



# STIFEL HC

Single component, water based, maximum performance silane sealer for horizontal concrete.

## HOW IT WORKS

STIFEL HC chemically reacts with siliceous materials found in concrete and masonry to form a hydrophobic barrier, preventing the absorption of water and waterborne chloride ions. The small molecular structure of a silane molecule allows it to move through concrete pores and penetrate deeply, up to 1/2" inch or more. Protection is provided long after surface coatings and other "penetrating type" sealers have succumbed to abrasion or oxidation.

## APPLICATIONS

- ◆ Use on exterior or interior horizontal trafficable or structural concrete surfaces, such as bridges, parking decks, garages, ramps, traffic ways, cast-in-place concrete and precast concrete.
- ◆ Use on new or existing substrates.
- ◆ Use in applications where conventional silanes containing hydrocarbon solvent carriers cannot safely be used.

## ADVANTAGES

- ◆ Unique silane chemistry does not evaporate under site application conditions, allowing for deep penetration (up to 1/2 inch) with consistent protection regardless of substrate or application conditions, such as warm or windy weather. Conventional silane sealers contain highly volatile silanes that evaporate during application, requiring a higher solids content to compensate for product lost through evaporation. ***The unique silane in STIFEL HC goes into the concrete, not into the atmosphere.***
- ◆ Protects treated surfaces from damage resulting from the absorption of water and chloride ion-containing deicing salts.
- ◆ Minimizes concrete freeze/thaw related surface scaling and the corrosion of imbedded reinforcing steel and precast anchors.
- ◆ Protects treated concrete from developing delaminations and spalls resulting from corrosion of imbedded reinforcing steel.
- ◆ Treated surfaces breathe naturally. Water entering from the unprotected side or via cracks does not become trapped and sweating from non-breathing barrier type sealants and coatings is minimized.
- ◆ Concrete skid resistance and texture are not altered.

- ◆ The adhesion bond strength of most sealants and top coats is actually improved with proper application of STIFEL HC.
- ◆ Substantially extends the serviceable life of concrete structures and significantly reduces maintenance costs.
- ◆ Safe and easy to use - single component, water based formulation is very low odor and has a high flash point (>200° F/100° C).
- ◆ Can be applied to concrete surfaces containing cured polyurethane, polysulfide or silicone traffic joint sealants without affecting joint sealant performance.
- ◆ Green Engineered™ – better for health and the environment.
- ◆ Meets all federal and state VOC requirements and NCHRP 244.

## PRECAUTIONS

- ◆ Certain extremely porous substrates may require an alternative STIFEL sealer to provide maximum performance. Contact NOX-CRETE for more information.
- ◆ Not recommended for use on vertical surfaces. STIFEL VC is recommended for these applications.
- ◆ Do not apply to concrete less than 28 days old.
- ◆ Do not apply to frost covered or permeated surfaces.
- ◆ Application to inadequately cleaned or wet substrates could result in less than optimum performance and blotchy or discolored appearance.
- ◆ Substrates with highly variable porosities may have color variations after treatment due to the varying and irregular absorption of STIFEL HC.
- ◆ Do not apply to or contact with bituminous or other organic solvent soluble joint sealants, membranes, coatings, or toppings or to incompletely cured joint sealants of any composition.
- ◆ Do not apply to glass or glazed tile. In case of accidental contact, remove immediately with soap and water.
- ◆ Do not apply to decorative surfaces without a test application to determine treated surface appearance acceptability.
- ◆ Product may damage vegetation or painted surfaces with contact.

STIFEL HC

7 dampproofing sealers/water repellents



chemical solutions to concrete problems

- ◆ May not be compatible with certain paints, caulks, sealants or coatings.
- ◆ 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 which 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.

## USE INSTRUCTIONS

- ◆ Request current (verify) product literature, labels and material safety data sheets from manufacturer in writing and read thoroughly before product use.
- ◆ Site environmental conditions, substrate conditions, and construction can have a major affect 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 product and quantities purchased can be satisfactorily applied and will achieve desired appearance and performance under intended use conditions.
- ◆ Substrate should be a minimum of 28 days old and free from accumulations of dust, oil, grease, rubber tire residue, concrete curing or bondbreaking membrane or residue, paint, protective sealers or other foreign materials.
- ◆ For old concrete surfaces previously exposed to vehicular traffic, dustless abrasive shotblasting, sandblasting or high pressure (3000 psi min.) water blasting is recommended to remove surface contaminants and open substrate for maximum sealer penetration.
- ◆ Allow cleaned surfaces to dry for 48 hours or more.
- ◆ Mix container contents thoroughly immediately prior to use. Pails can be shaken. Use NOX-CRETE'S manual drum agitator for 55 gal. (208 l) containers.
- ◆ Typical application rate on most concrete substrates is saturation to surface rejection or approximately 125 sf/gal (3.1 sm/l), whichever occurs first. The typical range for porous concrete is from 100 sf/gal (2.5 sm/l) and 175 sf/gal (4.3 sm/l) on dense, non-absorbent substrates.
- ◆ Apply using a low pressure, high volume sprayer or hand pump, air pressure-type construction sprayer. Large horizontal areas may also be applied with push brooms.
- ◆ Applied product will flow to low areas or openings. Openings in the substrate, such as sewer or storm drain inlets, should be plugged to prevent accidental entry or escape of material.

- ◆ Using a broom, redistribute accumulated material from depressions or puddles to insure maximum penetration. Do not allow material to persist or puddle on recently caulked or sealed joints.
- ◆ Clean application equipment promptly with soap and water.
- ◆ Treated surfaces should be swept clean and washed down at least quarterly. Areas subject to wheel traffic or other wear should be retreated when wear approaches product penetration depth.

## TECHNICAL DATA

Color .....	Milky White
Odor .....	Mild
Bulk Density .....	8.3 lbs./gal. (992 g/l)
Freeze Point .....	32° F (0° C)
Flash Point, ASTM D92 .....	> 212° F (100° C)
VP .....	<18 mmHg @20° C
VOC .....	<280 g/l
	<u>NCHRP 244</u>
Reduction In Water Absorption .....	84% effective
Reduction In Chloride Ion Absorption .....	90% effective

## PACKAGING

Product is packaged in 5.28 gal (20 l) bag-in-a-box and 55 gal (208 l) drums.

## SHELF LIFE

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

## HANDLING/STORAGE

Store in a dry location within a temperature range between 40° F (4° C) and 100° F (38° C).

## AVAILABILITY & TECHNICAL SERVICES

In addition to corporate offices in Omaha, Nebraska, NOX-CRETE Products Group maintains regional offices and distribution centers in principal markets throughout the world. For source or technical information, phone (800) 669-2738 or (402) 341-1976.

## 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 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.