



# **MAXCLEAR®**

## **HARDENER LITHIUM -F**

### **LITHIUM SILICATE HARDENER AND DUSTPROOFING SEALER FOR PROTECTION AND FINISHING OF CONCRETE FLOORS AND CONCRETE STRUCTURES**

#### **DESCRIPTION**

**MAXCLEAR® HARDENER LITHIUM -F** is a liquid product for indoor and outdoor applications which, once applied, provide a concrete surface stronger and longer.

Thus, **MAXCLEAR® HARDENER LITHIUM -F** seals, densifies and hardens concrete through its pores and capillaries, provides a protection of the treated surface reducing its water absorption and improving its hardness, abrasion resistance, weathering and contact with chemical compounds. It incorporates microspheres that allow to vitrify the polished cement surface by mechanical friction means, providing the pavement a glossy or satin aspect.

#### **APPLICATION FIELDS**

- Increasing the wearing resistance and imparts a dust-proofing finish for concrete pavements such as industrial floors, parking, hospitals, sport centres, etc.
- Protection of concrete in civil engineering, residential building, etc. against rebar corrosion in sea environment and industrial aggressive environments such as treatment plants, bridges, port facilities, silos, reservoirs, etc.
- Increase of chemical resistance of concrete structures and concrete flooring against aggressive compounds in download areas, fuel station, processing plants, etc.
- Manufacturing of prefabricated elements to provide greater resistance to the treated elements against weathering and weather patterns.
- Surface consolidation for concrete and mortars in order to enhance adhesion prior to paint.
- Surface protection in polished cement floors.

#### **ADVANTAGES**

- Penetrates further into the capillaries of concrete compared to other hardener liquids (from 10 to 100 mm depending of the quality of concrete).

- Protective treatment for pavements previously treated with **MAXCLEAR® HARDENER**.
- Extraordinary hardness and high durability, increasing chemical resistance against salts, water, diluted acid and alkali, the abrasion and impact resistance, sealing concrete surface.
- Provides ASR protection (alkali-silica reaction), not contributing to alkalinity and preventing the reaction in concrete surfaces.
- Suitable for indoor and outdoor applications, exposed to extreme thermal cycling.
- Apply in new or old concrete, in horizontal or vertical surfaces.
- Allows the substrate to breathe once treated, does not create vapour barrier.
- It reduces the growth of mildew, fungi and micro-organisms.
- Ready to use by brush, broom, roller or sprayed. Fast setting time.
- Easy application and high performance. Reduces maintenance costs.
- Its sealing effect on the surface reduces the porosity and water absorption by capillarity.

#### **APPLICATION INSTRUCTION**

##### **Surface preparation**

Remove all unsound and loose concrete so that only solid structure remains. Repair all cracks and defects of the substrate with any suitable **DRIZORO®** repair mortar. The surface must be clean, free of all traces of grease, paint, curing compounds or any other film that could inhibit the penetration of the product. Do not use acids for surface cleaning. Neutral pH cleaners are recommended.

On old concrete, for better results obtain mechanically an open texture surface by grinding (60-120 grains), diamond abrasive disc or similar.

##### **Application**

###### Application on new concrete:

Remove release agents, curing agents, waste or other external particles. Wait 12 to 24 hours until concrete has enough strength to be walked over.

Apply one coat of **MAXCLEAR® HARDENER LITHIUM -F** by spray uniformly and continuously at low pressure reaching saturation, trying to keep

the surface wet for 20 to 30 minutes but puddle-free. If after 30 minutes the application is still fresh and has not been absorbed by the substrate, remove excess of material with damp cloths or by suction. Do not wash or add water. If instead it dries quickly, successive applications must be carried out to maintain the surface wet.

After 10 days curing time or when surface humidity of substrate does not exceed 14%, finish the surface by high-speed polisher to obtain a glossy and vitrified substrate aspect. Previously an exhaustive cleaning of substrate must be carried out.

In case of applications on new concrete slabs treated with **MAXCLEAR® HARDENER LITHIUM**, wait 10 days for application, carrying out the cleaning process and on dry surface.

#### Application on old concrete:

Concrete must be preferably dry to improve substrate penetration.

Apply one coat of **MAXCLEAR® HARDENER LITHIUM -F** uniformly and continuously by spray at low pressure reaching saturation, trying to keep the surface wet for 20 but puddle-free

Once applied, the material should be redistributed over the surface by roller, brush, broom or microfiber mop in order to ensure a homogeneous distribution avoiding the formation of puddles due to excess of consumption.

If after 30 minutes the application is still fresh and has not been absorbed by the substrate, remove excess of material with damp cloths or by suction. Do not wash or add water.

Surface can be worked also by automatic grinding or planing machine if surface humidity is less than 14%.

Keep the entire area protected from rain and traffic the first 2 hours after the application.

#### **Cleaning tools**

The tools and equipments can be cleaned with water immediately after using. Once the product hardens, it can only be removed by mechanical methods.

#### **CONSUMPTION**

Average consumption is estimated about from 0,12 to 0,17 l/m<sup>2</sup> in one single layer on cured concrete and from 0,075 to 0,1 l/m<sup>2</sup> on fresh concrete.

These figures may vary depending on substrate conditions and porosity. A preliminary test on-site will determine the consumption exactly.

#### **PACKAGING**

**MAXCLEAR® HARDENER LITHIUM -F** is supplied in 25 l plastic jerrycan, 200 l drum and 1000 l container.

#### **STORAGE**

Twelve months in its original unopened packaging. It must be stored in a dry and covered place, protected from humidity and freezing, with temperatures above 5°C.

#### **IMPORTANT INDICATIONS**

- Do not apply with temperatures in the support below to 5°C.
- Protect metal surfaces, aluminium, aluminium profile, enamelled or painted pieces, glass, etc.
- In order to determine the effect on coloured concrete surface, a preliminary test on-site is recommended.
- Do not polish or sand the surface after the application.
- For further information and other uses not specified in this Technical Bulletin consult our Technical Department.

#### **SAFETY AND HEALTH**

**MAXCLEAR® HARDENER LITHIUM -F** is an alkaline product, and both rubber gloves and safety goggles must be used to apply it. In case of eye contact, rinse thoroughly with abundant clean water, but do not rub. In case of skin contact, wash affected areas with soap and water. If irritation persists, seek medical attention.

For further information, Safety Data Sheet of **MAXCLEAR® HARDENER LITHIUM -F** is available by request.

Disposal of the product and its empty packaging must be made by the final user and according to official regulations.

## TECHNICAL DATA

Characteristic of the product	
Description	Lithium silicate nanoparticles, sodium-free
Appearance	Cloudy transparent liquid to pale green
Density, (g/cm <sup>3</sup> )	1,11 ± 0,1
Particle size, (nanometres)	0,25 - 0,30 nm
Minimum application temperature, (°C)	>5
Drying time, (h)	1-2
pH	11,0
VOC content, (g/l)	0
Toxicity	Non-toxic
Flash point	Non-flammable

## GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



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