



## DEEP & DENSE Product Data Sheet

CHEMICAL HARDENER, DENSIFIER, FOR CONCRETE POLISHING

### BENEFITS

- Blocks and reduces vapor emissions through concrete but leaves concrete breathable
- Purges soluble chlorides and prevents re-entry. Cures and chemically hardens in one application
- Odorless and colorless
- Non-combustible. No flammable solvents
- Contains a non-acid penetrating agent – resists many acids, oils, greases and salts
- Dries quickly (foot traffic in 3 hours at 72

### Description:

Deep & Dense is a VOC-free Lithium Silicate densifier and chemical hardener used for polishing concrete. Deep & Dense Lithium is chemically activated by the alkali in concrete to solidify and fill the capillary structure and other voids. This reaction produces a denser surface for polishing, and a smooth surface. Deep & Dense easily penetrates the concrete and reduces moisture vapor transfer in the concrete. Deep & Dense also works as a curing agent using a chemical and moisture retention reaction to help complete the hydration process. Deep & Dense helps control hairline checking and temperature cracking on new concrete slabs. Deep & Dense should only be applied to concrete that is properly placed and determined to be structurally sound.

Deep & Dense does not leave a surface membrane like an acrylic thus making it compatible with all flooring adhesives without the need for stripping.

**WARNINGS: Deep & Dense should never be used on tile. CAN ETCH GLASS AND ALUMINUM. Remove immediately. Do not dilute or alter. Protect from freezing.** Protect vehicles, glass surfaces, plant life, aluminum, ceramics, glazed tile and wood from overspray. Remove overspray with soap and/or water immediately. Unprotected areas should be pre-wet with water and rinsed continuously. Eye protection, gloves and appropriate clothing should be worn to minimize skin contact.

### Application:

**Old Concrete/Existing Concrete** Make certain all surfaces are structurally sound and free of all contaminants such as oil, contaminants and any film forming curing compounds and sealers. Fill and repair all holes, and cracks before application. All Concrete should be thoroughly cleaned and rinsed with clean water. After washing allow the concrete to dry at least 2 hours before application.

**New Concrete/Concrete Polishing** Ensure surfaces are clean and free of all contaminants, and any film forming curing compounds or sealers. Ensure the concrete has been cured for a minimum of 3 days before application.

On colored concrete, wait 3 days before applying Deep & Dense. Under high relative humidity, and/or cooler ambient temperature conditions, the drying time should be increased to achieve the level of porosity necessary for good penetration.

**Green Concrete** Make certain surfaces are clean and free of all contaminants, and any curing compounds or sealers.

### **POLISHING CONCRETE / HARDEN AND DUSTPROOF**

If you wish to polish concrete apply Deep & Dense to the surface of concrete at a rate of 300-400 sqft per gallon using a pump sprayer or micro-fiber pad. Make certain concrete stays wet for 30 minutes by re-applying more Deep & Dense or by re-distributing the existing product using a micro-fiber pad. Do not puddle the product. No rinsing of Deep & Dense is needed. Let Deep & Dense dry before polishing the concrete. If the desired effect is to harden and dust-proof the concrete, no further steps are required

### **Pre-Polish Grinding**

Grinding the concrete to an initial surface profile (200-400 grit) is required if salt and pepper is the desired effect. Grinding must occur prior to the application of Deep & Dense. Concrete substrates that are contaminated with oil, grease or other substances after grinding to the initial surface profile should be thoroughly cleaned and dried before continuing. Apply first coat at approximately 400-600 sqft/gal using a pump sprayer or by spreading evenly with a micro fiber pad. A micro fiber pad gives better even will minimize puddling. Keep the surface wet for 30 minutes by applying more product where the surface has dried or by redistributing the product from puddled areas with a micro-fiber pad. Do not allow material to form puddles on the surface as this may cause white residue to form. When dry, proceed with additional required polishing steps. After the 800 grit level and before the final polishing steps, uniformly apply the 2nd coat at 500-750 sqft/gal spread with micro-fiber pad, keep the surface wet for 30 minutes by re-dispersing product with micro-fiber pad. Do not puddle. Allow to dry and remove any residue with polishing diamonds. There should be no need for water-flushing.

### **Final Polishing**

After treatment, continue honing, burnishing, and polishing the treated concrete to the desired finish. Use anywhere from 400-1500grit using progressively finer polishing disks. If you are wet polishing, remove the slurry residue between diamond changes using a wet/dry vacuum and rinse thoroughly removing all excess water and slurry. After the desired finish is achieved, allow the polished concrete to dry completely prior to any further surface treatment. For superior stain resistance and water repellency, apply one coat of StainGuard 5000 after the concrete has completely dried.

### **BURNISHING**

Deep & Dense can be burnished to a high sheen on steel trowel concrete floors. A high-speed burnishing machine (1900-2500 rpm) with appropriate maintenance pad is

required. To burnish, apply Deep & Dense at a rate of 500 sq.ft./gal with a pump sprayer, and polish to a high sheen with the burnishing machine while product is still wet. Work in small sections making certain area to be burnished is kept wet with product.

**Clean Up:** Rinse equipment with cold water. Do not leave behind any empty containers. Dispose of containers appropriately.

**Coverage:** Typical rate on ground concrete is 400-600 sq ft /gal Typical rate for hard troweled concrete is 300-400 sq.ft/gal

Compliance: Federal EPA V.O.C.

Form: Liquid  
Color: Clear  
Odor: None  
Boiling Point/Range (760 mm Hg): 212°F (100°C)  
Flash Point: N/A  
Auto Ignition Temp: N/A  
Lower Flammability Limit (LEL): N/A  
Upper Flammability Limit (UEL): N/A  
Vapor Pressure (mm Hg at 20°C): 17.0  
Vapor Density (Air= 1): N/A  
Freezing Point/Melting Point: N/A  
Solubility (Water): 100%  
Specific Gravity: 1.1  
Evaporation Rate (Ethyl ether = 1): N/A  
Viscosity: Approx. 100 mPa\*s  
pH: 11.3  
Volatility (wt. %): 0  
Liquid Density (20 °C): 1.08 g/cm<sup>3</sup>

VanHearron's state-of-the-art protective treatments have developed a reputation among architects and design professionals as the premier solution for construction chemicals. VanHearron, Inc. is dedicated to solving the destructive influence water intrusion and other elements have on tile and natural surfaces.

*Technical service engineers and chemists are available to answer questions on product performance, application methods and chemical composition.*

Disclaimer/Warranties: 100% satisfaction guaranteed when used as directed. Contact VanHearron for exclusive remedy or either refund of purchase price or replacement of product. Proof of purchase within one year of purchase required. Neither manufacturer nor seller have any knowledge or control concerning the purchaser's use of the product. No expressed warranty is made by manufacturer or seller with respect to the results of any use of the product or container wherein the product is packaged. No implied warranties including but not limited to an implied warranty of merchantability or an implied warranty of fitness for a particular purpose are made with respect to the product. User shall rely on his or her own information and tests to determine suitability of the product for the intended use. User assumes all risk and liability resulting from use of the product. Neither manufacturer nor seller assume any liability for personal injury, loss, or damage resulting from the use of the product. We do not suggest or guarantee that any hazards listed herein are the only ones which may exist. In the event that the product shall prove defective, buyer's exclusive remedy shall be that the seller or manufacturer shall, upon written request of buyer, replace any quantity of the product which is proven to be defective or shall, at its option, refund the purchase price of the product upon return of the product. Manufacturer shall not be responsible for use of this product in a manner to infringe on any patent held by others.