

# nox-crete®

chemical solutions to concrete problems

## TILT-UP



## YOUR RESOURCE FOR TILT-UP PRODUCTS

We have taken tilt-up to a new level by introducing an entire line of high performance tilt-up products designed to improve building aesthetics, reduce construction costs (by reducing labor and material costs) and reduce construction time.

Our 100% compatible Tilt-Up Partner Products eliminate incompatibility concerns resulting from the use of products from multiple manufacturers ensuring peace of mind for the entire project team.

From cure and bondbreakers to battery powered sprayer systems and PVC rustication strips, Nox-Crete has you covered on your next tilt-up project.

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## GREEN ENGINEERED PRODUCTS

Since the early 1980s, Nox-Crete has been committed to developing products that are Green Engineered®. Nox-Crete products with this label are specially designed to be safer for both people and the environment. The cornerstone of our Green Engineered® concept is our research and development of water-based products. Green Engineered® products from Nox-Crete are performance-

driven and designed to the highest quality standards using safer raw materials. With Green Engineered® products, design and construction professionals can meet the expectations for project design and construction without compromise to product performance or the world we share.





# PVC RUSTICATION



## CLEAN LINE REVEAL®

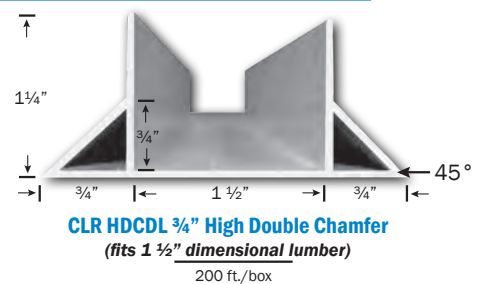
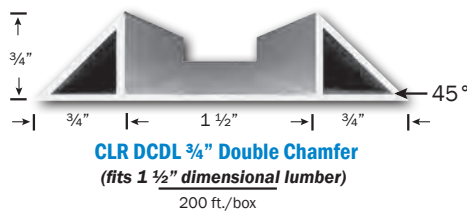
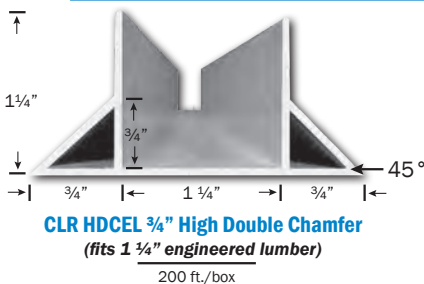
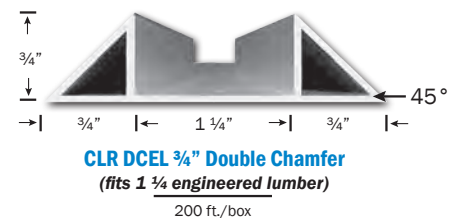
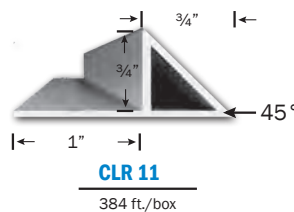
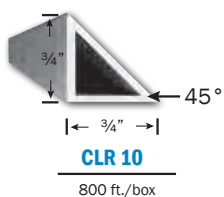
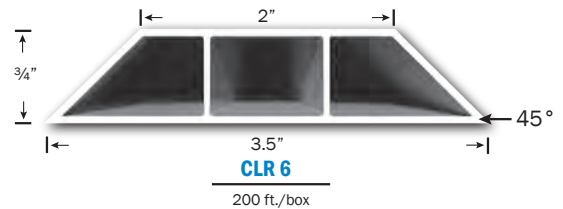
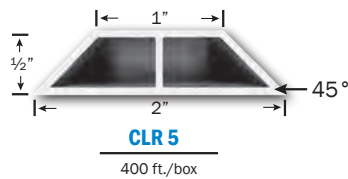
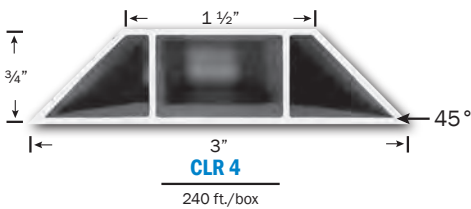
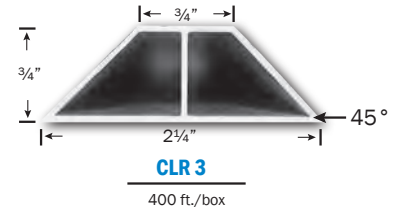
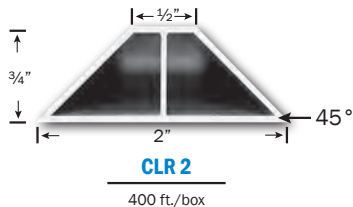
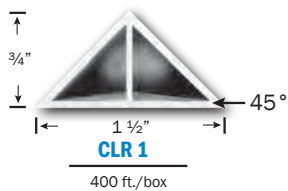
### Standard and Custom Extruded High-Density PVC Reveal for Tilt-Up

Made from high density PVC, CLEAN LINE REVEAL is used to create design details and chamfered edges on tilt-up wall panels. Available in 12 different profiles including a double chamfer, CLEAN LINE REVEAL can be easily cut to length and glued in place using either cartridge or spray adhesives. The finished wall panel is left with an incredibly smooth and uniform finish without concrete surface retardation or discoloration that can be caused by wood sugar migration from traditional wood reveals.



CLEAN LINE REVEAL®

## AVAILABLE PROFILES



## BONDBREAKERS

### SILCOSEAL® SELECT

#### • Water Based

**New Generation, Chemically Active Cure and Bondbreaker for Tilt-Up, Lift Slab and Precast Construction**

SILCOSEAL SELECT is a new generation tilt-up cure and bondbreaker. Over 60 years of experience manufacturing products for tilt-up construction has resulted in SILCOSEAL SELECT becoming the most successful and sought after bondbreaker in the world. Like all other versions of SILCOSEAL, and in contrast to most conventional cure and bondbreakers, SILCOSEAL SELECT 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 SELECT contains a special formulation of organic compounds which chemically react with calcium hydroxide, a byproduct of the cement hydration reaction, present in the concrete surface pores. The reaction products formed are amorphous gels which, in conjunction with other special organic compounds in SILCOSEAL SELECT, effectively seal concrete casting slab surface pores to prevent sticking - allowing wall panels to lift easily. Moisture entry or exit through the casting slab surface is further restricted by the addition of a special additive in SILCOSEAL SELECT designed to minimize wall panel surface defects resulting from the "Osmotic Effect". When applied as a cure, SILCOSEAL SELECT is very effective at restricting water loss during curing, meeting the moisture retention requirements of ASTM C309 when applied to a steel troweled surface in accordance with CEN/TS 14754.



SILCOSEAL® SELECT

### SILCOSEAL® 2000F

#### • Water Based

**Second Generation, Chemically Active Cure and Bondbreaker for Tilt-Up, Lift Slab and Precast Construction**

In contrast to most conventional cure and bondbreakers, SILCOSEAL 2000F 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 2000F consists of a special formulation of organic compounds in a predominately water based solvent system which chemically react with calcium hydroxide, a byproduct of the cement hydration reaction, present in concrete surface pores. The reaction products formed are amorphous gels which, in conjunction with other special organic compounds in SILCOSEAL 2000F, effectively seal concrete casting slab surface pores to prevent sticking - allowing wall panels to lift easily. Moisture entry or exit through the casting slab surface is further restricted by the addition of a special additive in SILCOSEAL 2000F designed to minimize wall panel surface defects resulting from the "Osmotic Effect". When applied as a cure, SILCOSEAL 2000F is very effective at restricting water loss during curing, meeting the moisture retention requirements of ASTM C309 when applied to a steel troweled surface in accordance with CEN/TS 14754.



SILCOSEAL® 2000F



# BONDBREAKERS

## SILCOSEAL® ADVANTAGE

### • Water Based

#### **Chemically Active Cure and Bondbreaker for Tilt-Up, Lift Slab and Precast Construction**

Economical water based cure and bondbreaker that is value engineered to a high level of performance at a very reasonable price. SILCOSEAL ADVANTAGE chemically reacts, like all SILCOSEAL bondbreakers, with byproducts of the cement hydration process to create amorphous gels that prevent sticking and allow panels to lift easily. Wall panel surfaces appear uniformly white without the traditional yellow bondbreaker discoloration. While SILCOSEAL ADVANTAGE does not have the improved emulsion stability and protection from the "Osmotic Effect" like other versions of SILCOSEAL, its performance is still much better than most conventional tilt-up bondbreakers. When applied as a cure, SILCOSEAL ADVANTAGE is very effective at restricting water loss during curing, meeting the moisture retention requirements of ASTM C309 when applied to a steel troweled surface in accordance with CEN/TS 14754.

## SILCOSEAL® CLASSIC

### • Solvent Based

#### **Chemically Active Cure and Bondbreaker for Tilt-Up, Lift Slab and Precast Construction**

Economical solvent based cure and bondbreaker that is value engineered to a high level of performance at a very reasonable price. In contrast to most conventional solvent based cure and bondbreakers, SILCOSEAL CLASSIC does not contain any wax or hydrocarbon resins, and as a result, does not depend on a physical barrier deposited on top of casting slab to prevent bonding. Instead, SILCOSEAL CLASSIC chemically reacts, like all SILCOSEAL bondbreakers, with byproducts of the cement hydration process to create amorphous gels that prevent sticking and allow panels to lift easily. Wall panel surfaces appear uniformly white without the traditional yellow bondbreaker discoloration. When applied as a cure, SILCOSEAL CLASSIC is very effective at restricting water loss during the curing process, meeting the moisture retention requirements of ASTM C309 when applied to a steel troweled surface in accordance with the CEN/TS 14754.



SILCOSEAL® CLASSIC



**Ideal for use in cold and /or damp environments**



SILCOSEAL® EX

## SILCOSEAL® EX

### • Solvent Based

#### **New Generation, Fast-Drying, Low VOC, Chemically Active Cure and Bondbreaker for Tilt-Up and Lift Slab Construction**

SILCOSEAL EX is a new generation, tilt-up cure and bondbreaker composed of fast drying, low VOC and exempt solvents for use in low VOC markets where, due to extreme weather conditions, water-based bondbreakers cannot be used. SILCOSEAL EX is ideal for use in cold and /or damp environments and dries quickly to minimize slipperiness making floor/casting slab surfaces safer to work on. In contrast to most conventional cure and bondbreakers, SILCOSEAL EX 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 EX is formulated with organic compounds that react chemically with byproducts from the cement hydration process to create amorphous gels that prevent concrete sticking and allow wall panels to lift easily and completely without the need for pry bars or wedges commonly used with conventional bondbreakers. SILCOSEAL EX can be stored in freezing conditions and can be sprayed at temperatures down to 20 deg F (-7 deg C). When applied as a cure, SILCOSEAL EX is very effective at restricting water loss during the curing process, meeting the moisture retention requirements of ASTM C309 when applied to a steel troweled surface in accordance with CEN/TS 14754.

## BRICK RELEASE

### • Water Based

#### **Protective Treatment for Thin Brick**

A superior, cost-effective alternative to using traditional wax coated clay-fired brick on tilt-up wall panel applications. BRICK RELEASE protects the face of thin bricks from concrete slurry staining. It is very easy to apply and does not require the use of hot water to remove.



## LIQUID FLOOR HARDENERS / DENSIFIERS

### DURO-NOX®

#### • Water Based

**Maximum Performance, Traditional Silicate Type Liquid Floor Hardener, Sealer and Densifier**

Original, high performance formulation hardens, seals, densifies and dustproofs new and existing concrete floors. Increases abrasion, impact and wear resistance. Develops a lustrous, marble-like sheen that continues to improve through regular use. The application of DURO-NOX results in the formation of calcium silicate hydrate gels that become a permanent part of the floor. Abrasion resistance is increased by up to 400% and surface hardness by up to 12%. A 20-year performance warranty is available on qualified projects.



### DURO-NOX® LS

#### • Water Based

**Maximum Performance, Lithium Silicate Type Liquid Floor Hardener, Sealer and Densifier**

High performance formulation hardens, seals, densifies and dustproofs new and existing concrete floors. Increases abrasion, impact and wear resistance. Does not require the costly and environmentally-damaging high pH rinse removal step necessary with application of traditional silicate type liquid floor hardeners. Develops a lustrous, marble-like sheen that continues to improve through regular use. Increases the surface abrasion resistance over 500%. A 20-year performance warranty is available on qualified projects.



### DURO-NOX® HS

#### • Water Based

**Maximum Performance, Lithium & Potassium Blended Hybrid Silicate Type, Floor Hardener, Sealer & Dustproof**

DURO-NOX HS, offers all the advantages of the original DURO-NOX, but with a next generation hybrid silicate formulation that eliminates the costly and environmentally damaging rinse removal step required with traditional sodium silicate type liquid floor hardeners. When DURO-NOX HS chemically reacts with free limes present in concrete, calcium silicate hydrate gels are formed and become a permanent part of the floor. Treated floors have increased hardness and abrasion resistance. Additionally, floors treated with DURO-NOX HS exhibit an attractive sheen that increases over time through routine maintenance and use. Increases the surface abrasion resistance over 800%. A 20-year performance warranty is available on qualified projects.



### DURO-NOX® LSC

#### • Water Based

**Standard Performance, Lithium Silicate Type Liquid Floor Hardener, Sealer and Densifier**

Less reactive, lower solids formulation economically hardens, seals, densifies and dustproofs new and existing concrete floors. Increases abrasion, impact and wear resistance. Does not require the costly and environmentally-damaging high pH rinse removal step necessary with application of traditional silicate type liquid floor hardeners. Particularly well-suited for use on colored, dyed or stained concrete without causing white surface discoloration. Develops a lustrous, marble-like sheen that continues to improve through regular use. Increases the surface abrasion resistance over 300%.



### DURO-NOX® HSC

#### • Water Based

**Standard Performance, Lithium & Potassium, Blended Hybrid Silicate Type Liquid Floor Hardener, Sealer & Densifier**

DURO-NOX HSC is a less reactive, lower solids formulation and one of the more economical ways to densify concrete floors, DURO-NOX HSC offers all the advantages of DURO-NOX, but with a hybrid silicate formulation that eliminates the costly and environmentally damaging high pH rinse removal step required with traditional sodium silicate type floor hardeners. Particularly well-suited for use on colored, dyed or stained concrete without causing white surface discoloration. Develops a lustrous, marble-like sheen that continues to improve through regular use. Increases the surface abrasion resistance over 500%.



## CURES & SEALS

### CURE & SEAL 1200E

- Water Based

#### **High Performance, Methyl Methacrylate Acrylic Concrete Curing and Sealing Compound**

Applied to freshly placed and finished concrete surfaces, CURE & SEAL 1200E creates a vapor seal that minimizes moisture loss through evaporation and allows concrete to develop maximum strength, density and surface hardness. Successive seal coats can be applied to create a non-yellowing, high gloss, abrasion and chemical resistant surface coating. Meets the moisture retention requirements of ASTM C309.



### RES-CURE DS

- Water Based

#### **Dissipating, Styrene Resin Type Curing Compound**

Applied to freshly placed and finished concrete surfaces, RES-CURE DS quickly forms a moisture vapor-resistant membrane, preventing rapid evaporation of concrete mixing water necessary for proper concrete cure and strength development. RES-CURE DS begins to dissipate immediately following application with exposure to sunlight and alkalinity from the concrete, and typically becomes fully dissipated in 90 days, or less. Meets the moisture requirements of ASTM C309.



## EVAPORATION REDUCER

### MONOFILM

- Water Based

#### **Surface Moisture Evaporation Reducer for Concrete**

MONOFILM contains a high molecular weight alcohol that when applied to fresh concrete slabs forms a monomolecular film on the surface that effectively reduces surface bleed water evaporation up to 80% to reduce wind crusting and to minimize the formation of plastic shrinkage cracks.



MONOFILM

## CONCRETE FLOOR STRIPPER

### BIO-CLEAN PLUS

- Water Based

#### **Concentrated, Biodegradable, Citrus Based Concrete Floor Stripper**

BIO-CLEAN PLUS is a powerful, water-dilutable, citrus based, concrete floor stripper that deeply penetrates concrete floor surfaces to safely and effectively remove curing compounds residue, tilt-up bondbreaker residue, rustication adhesives, black tire marks, oil and grease, paints and most other construction contamination. BIO-CLEAN PLUS can be used in auto-scrub machines and is 100% biodegradable.



BIO-CLEAN PLUS



## EXTERIOR STAIN



### NOX-CARB

#### • Solvent Based

#### **Acrylic and Silane Sealer and Stain for Exterior Vertical Concrete**

Penetrating, breathable, water repellent sealer/stain offers maximum protection for exterior vertical concrete surfaces. Formulated with a low molecular weight, 100% methyl methacrylate acrylic resin and a patented silane for enduring color and outstanding water repellency. Will not fade, flake or peel. Available in two textured versions (50 and 100 mesh) and in 10 standard colors and unlimited custom colors. 10-year warranty performance warranty available on qualified projects.

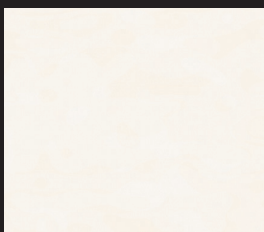


NOX-CARB

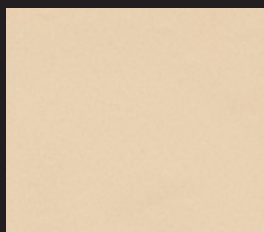
### ADVANTAGES OF NOX-CARB

- Vibrant color is U.V. resistant and will not fade, chalk or peel
- Provides enhanced resistance to water absorption and prevents freeze/thaw damage
- Sealed surfaces become self-cleaning with rain
- Allows treated substrate surfaces to breathe
- Penetrates into capillaries and micro-pores and chemically reacts to form a weather-proof, protective barrier

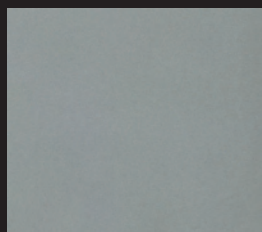
### STANDARD COLORS AVAILABLE



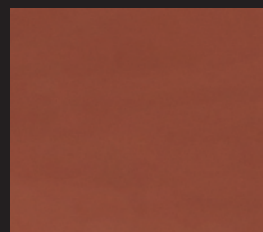
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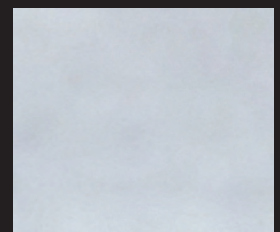
BUFF



CONCRETE GRAY



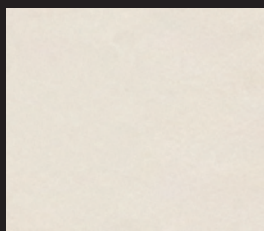
IRON RED



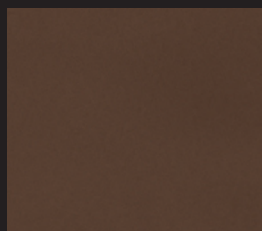
LIGHT SKY GRAY



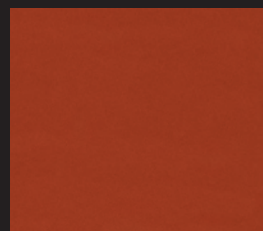
MEDIUM CARDSTOCK BROWN



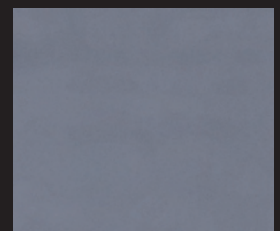
MISSION WHITE



MOCHA



BURNT RED



RIVERSIDE MEDIUM GRAY



## ATTACHMENT EMBEDS

### TIGERLOC™

#### Structural, High-Strength Window and Door Attachment Embed for Concrete Wall Panels



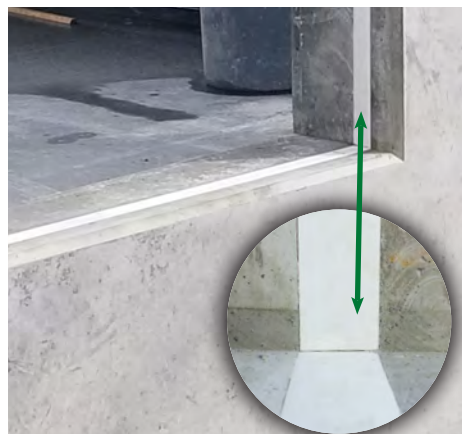
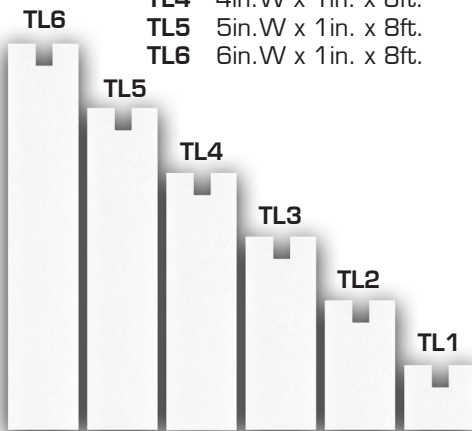
TIGERLOC replaces dimensional lumber as a window and door embed and will not twist, warp or rot. TIGERLOC'S patented structural design allows concrete to flow into the edge groove for a secure hold. Window and door frames are quickly and firmly attached using conventional attachment methods without creating hazardous silica dust resulting from drilling into concrete. TIGERLOC is sound and vibration absorbent and has a low thermal conductivity and a high insulating value making it ideal for use as a thermal block to ensure energy code compliance in insulated concrete sandwich wall panel applications. Also, provides separation of concrete wythes to eliminate cracking associated with differences in thermal movement.



TIGERLOC™

#### AVAILABLE DIMENSIONS

- TL1 1in.W x 1in. x 8ft.
- TL2 2in.W x 1in. x 8ft.
- TL3 3in.W x 1in. x 8ft.
- TL4 4in.W x 1in. x 8ft.
- TL5 5in.W x 1in. x 8ft.
- TL6 6in.W x 1in. x 8ft.



TIGERLOC SECURED INTO THE CONCRETE PANEL



DOOR & WINDOW FRAMES FASTEN SECURELY ONTO TIGERLOC

## STACK CAST FORMWORK SYSTEM

### PANELWARE™

#### Tilt-Up Stack Cast Formwork System



The PANELWARE FORMWORK SYSTEM™ is an innovative and sustainable tilt-up formwork system for stack casting panels. PANELWARE enables contractors to simply and easily form and pour multiple tilt-up panels on-site with reusable components and minimal waste. PANELWARE also allows panels to be formed with a higher degree of accuracy with a substantially lower cost when compared to traditional tilt-up forming methods.



PANELWARE™

## EDGE FORM BRACKET

### SELECT FORM BRACKET™

#### **Reusable, Stackable Edge Form Bracket**

The newly designed Nox-Crete Select Form Bracket is a heavy-duty reusable edge form bracket designed to be stackable while not in use. Select Form Brackets can be glued with Nox-Crete's Nox-Grip® adhesive or comparable product with consistent results, which is certainly not the case with dry versus wet lumber. The brackets can also be mechanically fastened using the four preformed holes on each leg of the bracket. The total contact surface area for gluing/fastening is essentially identical to 2 x 4 lumber. The versatile design allows for the use of the 7" leg on 7" to 9" edge forms and the 9" leg on 9" - 13" edge forms. Maximum center-to-center spacing with 2 x lumber edge forms is 36".



SELECT FORM BRACKET™

## TEMPORARY JOINT FILLER

### JOINT-SHIELD®

#### **Temporary Joint Filler for Concrete Slabs**

PVC, co-extruded, pre-molded temporary joint filler that effectively covers and seals saw cut joints in casting/floor slabs. JOINT-SHIELD has flexible wings that eliminates concrete seepage into saw cut joints which can result in wall panel surface defects. Eliminates concrete wall panel fins and costly grinding. JOINT-SHIELD, is available in 8 ft. lengths installs quickly and is reusable. Shallow wall panel voids are quickly and easily patched with traditional patching materials such as PANEL PATCH.



JOINT-SHIELD®

## PATCHING MATERIAL

### PANEL PATCH

#### **Fast Drying, Smooth Textured, Non-Grit Containing, Portland Cement Based, Polymer Modified, Concrete Resurfacing and Finishing Compound**

Easy to apply concrete resurfacing and finishing compound has a smooth, creamy consistency that is grit-free and can be featheredged (like drywall compound) for smooth transitions. Dries fast - in as little as 15 minutes. Ideal for repair of minor surface defects such as chips, gouges, pin-holes, grinding marks and all other minor surface defects on tilt-up wall panels.



PANEL PATCH



## APPLICATION EQUIPMENT

### PERFECT POWER SPRAYER

#### **Battery-Driven Power Sprayer**

The most advanced, battery-driven power sprayer currently available. Specifically designed for spraying Nox-Crete curing compounds, tilt-up bondbreakers, floor sealers and liquid floor hardener/densifiers.

#### **FEATURES:**

- **Powered by DeWalt® 20 Volt or 20/60 FLEXVOLT® lithium-ion batteries**
- Chemically resistant, self priming gear pump with enclosed housing for maximum durability and performance
- On-board computer maintains pressure and volume for consistent application rates and automatically adjusts for viscosity variations
- Chemical-resistant gear pump with the ability to self-prime
- Automatic run-dry shut-off to prevent damage to pump
- Extreme solvent resistance to most organic, exempt and low VOC solvents
- Heavy-duty stainless spray gun and wand



### PERFECT CONCRETE SPRAYER

#### **Commercial-Grade Pressurized Sprayer**

Exclusively designed for use with Nox-Crete products, the PERFECT CONCRETE SPRAYER is perfectly designed for applying tilt-up bondbreakers, curing compounds, floor sealers, liquid floor hardener/densifiers and other construction chemicals. The success of your project often depends on applying these products correctly and the PERFECT CONCRETE SPRAYER will ensure that a successful result is achieved. Solvent resistance to most organic solvents to include Low VOC and exempt solvents. The sprayer has a 3.4 gal (12.8 L) capacity and two in-line filters that eliminate spray tip clogging. Use either the air fill inlet or the hand pump to pressurize PERFECT CONCRETE SPRAYER up to 116 psi (8.0 Bar). A backpack-style carrying strap makes for easy transportation. Various models available depending upon use requirements.

## HISTORY



**CARL LINN IN THE LABORATORY**

### THE CONCRETE CHALLENGE

In 1956, while working for a lubricant company, chemist Carl Linn observed contractors using the company's oil and grease compounds to prevent concrete from bonding to forms. Not only were the compounds difficult to work with, but the concrete was discolored and unpaintable. Forms failed after just a few pours. Concrete workers struggled with these issues for years, but Linn had an idea.

### OUR CHEMICAL SOLUTIONS

After developing the world's first chemically active concrete form release agent, the company then set its sights on tilt-up and went on to develop the world's first chemically active water-based bondbreaker for tilt-up, lift slab and precast construction. Although initially met with some reluctance to switch over from the traditional petroleum-based, barrier type bondbreakers, it wasn't long before the new water-based, chemically active SILCOSEAL bondbreaker was the top selling bondbreaker in the world.

With SILCOSEAL 2000F and SILCOSEAL SELECT, concrete tilt wall panels come up bright white colored, with minimal surface defects and free of all bondbreaker residue. And so, Nox-Crete's passion for solving concrete professionals' challenges was born.



**NOX-CRETE BONDBREAKER USED ON CIRCA 1964 TILT-UP PROJECT**

### STILL INNOVATING WORLDWIDE

Today, Nox-Crete continues to manufacture chemical solutions to concrete problems. With over 100 unique and innovative products spanning 11 different market segments sold through a worldwide network of distributors and dealers, Nox-Crete has emerged as a recognized leader in the industry.

Following Carl Linn's example, we continue to rely on concrete contractors for new product ideas. Our chemists and engineers work closely with contractors to identify field problems and then develop product solutions in our laboratory.

This passion for innovation is found in the quality and performance of all Nox-Crete products.

### CONCRETE MARKETS WE SERVE

- Application Equipment
- Curing
- Decorative
- Equipment Maintenance
- Flooring
- Forming
- Grouts and Repair Mortars
- Plywood form OEM
- Precast
- Tilt-Up
- Waterproofing

