

EUCO DIAMOND HARD

Liquid Densifier and Sealer



THE SUPERIOR SEALING SOLUTION

EUCO DIAMOND HARD is a liquid densifier and sealer for concrete that penetrates, reacts, and bonds within the surface to produce a harder, dustproof, liquid repellent floor. Concrete treated with EUCO DIAMOND HARD resists tire marking and is easily maintained. And because EUCO DIAMOND HARD is a sealer that penetrates, it doesn't change the non-slip texture of concrete and never shows wear patterns or peels off like membrane forming coatings or sealers sometimes do.

PROVEN PERFORMANCE

Silicate materials have been used to improve the durability of concrete since the World War II era, when silicate was used to quickly strengthen new concrete runways on military bases. The synergy of silicate and silicate together has been proven in EUCO DIAMOND HARD for over two decades. Join the impressive list of businesses and design firms who have specified EUCO DIAMOND HARD for their most important projects.

PROTECTION THAT BEAUTIFIES

Concrete treated with EUCO DIAMOND HARD obtains a light, non-slip sheen especially attractive in commercial and retail establishments. The use and abuse of a EUCO DIAMOND HARD treated floor will actually improve its appearance, as traffic and regular maintenance work to buff in a deeper shine over the years. In addition to protecting and beautifying concrete floors, EUCO DIAMOND HARD provides a finish that is dustproof and easy to keep clean.



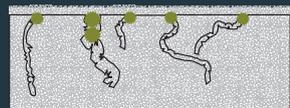
HOW IT WORKS

The silicate and silicate compounds present in EUCO DIAMOND HARD each play a unique role in densifying and sealing concrete. The silicate in EUCO DIAMOND HARD chemically reacts with calcium hydroxide (also known as portlandite) in the surface to produce calcium silicate hydrate (CSH) – the primary strength-providing portion of concrete paste. Portlandite is a soft, porous mineral that is subject to carbonation and chemical attack, so replacing it with the much stronger CSH is a major benefit of EUCO DIAMOND HARD. The silicate in EUCO DIAMOND HARD also reacts with the concrete to form a hydrophobic polymer within the pores and on the concrete surface. The ultimate result is a concrete floor that is exceptionally dense and liquid-repellent, which equals long-lasting protection and durability.

Silicate in EUCO DIAMOND HARD reacts with the calcium hydroxide present in concrete, producing a hard, crystalline gel called Calcium Silicate Hydrate (CSH). This gel fills the pores in the concrete surface, making it more dense and abrasion resistant.

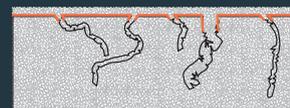
It is the dual action of both the silicate and silicate that makes EUCO DIAMOND HARD superior to any other chemical concrete densifier or sealer on the market.

CSH Gel



1. The silicate in EUCO DIAMOND HARD reacts to form extremely hard crystals in the pores of concrete surfaces.

Polysiloxane Resin Silicate



2. The silicate in EUCO DIAMOND HARD also reacts to create a liquid-repellent silicone seal on the concrete surface.

Polysiloxane Resin Silicate CSH Gel



3. The combined activity of silicate and silicate provides both a strengthened and sealed concrete surface by the action of the silicate and silicate described in diagrams #1 and #2.



THE COMPLETE FLOOR SYSTEM

Concrete floors are not completely protected and sealed until all joints and cracks have been filled. The Euclid Chemical Company provides joint fillers and sealants in a variety of colors to compliment and complete the EUCO DIAMOND HARD floor system.

EUCO 700 is specifically designed to fill control and construction joints in industrial concrete floors. EUCO 700 is a semi-rigid epoxy that prevents spalling of joint edges. EUCO 700 is approved for use in USDA inspected facilities and meets all the criteria for joint fillers recommended by the American Concrete Institute's Guide for Concrete Floor and Slab Construction (ACI 302.1R).

QWIKjoint 200 is a unique polyurea control and construction joint filler with a fast set time, enabling quick return of the floor to service. QWIKjoint 200 is insensitive to moisture and will cure in temperatures as low as -20°F (-29°C). It meets all ACI performance criteria and can be used in USDA inspected facilities.

EUCOLASTIC is a flexible urethane floor joint sealant for use in moving joints exposed to light traffic. Although not recommended for joints subjected to heavy wheeled loads, EUCOLASTIC is excellent for sealing joints and cracks in pedestrian areas indoors and out.

"CURING" THE CURING MYTH

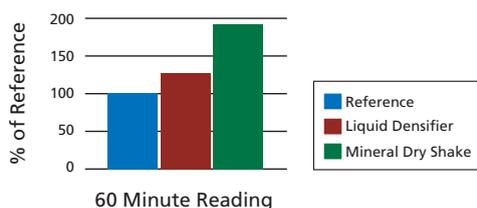
Liquid densifiers are not effective in curing new concrete. Tests show that concrete "cured" with a liquid densifier loses as much moisture in the first three days after placement as concrete that is not cured at all. This means that using a liquid chemical hardener on fresh concrete for the purpose of curing can result in a slab with low strength and poor surface quality. Properly curing concrete with a membrane forming curing compound that meets the requirements of ASTM C 309 will prevent these problems and ensure that the new floor achieves the strength and durability it was designed to have. The Euclid Chemical Company offers Kurez DR VOX, a dissipating curing compound that will break down in the weeks after placement, enabling the floor to be easily cleaned and prepared for the application of EUCO DIAMOND HARD.

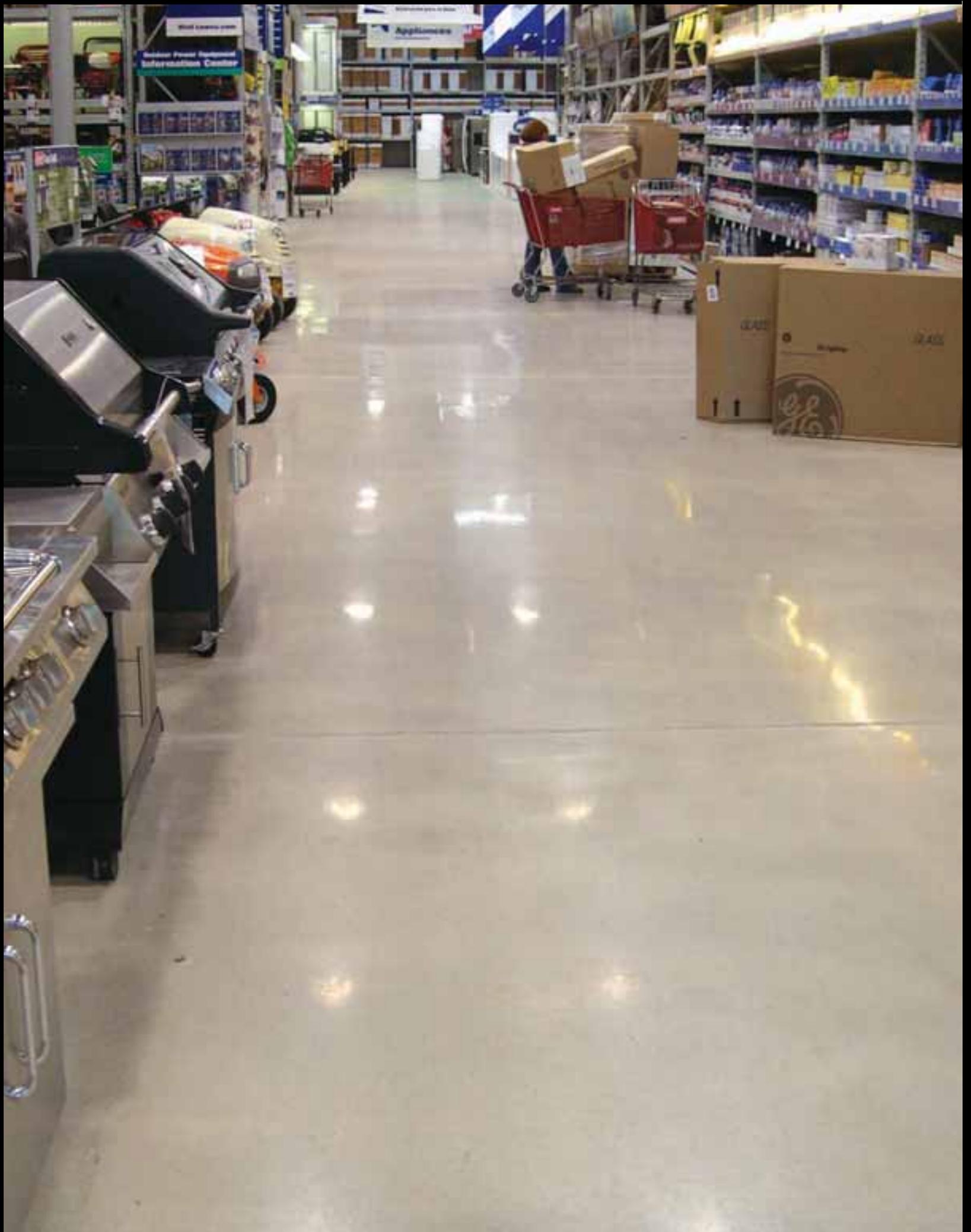
THE TRUTH ABOUT ABRASION RESISTANCE

Silicate and silicate products for concrete are efficient dustproofers, sealers, and densifiers. They are not, however, replacements for dry shake floor hardeners. As the chart below shows, dry shake floor hardeners give wear resistance above and beyond that of a liquid densifier. However, the system of a dry shake hardener with a liquid densifier like EUCO DIAMOND HARD on the surface will produce a floor with exceptional durability. The abrasion resistance of the dry shake plus the densification and liquid repellency of the silicate and silicate equals

years of unbeatable performance. The Euclid Chemical Company offers a variety of mineral and metallic aggregate hardeners to fulfill all possible design and performance requirements.

Concrete Wear Resistance







QUICK RETURN TO SERVICE

EUCO DIAMOND HARD is easily applied to a clean and sound concrete surface. The process is quick – a treated floor can be opened to foot traffic in as little as 4 hours. One day after application the floor is fully functional and can be put back into service.

VIRTUALLY MAINTENANCE FREE

The best way to maintain a EUCO DIAMOND HARD floor is to use it! Normal cleaning and daily use will accelerate the densification process and bring out the floor's sheen. Good housekeeping practices and quick clean-up of spills will help keep the floor looking new. Stubborn tire marks and oil stains can be removed with a citrus-based detergent like EUCO CLEAN & STRIP, a natural and biodegradable cleaner and degreaser.

GUARANTEED TO PERFORM

The Euclid Chemical Company stands by its product EUCO DIAMOND HARD with a 20-year dustproofing warranty. A pledge of technical and customer support also comes with each purchase of EUCO DIAMOND HARD (and all our products) through our network of distributors and certified applicators, along with expert service from our sales and technical representatives.

ENVIRONMENTALLY RESPONSIBLE

Choosing "green" products that are safe for workers and the environment is a priority for most designers today. EUCO DIAMOND HARD is water based and odorless, with zero VOC's. Specifying EUCO DIAMOND HARD can contribute to the LEED certification of your next building project.



THE EUCO DIAMOND HARD ADVANTAGE

- Silicate and silicate blend densifies and seals in one step
- Reduces porosity and increases density of the concrete surface
- Resists penetration of liquids, including oil and many chemicals
- Provides a low sheen luster that enhances the appearance of the concrete surface
- Will not blush, peel, flake or wear away
- Minimizes tire marks and enables them to be more easily removed
- VOC compliant and USDA approved

PRIMARY APPLICATIONS

- Warehouse floors
- Retail floors
- Manufacturing plants
- Residential garages and basements
- Distribution centers



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An **RPM** Company

The Euclid Chemical Company, founded in 1910, is today a worldwide supplier of quality products and services for the concrete and masonry industry. Marketed under the EUCO name, we offer a full line of admixtures, repair and maintenance products based on the latest technologies. We provide complete specification assistance and laboratory support as well as on-site service for guidance on proper product usage. EUCO materials are warehoused in over 200 locations in the USA and are available world-wide through international affiliates.

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ABOUT THE CD ...

Additional information on EUCO DIAMOND HARD can be found on the attached CD-ROM.

- Engineering Data: Abrasion resistance, permeability, coefficient of friction and more
- MSDS and Guide Specification
- Project References and Maintenance Procedures
- Warranty Information

Also on this CD is information about the complimentary products KUREZ DR VOX, EUCO 700, QWIKjoint 200, and EUCO Clean & Strip. For product updates and more information on The Euclid Chemical Company, visit www.euclidchemical.com.

