F.

- **The typical effective coverage rate for all combined bondbreaker coats applied to an existing, clean and unsealed casting slab is 200 - 400 sf / gal (5 - 10 sm / L).** The application rate can vary widely depending upon the specific conditions. Do not over- or under-apply.

STRIPPING

- To remove residual bondbreaker from casting slab floor surfaces resulting from over application of the bondbreaker, pretreat the areas to be stripped with Nox-Crete's BIO-CLEAN PLUS. Scrub the treated surfaces using a floor scrubbing machine equipped with nylo-grit scrub brushes. Squeegee off the excess BIO-CLEAN PLUS residue, rinse thoroughly with water and squeegee dry.
- To clean panel surfaces, pretreat the areas to be cleaned with a detergent solution consisting of 0.5 lbs (225 g) of trisodium phosphate in 1 gal (3.8 L) of water. Rinse the detergent solution off with water using a minimum 2,000 psi power washer.
- Determine adequacy of the surface preparation of panels and casting slabs with appropriate site test to verify acceptable adhesion, appearance and performance of paints, coatings, adhesives, sealers, sealants, grouts, etc. prior to application. See ACI 551 for specific recommendations.

TECHNICAL DATA

Color	White Liquid
Clarity	Opaque Emulsion
Bulk Density	8.0 lbs. / gal. (960 g / L)
VOC	<600 g / L
VOC Classification	Bondbreaker
Viscosity	28 Sec. @ 100º F (37º C)
Vapor Pressure	<16 mmHg @ 20º C
Flash Point	95º F (35º C) PMCC

TEST DATA

Meets the moisture retention properties of ASTM C309 when applied to a steel troweled surface prepared in accordance with CEN/TS 14754.

PACKAGING

Product is packaged in 5 gal (19 L) pails, 20 liter pails, 55 gal (208 L) drums, 200 liter drums, 275 gal (1,040 L) totes and 1,000 liter totes. Drums are equipped with a 2-inch center port opening for use with Nox-Crete's DRUM AGITATOR.

SHELF LIFE

Shelf life is 1 year. Use before the "USE BY" date stated on product packaging.

HANDLING/STORAGE

Product is a combustible liquid. Store in a dry location within a temperature range between 40° F (4° C) and 100° F (38° C). Following each liquid removal, tightly reseal all container bungs or caps to include mixer port cap that seals opening for drum agitator handle promptly to prevent loss of necessary volatile solvents.

CAUTION: FAILURE TO PROPERLY STORE PRODUCT CAN RENDER IT UNSUITABLE FOR USE.

AVAILABILITY & TECHNICAL SERVICES

In addition to corporate offices in Omaha, Nebraska, Nox-Crete, Inc. maintains regional offices and distribution centers in principal markets throughout the world. For source or technical information, call 800-669-2738 or 402-341-2080.

LIMITED WARRANTY

NOTICE-READ CAREFULLY

CONDITIONS OF SALE

NOX-CRETE offers this product for sale subject to, and Buyer and all users are deemed to have accepted, the following conditions of sale and limited warranty which may only be varied by written agreement of a duly authorized corporate officer of NOX-CRETE. No other representative of or for NOX-CRETE is authorized to grant any warranty or to waive limitation of liability set forth below.

WARRANTY LIMITATION

NOX-CRETE warrants this product to be free of manufacturing defects. If the product when purchased was defective and was within use period indicated on container or carton, when used, NOX-CRETE will replace the defective product with new product without charge to the purchaser.

NOX-CRETE makes NO OTHER WARRANTY, either express or implied, concerning this product. There is NO WARRANTY OF MERCHANTABILITY. In no case shall NOX-CRETE be liable for special, indirect or consequential damages resulting from the use or handling of the product and no claim of any kind shall be greater in amount than the purchase price of the product in respect of which damages are claimed.

INHERENT RISKS

NOX-CRETE MAKES NO WARRANTY WITH RESPECT TO THE PERFORMANCE OF THE PRODUCT AFTER IT IS APPLIED BY THE PURCHASER, AND PURCHASER ASSUMES ALL RISKS ASSOCIATED WITH THE USE OR APPLICATION OF THE PRODUCT.

Updated 08/05/25. This version replaces all previous versions.

1444 S. 20th St. • P.O. Box 8102 • Omaha, Nebraska 68108 United States
PHONE: (800) NOX-CRETE (669-2738) or (402) 341-2080