DURO-NOX HS

Maximum performance, chemically reactive, water based, lithium and potassium blended hybrid silicate, liquid floor hardener, densifier and sealer. Component of the **DURO-FLOOR CLASSIC SYSTEM.**

GREEN™ ENGINEERED

DURO-FLOOR CLASSIC SYSTEM FOR CONCRETE FLOORS

Tilt-Up Partner Products

	USEPA	OTC	CARB-SCM	SCAQMD	LADCO	UT-R307	MCAQD	CANADA	CT, MD, DE, D.C.
Duro-Nox HS	■	■	■	■	■	■	■	■	■

HOW IT WORKS

DURO-NOX HS penetrates deep into concrete surface pores where it chemically reacts with calcium hydroxide (lime) to produce water insoluble calcium silicate hydrate gels that fill surface pores to densify, harden and seal treated concrete floor surfaces. The controlled reactivity and reduced sensitivity of DURO-NOX HS to reactions with air make it an excellent choice for application to concrete floors where traditional lithium silicate based products are deemed unacceptable.

APPLICATIONS

- Use to seal, harden and densify all new or existing (less than 3 years old) interior concrete floor surfaces.
- Ideal for use in warehouses, distribution centers, retail stores, restaurants, indoor malls, office complexes, food processing plants, dairies, breweries, food lockers, slaughtering plants, animal pens and bottling plants.
- Use in the diamond grinding/polishing process to restore, densify, harden and seal older interior concrete floors.
- Excellent for use to protect, seal and improve the appearance of concrete countertops.

ADVANTAGES

- Up to 850% increase in abrasion resistance and surface hardness.
- Does not require rinsing or flushing with water following product application — eliminates the costly disposal of hazardous (alkaline) rinse water.
- Increases the impact and wear resistance of concrete floors where high volumes of pedestrian and/or forklift traffic are expected.
- Provides permanent protection to the depth of penetration.
- Reduces the porosity of concrete surfaces to improve the chemical and stain resistance to most organic acids, alkalis, deicing salts, foods, fats, oils and grease.
- Densifies, strengthens, seals and dustproofs soft or dusty concrete floors.
- Improves the adhesion of subsequently applied line stripes, paints and coatings to soft or weak concrete surfaces.
- Overall performance and life far surpasses that of conventional membrane forming acrylic cure and seal type products.
- Breathable and does not contribute to floor sweating.
- Complies with USDA requirements for incidental food contact.
- Increases floor surface light reflectivity, thereby increasing overall interior brightness.
- Surface gloss appearance continues to increase through regular use and with cleaning.
- Because of the chemical reaction when applied to concrete, DURO-NOX HS treated surfaces will never peel or flake.
- Green Engineered™ – better for health and the environment.
- Meets all federal and state VOC requirements.

⚠ PRECAUTIONS ⚠

- Do not use on latex or epoxy polymer modified concrete.
- Do not use on concrete previously treated with wax or resin-containing cures, sealers or bondbreaker compounds. These products must be removed by chemical or mechanical means as they interfere with the penetrating properties of DURO-NOX HS.
- Protect from freezing. Allowing product to freeze can cause the container to rupture as well as separation of the active components, resulting in poor product performance. 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.
- Apply at substrate temperatures above 40° F (4° C) and below 100° F (38° C).
- Do not apply in direct sunlight. Best results are obtained when DURO-NOX HS is applied in the shade or at oblique sun angles (morning or early evening).
- Avoid contact with glass, aluminum and steel. If exposure occurs, immediately flush with water. Failure to do so may result in permanent surface discoloration.
- Not for use on colored concrete. Application to colored concrete may result in a blotchy white appearance that could be considered objectionable.
- Application over acid stained concrete requires the surface to be neutralized, thoroughly rinsed, and allowed to adequately dry prior to application of DURO-NOX HS.
- Application of DURO-NOX HS to water saturated concrete floor surfaces or during periods of high humidity may prolong the dry time making the surface more susceptible to whiting discoloration.
- Not recommended for application to concrete floor surfaces that are over three years old unless the floor surface is diamond ground to remove carbonation and expose unreacted lime.
- Some form of surface preparation is generally required prior to top coating DURO-NOX HS treated floor surfaces with a subsequently applied paint, coating or adhesive. For specific surface preparation procedure recommendations see ICRI guideline No. 03732.
- Over application or following incorrect product application procedures may result in an unacceptable concrete surface appearance. To avoid a potential problem, perform a test sample application following proper application procedures prior to beginning work.

- Not recommended for application to fresh concrete.
- Not recommended for application to tilt-up casting/floor slabs prior to application of SILCOSEAL bondbreakers. Best results are obtained when DURO-NOX HS is applied to the floor surface after all tilt wall panels have been raised.

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 concrete mix design 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 production 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.
- Best results are obtained when several representative test samples of DURO-NOX HS are applied at different application rates to the floor to be treated and evaluated for dry time and appearance. Under most conditions, the best results are achieved when DURO-NOX HS becomes dry to the touch within 15-20 minutes following product application. Longer dry times indicate over application which may result in surface discoloration. Shorter dry times indicate under application which may result in reduced product performance.
- Variations in concrete mix designs, placing and finishing procedures and weather conditions make it impossible to prescribe specific application rates that are inclusive of all site variables. The typical application rate for a burnished, steel power trowelled concrete floor surface is 700-800 sf / gal (17-20 sm / L). More porous surfaces will generally require a heavier application rate, while less porous surfaces will generally require a lighter application rate.
- Surfaces to be treated must be clean and free from dirt, dust, paint, residual wax or resin curing compounds, bondbreaker, sealers and standing water. For existing concrete floors, it is recommended to clean with Nox-Crete's biodegradable floor stripper, BIO-CLEAN PLUS, and an auto-scrubbing machine equipped with stiff nylon bristles. A dilution rate of 1 part BIO-CLEAN PLUS to 5 parts water is generally sufficient.
- Temperatures during application should be above 40° F (4° C) and no more than 100° F (38° C). To minimize rapid drying in warm weather conditions, best results are obtained if applications occur in the shade or at low sun angles.
- For large areas, apply product with an airless sprayer evenly to floor surface. Care should be given to avoid walking, driving or dragging equipment across freshly treated surfaces. Footprints, tire tracks, puddles, runs or other surface film imperfections should be immediately spread smooth with a micro-fiber applicator pad. Do not allow product to dry before spreading.
- For smaller areas, apply using a low pressure hand pump sprayer and immediately spread uniformly with a micro-fiber applicator. Do not allow product to dry prior to spreading.
- It is not necessary to work DURO-NOX HS into the floor surface with a scrubbing machine after application. However, it is essential that the product be applied evenly and uniformly to achieve maximum performance and appearance.
- Once DURO-NOX HS begins to chemically react with the concrete, it starts to thicken. Avoid disturbing the wet film once it reaches this stage. Damage to the wet film while it is thickening may result in surface imperfections.
- Once DURO-NOX HS has dried, any remaining dried powder residue can be removed with a stiff bristle broom or floor scrubbing machine.
- To improve the gloss, DURO-NOX HS can be burnished with a high-speed (2,000 rpm) burnisher using diamond impregnated or natural hog hair burnishing pads.
- For additional gloss, reduced slipperiness and stain protection apply a finish coat of Duro-Polish or Duro-Polish Plus.

TECHNICAL DATA

Color	Colorless
Clarity	Clear
Odor	None
Freeze Point	32° F (0° C)
Flammability	Nonflammable
VOC	0 g / L

Complies with USDA requirements for incidental food contact.

TEST DATA

ASTM D4060 Standard Test Method for Abrasion Resistance

	Percent improvement after 100 revolutions compared to an untreated control.*
Duro-Nox HS	>850%

*** Concrete samples were treated at 21 days and tested at 28 days.**

PACKAGING

Packaged in 5 gallon and 20 liter pails, 55 gallon and 200 liter drums, 275 gallon and 1,000 liter totes.

SHELF LIFE

Shelf life is two years. 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, 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.

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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.

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