

## Technic data sheet:

# ECOGUARD HG LITHIUM DENSIFIER

## HIGH GRADE LITHIUM SILICATE DENSIFIER & HARDENER FOR POLISHED CONCRETE

**PRODUCT DESCRIPTION:** isi GmbH Germany **ECOGUARD HG LITHIUM DENSIFIER (EHL D)** is a specially formulated lithium silicate based solution which is used as a hardening and densifying sealer in polished concrete applications. It is a ready to use, colorless, odorless, penetrating, protective concrete sealer. **EHL D** reacts with free lime (calcium hydroxide) which is present in the normal cement hydration process. The conversion of the free lime to CSH (calcium silicate hydrate), fills open capillary pores, thereby forming an insoluble bond. This produces denser concrete which a smoother, flatter surface that can reflect light more evenly, creating a glossier concrete surface. **EHL D** densified surfaces demonstrate far greater abrasion resistance. **EHL D** treated surfaces can also help counter the effects of A.S.R. or reactive aggregates when they are present in the concrete.

**USES:** Typical diamond polishing applications include warehouse floors, schools, retail, lobbies, hospitals, airports, showrooms, as well as decorative precast concrete polishing such as counter or table tops.

### BENEFITS:

1. **Enhances polished concrete surfaces**
2. **Promotes greater gloss**
3. **Resists black rubber wheeled tire marks**
4. **Decreases permeability of the surface**
5. **Floors are easier to clean and maintain**
6. **Reactive silicate densifier becomes part of the concrete: cannot chip, lift or peel**
7. **EHL D treated floors meet ADA slip resistance testing requirements**
8. **Odorless, non-yellowing, V.O.C. compliant water based formulation**

**COMPOSITION:** Water based lithium silicate dispersions with added penetrating agents.

PHYSICAL DATA:	APPROXIMATE VALUES @ 70 °F (21.1°C):
Color:	Clear light blue solution
Weight/gallon:	8.70 lb.
pH:	10.0 +/- 0.50 (Alkaline)
V.O.C. levels	Contains no VOC's
Viscosity (Brookfield):	10 cps
% Solids (Lithium):	5.5%
% Actives (Total):	>18%

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### **SURFACE PREPARATION: EXISTING (OLD) CONCRETE:**

Surfaces to be treated must be structurally sound, clean and free of all contaminants, resins, or previously applied sealants, and porous. During the first grinding pass, you may use ECOGUARD Pre-Grind for an easier first cut and to break down grease or oil contaminants on the concrete surface, if any. It is important to grind wet and to auto-scrub the surface after the first grinding pass. Repair all cracks, and surface depressions prior to applying **EHL**D, using ECOGUARD Crack Repair and/or Surface Repair products.

### **NEWLY POURED CONCRETE:**

Recommended concrete mix designs should be 3500 psi minimum and a maximum of 20% fly ash. Newly placed concrete should be cured a minimum of 7 days, but preferably 28 days old to allow excess moisture (which inhibits **EHL**D penetration) to evaporate and/or fully hydrate with the cement. Surfaces should be cured by water spray, damp burlap, or visqueen methods only (no resins or curing compounds that inhibit penetration of the **EHL**D). If resin based curing compounds were used, these will have to be ground off completely prior to applying the **EHL**D.

### **DIRECTIONS: SURFACE PREPARATION:**

The successful application of **EHL**D is dependent upon the grinding and polishing techniques used by the contractor. Applicators should be experienced in the use of silicate hardening materials as well as the use of grinding and polishing equipment. The composition of the concrete, flatness, finishing and curing will all have an effect on the final surface shine. These conditions will determine the depth required by the grinding process and the required grinding discs and polishing pads. In most cases, the surface must be initially ground with the appropriate diamond grinding disc to both level and expose (open) the floor surface. After the initial grinding, the floor should be cleaned and allowed to dry.

### **APPLICATION:**

**EHL**D is typically applied by low pressure spray. Coverage is typically 200 square foot per gallon, but will vary with substrate porosity as more porous floors will absorb heavier. Completely saturate the floor, using a low pressure, high volume sprayer. Allow 30-45 minutes for the **EHL**D to penetrate and react. Any excess material on the surface after that time should be whisked into the concrete, using a soft nylon broom. Allow to dry to the touch. The polishing sequence can then begin, using progressively higher disc grit sizes until the level of sheen required is obtained. In the later polishing steps (# 800 or # 1500), to produce an even higher shine, an additional "light coat" of **EHL**D can be applied at 30 – 40 m<sup>2</sup> each m<sup>2</sup>/Liter.

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Allow this coat to dry completely, which will increase additional CSH in the surface, before continuing the polishing sequence to higher grit sizes. After final polishing and drying, floors can be open to traffic and do not need additional treatments. Allow the surface to dry 12 hours before exposing to foot traffic, 24 hours for vehicles. To maintain gloss, cleaning should be done on a regular basis to reduce abrasive sand or dirt contaminates.

### **CAUTIONS:**

Do not dilute or thin. EHL D is considered a penetrating hardener and is not a film forming type sealer. When EHL D is applied excessively (puddled) and allowed to dry in this condition without being broom swept after 30-45 minutes , a white residue may remain on the surface of the treated substrate. This white residue consists primarily of excessive lithium carbonate salts that are difficult to remove without additional polishing or scrubbing. Do not apply in temperatures below 12° C or above 40° C. Do not apply to frozen or frost filled surfaces. The treated surface will be slippery during application and until dry. Surfaces treated with EHL D or other silicate based sealers are not compatible with vinyl floor adhesives, or many other floor covering adhesives as the final substrate is rendered water impermeable, but still breathable. Keep from freezing.

### **WARNINGS:**

**Avoid contact with skin and eyes. Wear protective clothing and safety glasses during application. Keep away from food and drink. Do not take internally. Refer to product M.S.D.S. (Material Safety Data Sheet) for further health and safety information. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.**

### **H.M.I.S. CODES:**

HEALTH = 1, FLAMMABILITY= 0, REACTIVITY = 0, PERSONAL PROTECTION = C (GLOVES, GOGGLES, APRON)

**SHIPPING NAME:** Concrete Sealer -Water base

**SHIPPING CLASS:** ITEM 33880, SUB 2, LTL 55

**PACKAGING:** 1 – 5 – 25 – 120 – 1000 Liter

**SHELF LIFE:** 1 year properly stored @ 15° to 38° Celsius

## ***Technic data sheet:***

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