# STALDEC SLF

High build, self-leveling, polyurethane concrete floor topping/coating.



## PRODUCT NAME

**STALDEC SLF**

*High build, self leveling, solvent free, polyurethane floor topping/coating for interior applications.*

## MANUFACTURER

NOX-CRETE, INC.
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## PRODUCT DESCRIPTION

Reactive, rapid curing, self leveling, non-shrinking, solvent free, two component urethane floor topping or resurfacing system for interior applications. Provides dense non absorptive, highly abrasion resistant surfaces with good solvent and chemical resistance. For roller or squeegee application. Available in pigmented and anti-skid versions. Can be top coated with STALDEC LSX or LVI for improved ultraviolet, chemical, and solvent resistance where necessary. Meets California Clean Air Act Rule 1113 requirements for volatile organic content (VOC) and vapor pressure.

## BASIC USE

STALDEC SLF fills concrete surface depressions and voids, developing smooth glossy floor coverings that beautify concrete surfaces, improve lighting conditions, prevent dusting, and provide superior chemical, solvent and abrasion resistance. STALDEC SLF rejuvenates old, rough, deteriorated concrete to better than new condition in terms of appearance, performance capability and expected life.

For use where 100% solids non-cementitious, non-shrinking topping/coating compounds are required for resurfacing or reprofiling floors. For use where solvent vapors and related environmental or health problems cannot be permitted.

For use on deteriorated, damaged, or rough concrete or other floor surfaces, both new and old, to provide level (super-flat) elevations, and clean, smooth, floor surfaces.

For use on old uneven concrete floors to provide a smooth surface without replacing underlying concrete.

For use where supporting superstructure will not support weight of cementitious type toppings.

For use where absorptive nature and/or poor chemical resistance of cementitious type self leveling floor toppings cannot be tolerated.

For use where construction schedules do not permit time for curing and strength development of cementitious type floor toppings or existing floor removal and replacement.

For use where concrete surface appearance and ease of cleaning is desired and/or where budget does not permit use of tile or terrazzo.

For use in manufacturing, laboratory, and pharmaceutical facilities where high gloss and easy to clean surfaces are required to insure working environment is clean and sterile.

For use in manufacturing and maintenance facilities where concrete surfaces are subjected to periodic contact with moisture, acids, bases, foodstuffs, urine, oils, greases, etc., that destroy concrete. STALDEC SLF provides excellent resistance to most chemicals and promotes easy efficient spill removal and clean up.

Typical applications include manufacturing plants, warehouses, laboratories, pharmaceutical plants, food processing plants, meat packing plants, animal confinement buildings, vehicle showrooms, maintenance facilities, supermarkets, etc.

## ADVANTAGES

STALDEC SLF's chemical curing process results in rapid strength development. Toppings are typically set to touch within one hour and hard dry (for light foot traffic) in 24 hours @ 70° F (21° C) substrate temperatures. Normal traffic or use can usually be resumed in 72 hours.

STALDEC SLF's packaging and system design requires no water or bulk mixing devices that are characteristic of cementitious type self leveling flooring systems. STALDEC SLF'S simple mixing process is clean with no dust generation. Product is ideally suited for renovation work where existing building furnishings and/or equipment cannot be subjected to cementitious dust and/or mixing water.

STALDEC SLF is 100% non-shrinking so there are no unsightly surface cracks or crevices at wall or column junctures - problems characteristic of cementitious and solvent containing flooring systems.

STALDEC SLF provides a finished surface that does not require sealing to counteract excessive porosity. STALDEC SLF is pigmented and develops a glossy architectural finish. It does not require a coating for color or wear purposes as do cementitious systems.

STALDEC SLF's solvent free design eliminates solvent associated health, environmental, and fire hazards.

STALDEC SLF surfaces can be seeded with NOX-CRETE anti-skid aggregates for skid resistance in wet or oily environments or applications requiring an electrically conductive system.

STALDEC SLF's normally glossy surface can be flatted with transparent flatted STALDEC LVI, STALDEC LSX, or STALDEC emulsifiable equivalents.

## LIMITATIONS

For industrial use only.

Not for application to concrete cured with liquid membrane curing compounds unless such are completely removed by chemical or mechanical means prior to STALDEC SLF application.

Not for exterior applications without final top coating with pigmented STALDEC LSX.

Not for applications where moisture can contact the underside of coating or immersion.

STALDEC SLF may discolor slightly on exposure to ultra violet light and some chemical compounds. Use of STALDEC LVI as a final top coat over STALDEC SLF in such exposures will typically provide required resistance.

Use of STALDEC SLF in wet or oily environments may result in slippery floors. In such applications use NOX-CRETE's anti-skid aggregates in top seeded application. Contact KINSMAN'S NOX-CRETE PRODUCTS GROUP for specific recommendations in writing.

Seal swelling compounds used in some hydraulic fluids and/or plasticizers incorporated in some natural and synthetic rubbers, to include vehicle tires, may discolor STALDEC SLF on extended contact. Where potential for such contact exists, only dark pigmented versions should be used to minimize discoloration. Alternatively, wood, metal, or plastic barrier pads can be used under tires.

MAKE TEST APPLICATION TO DETERMINE SUITABILITY FOR PURPOSE INTENDED BEFORE PROCEEDING.

## PACKAGING

| Size | Container | Gross Wt. |
|---|---|---|
| 5.0 gal. (unmixed) kits | 1 gal. (3.8 L) steel can | 64 lbs./Kit |
| Yield ca 0.50 CF (14.2 L) | 5 gal. (19.0 L) plastic pail | 29 kg |

## COMPOSITION

Two component, 100% solids, urethane flooring system available in pigmented versions only. Anti-skid available for incorporation into systems where desirable.

## APPLICABLE STANDARDS

For use on ACI 302, 1R-80, Table 1.1, Class 1,2,3 and 4 concrete floors.

## TECHNICAL DATA

| | |
|---|---|
| Pot Life | 15-30 minutes at room temperature |
| Shelf life | 1 year |
| Mix Ratio | 3.6 to 1 |
| Yield per kit (approx.) | 0.5 CF (14.2 L) |
| Nonvolatiles (Solids) | 100% |
| Density Mixed | 11.9 lbs./gal. (1428 g/l) |
| Taber Abrasion | <0.010 g loss on CS 17/1 Kg |
| Shore Hardness D | 85 |
| Compressive Strength | 8530 psi typ 8500 |
| Flexural Strength | 5690 psi typ 5700 |
| VOC, ASTM D2369 | 0 g/l |

## CHEMICAL RESISTANCE

STALDEC SLF provides good resistance to a variety of chemicals, foodstuffs, solvents, lubricants, etc., to include dilute mineral acids, aromatic, aliphatic and many oxygenated solvents, fertilizers, urine, feces, deicing salts, hydraulic fluids, etc. Contact KINSMAN'S NOX-CRETE PRODUCTS GROUP for recommendations regarding specific chemical environments.

STALDEC SLF is not recommended for contact with glacial acetic acid, concentrated lactic acid, concentrated mineral acids and chlorinated solvents.

Make test application to determine suitable resistance to anticipated use conditions.

## COVERAGE RATES

STALDEC SLF is designed for application in films ranging from 0.25mm (10 mils) to 15mm (600 mils) as required. A single application is typically all that is required. STALDEC LSX or LVI may be applied as a topcoat to improve chemical resistance and color stability.

## DRYING TIME

At 70° F (21° C), STALDEC SLF is typically set to touch and dust free in 1 hour. Light foot traffic can generally be resumed in 24 hours. Heavy traffic should be avoided for 72 hours to allow sufficient abrasion and chemical resistance to develop. Higher temperatures reduce curing time.

## INSTALLATION

## IMPORTANT

Site environmental and substrate conditions and construction have a major effect on product selection, application methods, procedures and rates, appearance, and performance. While product literature provides general information applicable to some conditions 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.

## PREPARATION

Concrete surface to be treated must be absolutely dry, a minimum of 28 days old, and free from surface accumulation of dust, dirt, oil, debris, concrete cures, bondbreakers, rubber tire residue, paints, and other compounds which would prevent penetration and intimate contact between the concrete surface and the STALDEC SLF.

All surfaces require some preparation. While in some instances mechanical scarification is not necessary, excessively smooth dense (hard trowelled) surfaces may require deep acid etching prior to coating. (NOX-CRETE's K-CONCENTRATE is recommended).

Old floors should be mechanically cleaned to remove surface contaminants or coatings. Excessively oily or greasy floors may require degreasing and detergent scrubbing prior to mechanical cleaning.

Acid etch all surfaces following cleaning. Care should be exercised to promptly remove excess acid and reaction products completely from the floor prior to priming.

## PRIMING

Verify substrate temperatures are above 40° F (4° C) and that surfaces are dry by taping 6 SF (2 $m^2$) pieces of polyethylene film tightly to floor and observing absence of condensation on underside after 12 hours.

Apply NOX-CRETE's PRIME 40E at the rate of 400-600 SF/gal. (10-15 SM/L). Allow primer to become tack free before applying STALDEC SLF.

## TOPPING/COATING

STALDEC SLF is a high viscosity, two component, polyurethane system which requires thorough mixing to ensure proper development of physical properties.

Add entire contents of Component B (2 gallon pail) to Component A (5 gallon pail). Mix together for 3 minutes using a 1/2 inch electric drill and a 5 gallon pail Jiffy mixer. The use of a "hand stir" type mixer or "dry wall compound" type mixer attached to an electric drill is not recommended. Adequate mixing can only be ensured through the recommended mixing equipment.

Ensure that the sides and bottom of the container are thoroughly mixed. After 3 minutes, transfer the entire contents of the container to a second container and mix in the same fashion for 1 minute. Avoid mixing in manner that would incorporate air into coating system. After this procedure, the product should be completely mixed and an exothermic reaction begins to take place. To maximize the working time, it is essential that the product be immediately poured out onto the surface to be coated. Leaving mixed product in the mixing container for more than 5 minutes after mixing may result in the product being unusable. Product which is promptly removed from the mixing container will generally have a working time of 15-20 minutes.

Spread to proper depth with notched squeegee. Promptly follow squeegee with NOX-CRETE's short nap mohair roller, cross rolling in a direction 90° to that of squeegee direction to level coating. (Note: Do not over roll or over work material.) To remove entrapped air, promptly roll the freshly applied STALDEC SLF with NOX-CRETE'S spiked roller. If anti-skid aggregate is to be employed it should be seeded into freshly cross rolled material and the coating lightly re-rolled to work aggregate into coating to depth of approximately 75% of aggregate diameter.

Clean application equipment with NOX-CRETE's Solvent B or suitable aromatic hydrocarbon solvent. Discard all used rollers, and discard squeegees if they cannot be completely cleaned.

## POT LIFE

Pot life varies with temperature but approximates 15 to 30 minutes. Remove mixed material promptly from mixing pail and spread into shallow depths to prevent internal heating and extend workable time.

## SURFACE COATING

Where STALDEC SLF is to be topcoated with STALDEC LVI or LSX to provide additional chemical and/or ultra violet resistance, apply topcoat within 12 hours following STALDEC SLF application at rate of approximately 400-600 SF/gal. (10-15 SM/L).

## SHELF LIFE

One year from date of manufacture in original factory sealed containers. Use before expiration date stenciled on the container.

## STORAGE

Store in a dry, inside area away from excessive heat and open flame.

## MAINTENANCE

Regular sweeping and washing of STALDEC SLF treated surfaces is recommended. DO NOT use steam.

Worn or damaged areas may be retreated with adequate preparation. Obtain specific recommendations in writing from KINSMAN'S NOX-CRETE PRODUCTS GROUP prior to attempting recoating.

## TECHNICAL SERVICES

In addition to corporate offices in Omaha, Nebraska, Kinsman's Nox-Crete Products Group maintains regional offices and distribution centers in principal markets throughout the United States, Canada, and Europe. Phone 800-669-2738 or 402-341-1976 for supply source and technical information.

## AVAILABILITY

STALDEC SLF is available through Kinsman's Nox-Crete Products Group and it's distributors located in principal cities world wide. Contact Kinsman's Customer Service for source information.


***Kinsman's Nox-Crete Products Group***

***P.O. Box 8102***

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THIS REVISION SUPERSEDES ALL PREVIOUS VERSIONS 10/25/01