BASF
The Chemical Company

Distributed by: BEST MATERIALS LLC
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PRODUCT DATA

3 03 35 00 **Concrete Finishing**

KURE-N-HARDEN™

Hardening, sealing and dustproofing compound

Description

Kure-N-Harden™ is a water-soluble, inorganic, silicate-based curing, hardening, sealing and dustproofing compound. Use it for freshly placed and finished concrete and in renovation of aged concrete. It contains no VOCs.

Yield

150 – 200 ft²/gal (3.68 – 4.9 m²/L)

Coverage may vary with application method, surface conditions, and porosity.

Packaging

5 gallon (18.93 L) pails

55 gallon (208 L) drums

Color

Clear

Shelf Life

1 year when properly stored.

Storage

Store in unopened containers in cool, clean, dry area. Protect from freezing in the container; do not store below 35° F (2° C).

Features	Benefits
• Protects floors during construction	Cost efficient
• Easy application, quick drying	Saves on labor; minimizes downtime
• Water based	Has no VOCs; environmentally friendly; easy to clean up
• Aid for curing new concrete	Minimizes shrinkage cracking; improves strength development
• Concrete hardener	Withstands light to moderately heavy-duty traffic
• Improved abrasion resistance	Extends wearability

Where to Use

APPLICATION

- Concrete floors and pavements
- Curing of fresh concrete
- Renovation of aged concrete
- Industrial, processing and brewing plants
- Educational, medical and nursing facilities
- Utility, public and multi-residential buildings

LOCATION

- Interior or exterior
- Below, at or above grade

How to Apply

Surface Preparation

NEW CONCRETE

1. Freshly finished concrete surfaces require no surface preparation if Kure-N-Harden™ is to be applied immediately after the final finishing operation in place of a resin or acrylic curing compound.

2. On areas where forms have been recently removed, all form oil or breaking compound residue must be removed.

EXISTING CONCRETE (CURED 28 DAYS PLUS)

1. To remove all dust and dirt, sweep all areas to be treated with a fine-bristled broom or hose off with water and let stand until completely dry.

2. The surface must be free from all contaminates that will inhibit the penetration of Kure-N-Harden™ into the pores of the concrete.

3. Any curing, scaling or coating agents must be chemically or mechanically removed before Kure-N-Harden™ is applied. If acid is used to remove surface coatings, the surface must be flushed sufficiently and neutralized before application of Kure-N-Harden™. A floor buffing machine with an aggressive pad can be used along with Citrus Degreaser (see Form No. 1017985) or other cleaners to remove existing compounds.

Sonneborn®

Technical Data

Composition

Kure-N-Harden™ is an alkali-silicate hardener.

Compliances

- USDA compliant for use in meat and poultry areas

Test Data

PROPERTY	RESULTS	TEST METHODS
Compressive strength, psi (MPa)		ASTM C 109, modified
Untreated	5,000 (34.5)	
Kure-N-Harden™ treated*	6,000 (41.4)	
20% increase in compressive strength at 3 days over untreated samples		
Comparative abrasion resistance, g loss		Taber Abraser CS-17 Wheel
1,000 g load, 1,000 revolutions		
Untreated sample	8, (100%)	
Kure-N-Harden™ treated*	6, (78%)	
20% increase in abrasion resistance over untreated samples		
Moisture retention, g loss		ASTM C156
Untreated sample	90	
Kure-N-Harden™ treated*	63	
30% improvement in moisture retention		

*Application to fresh mortar. Abrasion resistance measured at 7 days, 70° F (23° C) and 50% relative humidity.

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Chemical Resistance

Alkali silicate hardeners can be used to increase resistance to chemicals including, but not limited to the following:

Acetic acid, <10%
Aluminum sulfate
Ammonium carbonate
Ammonium chloride
Ammonium hydroxide
Ammonium nitrate
Ammonium sulfate
Anthracene
Arsenious acid
Barium hydroxide
Beef fat
Benzene
Borax
Boric acid
Buttermilk
Calcium chloride
Calcium hydroxide
Calcium nitrate
Calcium sulfate
Carbazole
Carbonic acid
Castor oil
China wood oil
Chromic acid, 10%
Chrysen
Cider
Coal
Coal-tar oils
Cobalt sulfate
Coconut oil
Copper chloride
Copper sulfate
Corn syrup
Cottonseed oil
Creosote
Cresol
Cumol
Ethyl alcohol
Ferric chloride
Ferric nitrate
Ferric sulfate
Fish oil
Formaldehyde, 37%
Formic acid, 90%
Fruit juices
Glucose
Glycerine
Honey
Humic acid
Hydrochloric acid, 10%
Hydrogen sulfide
Iodine
Lactic acid, 25%
Lead nitrate
Lead-refining solutions, 10%
Lignite oils
Linseed oil
Machine oil
Magnesium chloride
Magnesium nitrate
Manure
Methyl alcohol
Mine water, waste
Mineral spirits
Molasses
Mustard oil
Nickel sulfate
Nitric acid, 40%
Oleic acid, 100%
Olive oil
Paraffin
Peanut oil
Phenanthrene
Phenol, 25%
Phosphoric acid, 80%
Poppy seed oil
Potassium aluminum sulfate
Potassium carbonate
Potassium chloride
Potassium dichromate
Potassium hydroxide, 15%
Potassium nitrate
Potassium persulfate
Potassium sulfate
Rapeseed oil
Rosin
Sea water
Sodium bicarbonate
Sodium bromide
Sodium carbonate
Sodium chloride
Sodium dichromate
Sodium hydroxide, 10%
Sodium nitrate
Sodium nitrite
Sodium sulfate
Sodium sulfite
Sodium thiosulfate
Soybean oil
Sugar
Sulfur dioxide
Toluene
Zinc chloride
Zinc nitrate
Zinc sulfate

Application

Kure-N-Harden™ is not a film-forming product, but should fully saturate the concrete for maximum effect. Perform enough applications for Kure-N-Harden™ to saturate (but not puddle) the concrete by following the instructions below.

NEW CONCRETE

1. Spray apply undiluted Kure- N-Harden™ on the concrete surface with a low-pressure sprayer following final finishing operation and after all surface water has evaporated and the concrete surface is hard. To ensure proper performance, apply Kure-N-Harden™ to the entire surface area as soon as the surface can bear foot traffic. Keep the entire surface wet for 30 minutes by spraying Kure-N-Harden™ or by brooming excess material from low spots to saturate dry spots. Keep Kure-N-Harden™ from drying out on surface for a full 30 minutes.

2. As Kure-N-Harden™ begins to penetrate into the surface, lightly sprinkle the surface with water to aid penetration.

3. As Kure-N-Harden™ begins to dry a second time, flush the surface with water and squeegee the surface to remove any excess material and other impurities that were brought to the surface.

4. To improve sheen, dry buff with a nonaggressive pad the following day.

BROOM OR ROUGH-FINISHED CONCRETE SURFACES

1. Follow the basic application methods as described above.

2. Move excess material with broom instead of squeegee for newly placed concrete. Rough-finished concrete will absorb the Kure-N-Harden™ material quickly.

3. After 30 minutes, final flushing with water may not be necessary unless puddles of Kure-N-Harden™ remain on the surface. Do not let unabsorbed material stand on the surface.

CAUTION: To ensure full penetration of Kure-N-Harden™, all treated surface areas must remain wet for a minimum of 30 minutes.

4. Failure to remove all excess material from floor surfaces may result in unsightly white stains.

5. On exterior applications environmental factors, such as wind and heat, may greatly reduce the effectiveness of Kure-N-Harden™ as a curing aid.

NOTE: It is the responsibility of the user to adjust the curing rate to properly regulate the hydration of the concrete.

EXISTING CONCRETE (28 DAYS PLUS)

1. Saturate the surface with undiluted Kure-N-Harden™ by sprayer, squeegee or brooming.

2. If dry spots appear, move excess material onto them or respray them immediately so that entire surface is wet with Kure-N-Harden™ for a minimum of 30 minutes.

3. Complete job using one of the following finishing options.

- If after 30 to 40 minutes the majority of Kure-N-Harden™ has been absorbed into the surface, broom or squeegee any excess material from the low spots so it may be absorbed into the surface or completely removed from it. Flush floor clean with water.
- Use a floor buffing machine with a nonaggressive pad to help work Kure-N-Harden™ into fully cured concrete during application.

Drying Time

1. Kure-N-Harden™ penetrates in approximately 1/2 – 1 hour per application, influenced somewhat by temperature, humidity and job conditions. Each application must penetrate thoroughly before proceeding with next.

2. A floor treated with Kure-N-Harden™ must completely dry before accepting any traffic. Allow 24 hours before subjecting to heavy traffic.

Clean Up

Clean brushes, tools and equipment and flush sprayer with clean water immediately after use.

For Best Performance

- Protect Kure-N-Harden™ from freezing.
- In event of freeze/thaw, warm and restir to uniformity. If separation is persistent, discard Kure-N-Harden™—DO NOT APPLY.
- Install joint sealants before application of Kure-N-Harden™; if not possible, test first for adhesion.
- Wash surfaces with water and detergent and allow to thoroughly dry. A test application is mandatory. For subsequent coating applications, perform proper surface preparation and consult the coatings manufacturer for more instructions.
- Spray application will yield best results.
- Dry buffing 24 hours after application will improve sheen of finished floor.
- Application method and concrete porosity will affect final appearance of Kure-N-Harden™. White residue signifies too strong a mix or the surface reaching maximum hardness. Applications should be stopped and the surface flushed with clean hot water, broomed with a stiff-bristled broom and allowed to dry. If any applications remain, a dilution may be required to avoid further problems.
- Applications with pozzolonic additives in the concrete will require additional Kure-N-Harden™.
- Protect metal, glass, wood, paint and brick from contact with Kure-N-Harden™. If accidentally misapplied to these surfaces, wash with clean water within 30 minutes.
- Allow at least 7 days interval before applying tile or floor covering adhesives over Kure-N-Harden™.
- One application of Kure-N-Harden™ is normally sufficient. Repeat applications will ensure complete densification of concrete surface.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

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Health and Safety

KURE-N-HARDEN™

Warning

Kure-N-Harden™ contains silica acid and sodium salt.

Risks

Severe skin and eye irritant. Contact with skin or eyes may cause burns. Causes respiratory irritation. Ingestion may cause burns or other harm. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. DO NOT breathe vapors. Use only with adequate ventilation. Keep container closed. DO NOT take internally. Use impervious gloves, eye protection and if used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. All label warnings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product does not knowingly contain materials listed by the state of California as known to cause cancer and birth defects or other reproductive harm.

VOC Content

0 lbs/gal or 0 g/L, less water and exempt solvents.

For medical emergencies only, call ChemTrec (1-800-424-9300).

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