

## DCI Penetrating Lithium Based Sealer/Hardener

### PRODUCT DESCRIPTION

DCI Penetrating Lithium Based Sealer/Hardener is a clear, odorless V.O.C. compliant, water-based, environmentally safe-to-use salt protectant and dust proofer that hardens, seals, and densifies concrete and other masonry surfaces. DCI Penetrating Lithium Based Sealer/Hardener reacts chemically with siliceous materials to provide a permanent hydrophobic surface that protects and preserves concrete surfaces and a variety of masonry substrates without altering the natural appearance and texture.

DCI Penetrating Lithium Based Sealer/Hardener is in a class of its own providing all the protection of a high-end penetrating water repellent sealer and the benefits of a surface hardener, sealer, densifier.

DCI Penetrating Lithium Based Sealer/Hardener is penetrates and seals by reacting chemically with the concrete surface, forming a clear, dense, and durable inorganic topical surface layer that is breathable, abrasion-resistant, and hydrophobic.

DCI Penetrating Lithium Based Sealer/Hardener forms an effective chloride ion screen providing superior protection against water and water-carried salts that cause erosion, deterioration and corrosion. DCI Penetrating Lithium Based Sealer/Hardener seals micro-channels making concrete harder, stronger, more abrasion resistant, dust proof, and easier to maintain. Substrates become resistant to staining, spalling, weathering, efflorescence, water intrusion, fungi and mildew, deterioration, freeze-thaw scaling and reinforcing steel corrosion.

DCI Penetrating Lithium Based Sealer/Hardener will also harden the surface making it extremely abrasion resistant, providing salt resistant and

water repellent characteristics even through regular maintenance, pressure washing, pedestrian and traffic wear. The permanent bond lasts longer than silanes, reduces maintenance costs, and looks better over time.

DCI Penetrating Lithium Based Sealer/Hardener can be used as an interior or exterior treatment for both horizontal and vertical concrete and masonry. It is perfect for parking garages, bridge decks, exterior concrete, integrally colored concrete and acid stained concrete.

### KEY BENEFITS

- **Sealing:** As DCI Penetrating Lithium Based Sealer/Hardener penetrates the micro-channels in concrete, it reacts to form insoluble silicate structures that seal the concrete. This helps protect the concrete from water penetration and makes it more resistant to many types of chemicals.
- **Hardening and Dust Proofing:** DCI Penetrating Lithium Based Sealer/Hardener hardens the concrete making it stronger and more abrasion resistant. It also dust proofs the concrete, so particles of concrete will not circulate within a building creating a health and maintenance problem.
- **Environmentally Safe:** DCI Penetrating Lithium Based Sealer/Hardener contains no carcinogens and minimal VOC's. Application is fast and the floor is ready to use within hours.
- **Cost Effective:** DCI Penetrating Lithium Based Sealer/Hardener incorporates the hardening of a densifier with the chloride protection of a silane, all in a single, permanent application.
- **Decorative Concrete:** Excellent color enhancer and sealer for acid stained or integrally colored concrete, pavers, block and roof tiles.

# Direct Colors Technical Data Sheet

---

## **PRODUCT ADVANTAGES**

- Provides maximum water repellency combined with hardening, densifying and sealing characteristics to provide long-term protection against staining and deterioration
- Surfaces treated with DCI Penetrating Lithium Based Sealer/Hardener will maintain their natural appearance, vapor permeability, slip resistance and other surface characteristics.
- Seals micro-channels in concrete against water and chemical attack that cause corrosion and deterioration.
- Helps reduce damaging ASR alkali-silica reactions in the surface layer of concrete substrates.
- Testing demonstrates that provides excellent protection from salt and water intrusion.
- Creates a stronger, more impenetrable, and better-looking finish that is dust-proof and resistant to staining and deterioration.
- Penetrates deep inside the concrete capillaries (3-5 mm in densely finished concrete) chemically reacting with the free-lime, forming a permanent insoluble bond within the concrete.
- Forms a protective surface layer that is breathable, dense and abrasion resistant.
- Protection from acid rain, waterborne chemicals and freeze-thaw damage.
- Protects colored concrete from weathering and efflorescence.
- Reduces maintenance, cleaning costs and repairs.

## **USE & TECHNICAL SPECIFICATIONS**

### **COVERAGE / TREATMENT YIELD\***

Machine-Troweled Concrete Surface - 400-550 ft<sup>2</sup> per gallon (1 liter per 9.8 to 13.5m<sup>2</sup>)

Broom Finished Concrete Surface - 250-350 ft<sup>2</sup> per gallon (1 liter per 6 to 8.5m<sup>2</sup>)

**\*Coverage rate will vary with concrete mix, finish, porosity and environment.**

Typical Coverage Estimated between 200-400 ft<sup>2</sup> per gallon for the following surfaces:

- Exposed aggregate
- Stucco
- Porous concrete
- Smooth concrete, precast
- Smooth concrete, steel trowel finish
- Exterior brick
- Concrete block
- Rough stone, sandstone
- Smooth stone, polished granite
- Bridge decks and other surfaces subject to abrasion
- Any material with a Portland cement binder

### **DRYING TIME**

1-2 hours

### **PHYSICAL PROPERTIES**

Form Clear to light amber aqueous solution

Total Solids 17%

Active Ingredients: 100% of total solids

Weight/Gal 9.13 lbs/gal

Specific Gravity: 1.10

pH 11.0

Flash Point: N/A

V.O.C. Content 50< gms/L 0 lbs/gal or 0 g/L per gallon of coating

Freeze point 32°F(0°)

Slip resistance does not change floor friction coefficient\*

# Direct Colors Technical Data Sheet

---

Depth of surface penetration 2-8mm on machine-trowled concrete

Shelf Life 1 year in factory sealed container

\*Must employ all recognized slip and fall prevention techniques

**DCI Lithium-based Sealer/Hardener is appropriate for the following substrates and surface applications:**

## **Substrates**

Adobe

Granite

Natural Stone

Sandstone

Clay brick

Mortars

Limestone

Terracotta

Architectural concrete

Cast-in-place concrete

Concrete Masonry units

Exposed aggregate substrates

Portland cement stuccos

Precast pre-stressed concrete products

## **Stamped/Colored Concrete**

### **Acid Stained Concrete**

### **Concrete Countertops**

Terrazzo

## **Uses**

Parking garages

Stadiums

Buildings

Marinas

Sea walls

Dams

Bulkheads

Loading Docks

Foundations

Bridge Decks

Highway sound barriers

Brick

Stone veneers

Cast-in-place concrete

Precast

Overpass tunnels

Pedestrian walkways

Driveways

Pavement

Monuments

## **OTHER USES:**

Protective color guard treatment for acid stained concrete and integrally colored concrete or a surface enhancer on polished concrete floors.

DCI Penetrating Lithium Based Sealer/Hardener may be applied to new or existing acid stained floors, integrally colored concrete or polished concrete surfaces of any age to create a more durable, lasting shine as well as enhanced stain resistance. On acid-stained floors, the surface must be neutralized before applying DCI

# Direct Colors Technical Data Sheet

---

Penetrating Lithium Based Sealer/Hardener or whitening will occur.

All surfaces must be clean and sound. We recommend thoroughly cleaning existing surfaces with black scrubbing pad (light abrasion) and a neutral pH detergent. For polished concrete applications DCI Penetrating Lithium Based Sealer/Hardener is typically applied at 400 square feet per gallon after 120 grit metals.

Treated surfaces will exhibit a glossy satin sheen. Maximum strength and resistance will develop over 7 days. The surface will increase its hardness and durability and its sheen over time - taking on a polished look with general maintenance.

## **FINAL RESULTS**

Typical drying time is 1-2 hours for both vertical and horizontal surfaces.

Floors are ready for traffic and use when dry. Sanding or polishing will only wear down the protective surface and is not recommended for industrial applications unless it is being used as a surface enhancer for polished concrete acting as polishing agent.

A light lithium residue may form on the surface after the surface is dry. Excess product not absorbed during the application process can be removed with a stiff broom, power sweeper or floor machine (if required).

Water repellency and hardness continues to develop for up to 7 days following the application; however, significant results should be visible within 24 hours.

Second applications are rarely needed; however, if concrete is very porous or if a quicker sheen is desired, you may apply a second, very light application. Lightly mist the surface with the product and spread evenly with a Padco™ floor trim pad or similar applicator and let dry.

## **CLEAN UP**

Use water to clean tools and equipment. DCI Penetrating Lithium Based Sealer/Hardener is environmentally friendly and requires no special or hazardous disposal methods.

## **MAINTENANCE**

Routine sweeping, mopping, washing and mechanical scrubbing of floors with neutral pH cleaners/water is recommended.

**DO NOT USE acidic or citrus cleaners to maintain the floor.** Although DCI Penetrating Lithium Based Sealer/Hardener is chemically resistant and helps reduce staining, acidic and citrus cleaners may etch the surface causing a residual stain. Regular maintenance will improve surface shine. This will prolong the life of the floor surface and over time will increase the sheen.

Wipe up any chemical spills as soon as possible. Wait 6-12 hours after application before painting, line- stripping, or applying resilient tile, and conduct an adhesion test.

Use a stiff broom or power sweeper to remove dirt and dust from the surface.

Please consult the manufacturer to inquire about surface preparation and recommendations. Always test adhesion and performance for suitability and desired results before application.