

K A U F M A N

PRODUCT
INFORMATION

KAUFMAN
PRODUCTS
INC.

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SureHard LS

Description

SureHard LS is a high quality lithium silicate solution designed to react with concrete and masonry to seal, densify and harden the surface. SureHard LS penetrates into the surface and chemically reacts to produce calcium silicate hydrate (CSH) within the pores, thus closing the small voids to penetration by foreign matter and making the surface denser and harder. Surfaces treated with SureHard LS are not only more abrasion resistant, but have increased resistance to many chemicals, and are easier to clean. Because SureHard LS penetrates into the surface and chemically reacts with it, the effects of the treatment will last many years, never flaking or peeling off. SureHard LS is water-based, so it is a very safe material that meets all environmental regulations from the EPA, LADCO, OTC, SCAQMD, and CARB.

Uses

SureHard LS is effective in making the concrete denser, harder and consequently dust proofed. It will reduce the penetration of oil and grease, and increase the acid resistance. Resistance to moisture penetration is greatly improved. SureHard LS also neutralizes the alkali in the concrete, thus increasing the bonding and life of future paints and adhesives.

SureHard LS is recommended for use on concrete surfaces - both inside and out. Typical recommended areas include industrial plants, warehouses, malls, food processing plants, breweries, textile mills, freezers, parking decks, etc. SureHard LS lasts longer than many coatings, and is ideal for use in conjunction with diamond polishing.

Specifications

Active Ingredients	Lithium Silicate
Color	Clear
Specific Gravity	1.1
pH	11
VOC Content	0 g/l
Flash Point	None
Yellowing	None
Freeze Point	32°F
Dry Time	1-2 hours

Coverage

Coverage is influenced by surface conditions and porosity as well as job requirements. The following rates are approximate, assuming average concrete, finish, temperature and other factors. The texture and the absorption of the surface will ultimately determine the coverage rate.

Fresh, Uncured, & Burnished Concrete	800-1,000 ft ² /gal
Existing, Steel-Trowelled Concrete	400-650 ft ² /gal.
Existing, Float-Finished Concrete	250-350 ft ² /gal.

Never dilute SureHard LS, as it should be used directly from the container and requires no dilution whatsoever. Mildly stir prior to use.

Application

New Concrete:

Concrete must be cured as per ASTM C-171 for wet or sheet curing, or with a quality curing compound that meets and exceeds all aspects of ASTM C-309 such as DR Cure by Kaufman Products. New concrete should be cured for a minimum of 7 days, and hopefully longer, prior to application of SureHard LS. If DR Cure, or any membrane-forming curing compound, is used, then it must be removed completely prior to the application of SureHard LS. Once the curing material (water, membrane-forming compound, poly, etc.) is removed, allow the slab to air dry for a minimum of 1 day prior to using SureHard LS, as insufficient drying of the slab will prevent proper penetration of SureHard LS, which will in turn minimize the effectiveness of the product.

Aged Concrete:

All surfaces to be treated must be clean, sound and free of foreign matter and laitance. Remove any membrane-curing compound. Apply a single application of SureHard LS to the surface by using a low pressure sprayer with a 0.5 gallon/minute spray tip. Make certain that the surface is uniformly wetted by SureHard LS, without producing puddles. While SureHard LS is still wet, the use of a lamb's wool applicator, soft bristle broom, or microfiber pad to evenly distribute the material is recommended. Once SureHard LS begins to dry, discontinue the use of these finishing/spreading tools. Make certain to keep SureHard LS wet for a minimum of 15-20 minutes. If excess material puddles and dries on the slab, a white residue will form, which may easily be removed with a stiff broom or floor scrubbing machine. Dry buffing or burnishing the floor with a polishing pad will assist with the development of a higher sheen.

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Concrete Cleaning

There are various ASTM methods for proper cleaning of concrete, which is vital when using a penetrating, liquid chemical-hardener such as SureHard LS. If SureHard LS is unable to penetrate into the slab, then the performance will be diminished. Ideally, the slab will be swept to remove any loose dirt or debris, then wetted and scrubbed with soap which will usually expose the true wearing surface, followed by scrubbing a second time with soapy water. Allow the floor to dry thoroughly for a minimum of 24 hours for better penetration. The degree of cleaning is to be determined by the contractors, however listed below are several general guidelines for proper surface cleaning.

ASTM D-4258	Practice for Surface Cleaning Concrete for Coating
ASTM D-4259	Practice for Abrading Concrete
ASTM D-4261	Practice for Surface Cleaning Concrete Unit Masonry for Coating
ASTM D-4262	Test Method for pH of Chemically Cleaned or Etched Concrete Surface
ASTM D-4263	Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.

Warning

If floor joints are to be filled after application of SureHard LS, then it is mandatory that they be cleaned properly, such as with a circular concrete saw or grinder with a wire wheel, prior to installation of a joint filler.

Notes

Protect metal, glass, wood, paint, aluminum and brick from contact with SureHard LS. If accidentally applied to these surfaces, wash with clean water immediately. Always test the adhesion of any tile or carpet adhesives to SureHard LS. SureHard LS should be dry for 7 days before attempting to apply adhesives over it. Allow SureHard LS to dry thoroughly for 4-6 hours at 70 degrees Fahrenheit, prior to exposure to foot traffic, rain, snow, or sleet. *Read Safety Data Sheet before using.*

Prevent SureHard LS from freezing in the original containers.

For fast track projects reduce the cure time at the discretion of the project engineer. Insufficient drying of the concrete will prevent full penetration of SureHard, thereby reducing the effectiveness of the material.

Technical Information

Test results were achieved under laboratory conditions. Statistical variations will occur based upon mixing methods, temperature & humidity, test methodology, site conditions, curing conditions, application methods, and equipment.

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