

Experience



Excellence

### DIAMOND HARD DENSIFIER

NC-DHD is a one component water based **siliconate and lithium** based solution designed to densify and add waterproofing characteristics to cement and concrete substrates. The densifier reacts with the cementitious ingredients to densify and add water repellency while allowing deep penetration to chemically harden and fortify the substrate. After the chemical reaction occurs, the substrate will be more abrasion resistant and help protect the surface from wear, moisture and efflorescence while remaining breathable

**RECOMMENDED USES FOR:** Concrete, overlays and Natural Stone

Increases durability by improving resistance to freeze thaw effects and improves abrasion resistance and durability. Improves weathering, densifies and reduces efflorescence of natural stone, precast stone and cement.. Protects and fortifies concrete as it seals against moisture damage. Application will reduce dusting and increase concrete life. Reduces water absorption into the substrate.

### GENERAL PRODUCT DATA

#### SOLIDS BY WEIGHT:

Proprietary

#### SOLIDS BY VOLUME:

Proprietary

#### VOLATILE ORGANIC CONTENT:

Water based material with no VOC's

#### RECOMMENDED FILM THICKNESS:

Apply until surface is saturated without puddles. Can be applied by any suitable method such as spraying or mopping etc.

#### COVERAGE PER GALLON:

When the surface is fully saturated, coverage will depend on the absorptivity of the substrate resulting in 100 to 400 square feet per gallon coverage.

#### PACKAGING INFORMATION

5 gallon kits and 50gallon drums (volume approx.)

#### SHELF LIFE:

1 year in unopened containers

#### STANDARD COLORS:

clear to very opaque color

#### FINISH CHARACTERISTICS:

Normally, this product does not change the overall appearance of the substrate.

#### IMPACT RESISTANCE:

N/A

#### ABRASION RESISTANCE:

The application of this product will increase the abrasion resistance of most substrates. Results will vary according to substrate type.

#### FLEXIBILITY:

N/A

#### ADHESION:

Because this material becomes an integral part of the surface that is treated and does not form an impermeable barrier, delaminations do not occur.

#### VISCOSITY:

Less than 25 cps

#### DOT CLASSIFICATIONS:

Not regulated

#### MIX RATIO:

Required none

#### CURE SCHEDULE:

Allow the material to dry for a 24 hour period of time to obtain the maximum benefits of the application. This allows the material to react with the concrete and become an integral part of the substrate.

#### APPLICATION TEMPERATURE:

55-90 degrees F with relative humidity below 75%

#### CHEMICAL RESISTANCE:

N/A

#### PRIMER:

Required none

#### TOPCOAT:

Required none

#### LIMITATIONS:

\*The surface can be damp prior to application but there should be no standing water or puddles. The best application would be with a dry substrate

\* Remove all overspray before drying from all glass or metal surfaces as this product can etch the surface.

\*Under certain conditions, a precipitate may be deposited as the lithium solution dries. See application procedures on the reverse side for more details. Always apply a test patch to determine the suitability before using.

\*Physical properties listed on this technical data sheet are typical values and not specifications.

\*See reverse side for application instructions.

# DAIMOND HARD DENSIFIER

## MIXING AND APPLICATION INSTRUCTIONS

**PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 50 and 80 degree F. Keep from freezing.

**SURFACE PREPARATION:** All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free application. Under certain conditions, a precipitate may be deposited as the lithium solution dries. Substrates with a high acid level will react with the lithium solution and can cause some neutralization of the material before it is absorbed into the surface leaving a white precipitate. This white precipitate is more readily noticeable on darker concrete and substrates. A test should be made to determine that none of these conditions exist. The substrate can be damp prior to application but there should be no standing water or puddles.

### **PRODUCT MIXING: None Required**

**PRODUCT APPLICATION:** Stir material before using. Apply material to the horizontal surface without thinning with a brush, mop or spraying equipment. When applying the material, always maintain a wet edge as this will reduce any chance of water spotting. When spraying, this product can damage vegetation, stain or etch glass, aluminum, metal and plastic. If contamination does occur, rinse it off with water immediately. If a white precipitate should form due to high acid content, or second coating, rinsing with water and a stiff broom will usually be able to remove the spotting. Since Diamod Hard Densifier does not totally seal pores, water can still evaporate from the underlying surface. However, if capillary water is traveling toward the treated face, some of it will be stopped at the depth to which the DHDG or Guardian has penetrated. At this point it will evaporate, passing through the treated area as water vapor. This normally will present no problem. However, if the capillary water source contains soluble salts, they will be deposited at this point within the substrate where this water evaporates. In essence, this reduces visible efflorescence but there is this danger: If capillary water deposits excessive amounts of soluble salts, their crystalline growth can develop sufficient pressure resulting in spalling. Spalling may also result from substantial pressures of water freezing behind the face of the surface before evaporation can occur. These conditions both develop from outside sources of water. This product is developed to prevent the migration of water beneath the treated surface while still allowing water vapor to escape. Applications of this material will prevent positive side absorption of water and improve the capability of the substrate to resist spalling.

**PRODUCT APPLICATION (CONT'D)** Although the material will strengthen the substrate, outside sources of water may cause problems if the hydrostatic pressure is sufficiently great. After the product has been in contact with the substrate to allow for penetration and reaction, excess material can be removed by water or allowed to dry.

**RECOAT OR TOPCOATING:** : Normally one coat is all that is required. It is best to make a second pass when desired while the substrate is still wet. Avoid overlapping wet to dry as this can cause water spotting because the product will not be able to penetrate a dry area that was treated as well as in an area that has been treated but not yet dried.

**CLEANUP:** Use any suitable mild detergent with a neutral pH to slightly alkaline pH and water.

**FLOOR CLEANING:** Caution! Although very unlikely, some cleaners may affect the color of the treated surface. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

**RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals 24 hours has passed. Keep the floor dry for this period (excluding the application of the product and rinsing.)

### **Warranty**

Since no control is exercised over product use, The Nikka Corporation warrants that its products are manufactured free from defect and are consistent and within manufacturing tolerances on our data sheets. No other oral or written representation or statement of any kind, expressed or implied, now or hereafter made is authorized or warranted by The Nikka Corporation. This product is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular use. The Nikka Corporation shall have no liability for incidental or consequential damage, direct or indirect. Our liability is limited to price of or replacement of our product at our option. By accepting delivery of our product means that you have accepted the terms of The Nikka Corporation Warranty.

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