DRIZORO® Construction Products

MAXCLEAR® HARDENER LITHIUM

CE

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

DESCRIPTION

MAXCLEAR® HARDENER LITHIUM is a colourless liquid product based on lithium silicate nanoparticles in water solution which, once applied, its active chemical compounds penetrate deeply reacting with free lime of new or old concrete forming insoluble tricalcium silicate extremely resistant and providing a concrete surface stronger and longer.

Thus, ***MAXCLEAR® HARDENER LITHIUM*** seals, densifies and hardens concrete trough 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.

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 is 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.

ADVANTAGES

- Due to its exclusive very small-sized lithium silicate nanoparticle structure, penetrates further into the capillaries of concrete compared to other hardener liquids (from 10 to 100 mm depending on the quality of concrete).
- Its actives compounds lead permanent insoluble crystals of extraordinary hardness and high durability, increasing the abrasion and impact resistance.
- Its sealing effect on the surface reduces the porosity and water absorption by capillarity. Suitable for indoor and outdoor applications, exposed to extreme thermal cycling.

- Apply in new or old concrete, in horizontal or vertical surfaces.
- It increases the chemical resistance of substrate against oils, greases, diluted acid and alkali.
- Allows the substrate to breath once treated, does not create vapour barrier.
- Provides high resistance against stains on treated substrate and facilitate a better cleaning with anti-dust finishing.
- 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.
- Water-based product, non-flammable and non-corrosive. Sodium salts and VOC's free. Environmentally friendly.

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.

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*** 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. Surface finishing should be done by automatic grinding machine or manual trowelled.

Allow the surface to dry (from 1 to 2 hours at 20°C in normal conditions) if applied later a water-based curing agent.

Application on old concrete:

Concrete must be preferably dry to improve substrate penetration.

Apply one coat of ***MAXCLEAR***® ***HARDENER LITHIUM*** uniformly and continuously by spray at low pressure reaching saturation, trying to keep the surface wet for 20 to 30 minutes 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. Surface can be worked also by automatic grinding or planing machine.

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.

Keep the entire area protected from rain and traffic the first 2 hours after the application, and then it can be put into service.

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 0,2 kg/ m^2 in one single layer on cured concrete and from 0,08 to 0,1 kg/ m^2 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*** is supplied in 25 kg plastic jerrycan, 220 kg drum and 1000 kg 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 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*** 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	
CE Marking, EN 1504-2 Description. Impregnation for surface protection of concrete. Lithium silicate sealer hardener for protection and finishing of pavements and concrete structures.	
Description	Lithium silicate nanoparticles, sodium-free
Appearance	Cloudy transparent liquid to pale green
Density, (g/cm^3)	1,11 ± 0,1
Flash point	Non-flammable
Particle size, (nanometres)	0,25-0,30
pH	11
VOC content, (g/l)	0
Toxicity	Non toxic
Application and curing conditions	
Application conditions, (°C)	5°C < T < 35°C
Drying time at 20°C, (hours)	1-2
Cured product characteristics	
Degree of penetration, EN 1766	Class II: ≥ 10 mm
Capillary absorption and water permeability, (kg/m^2·h^{0,5}), EN 1062-3	w < 0,1
Yields	
Approximate yield per application on cured concrete, (kg/ m^2)	0,12 - 0,20

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.

DRIZORO, S.A.U.
C/ Primavera 50-52 Parque Industrial Las Monjas
28850 TORREJON DE ARDOZ – MADRID (SPAIN)
Phone: +34 91 676 66 76 - +34 91 677 61 75
e-mail: info@drizoro.com Web site: drizoro.com