

MAPECRETE LITHIUM CURE

Liquid surface treatment with triple consolidating, anti-evaporating and water-repellent action, for new concrete floors and concrete surfaces finished with surface mineral hardener



DESCRIPTION

Mapecrete Lithium Cure is a water-based solution of modified lithium silicates and polymers used for the surface treatment of internal and external, horizontal cementitious substrates. It forms a superficial microfilm with an anti-evaporation function and allows the lithium silicates contained in it to penetrate into the porosities of the support and chemically react with the free lime creating an insoluble compact microstructure that increases the wear resistance of the support and drastically reduces the penetration of liquids and salts dissolved in them, such as chlorides which would be harmful to any metal reinforcements present.

The treated support is more durable as it is more resistant to abrasion, it produces much less dust, it resists to UV and weathering, it is water-repellent, and the formation of stains and efflorescence is greatly reduced; moreover it is easier to clean and to maintain.

WHERE TO USE

Mapecrete Lithium Cure, thanks to its ability to give the treated surfaces greater resistance and durability, is suitable for use mainly on new cementitious civil and industrial floors, where also the ease of cleaning and maintenance and the reduced formation of dust are important features, such as garages, hangars, shopping centers, workshops, warehouses, sidewalks, yards, manufacturing industries in general, restaurants, schools, museums, parking lots, etc.

TECHNICAL CHARACTERISTICS

Mapecrete Lithium Cure is a product developed in the MAPEI R&D laboratories, it penetrates in the surface's porosity of cementitious materials, reduces the evaporation of water in the concrete (complies to the requirements ASTM C-156) and reacts with the lime free that is normally produced during the hydration phase of the cement, to form highly resistant insoluble hydrated calcium silicates which increase the density and strength of the cementitious paste, reducing the formation of micro-cracks.

The treated surfaces are shiner and have greater resistance to stains of various kinds and the formation of efflorescence.

Mapecrete Lithium Cure reduces the phenomenon of the alkali-aggregate reaction (pop-out) in case of the presence of alkali-reactive aggregates in the substrate.

Mapecrete Lithium Cure fulfills GEV EMI CODE ECT Plus requirements.

ADVANTAGES

- Ease of use and application.
- It penetrates deeply, forming insoluble, mechanically and chemically resistant compounds.

- It improves the chemical and abrasion resistance of the treated substrates.
- It reduces the formation of dust and makes the floorings easier to clean and maintain.
- It improves the aesthetics of the treated surface making it shinier and preserving it from the formation of stains and efflorescence.
- It increases the durability of the flooring.
- It keeps the substrate permeable to water vapor.
- It does not contain sodium and potassium which can cause damaging alkali-aggregate reactions.
- It protects from the damage of de-icing salts, from weathering and from freeze-thaw cycles.
- Excellent water repellent effect.
- UV resistant.

RECOMMENDATIONS

- Do not apply **Mapecrete Lithium Cure** on very dusty and / or crumbly or inconsistent substrates.
- Do not apply **Mapecrete Lithium Cure** on dirty surfaces, polluted by oils and / or greasy substances.
- Do not apply **Mapecrete Lithium Cure** with ambient and substrate temperatures below +4°C.
- It is always advisable to carry out a preliminary test on a small portion of the surface to check for the presence of any non-visible and / or incompatible contaminants.
- Carry out preliminary tests on a small portion of the surface in case subsequent resinous products have to be applied, to check their adhesion and compatibility.

APPLICATION PROCEDURE

Mapecrete Lithium Cure is ready for use and only needs to be stirred before use. It can be applied on new polished concrete floors, when still fresh as long as walkable, in any case before cutting the joints, if required. **Mapecrete Lithium Cure** is applied in a single coat with a low-pressure pump by spraying it evenly on the surface to be treated. The product forms a whitish surface.

It is advisable not to transit on the treated surface for the next 1 or 2 days after the application. The product undergoes the natural pulverization process in the following 14-28 days. After this period, it will be possible to remove any residues cleaning with hot water using a suitable floor washing machine.

TOOL CLEANING

The equipment used for the preparation and application of **Mapecrete Lithium Cure** can be easily cleaned with soap and water. Once the product has hardened, removal can only be done by mechanical mean.

CONSUMPTION

0.10-0.40 kg/m². The consumption of the product is strongly influenced by the type of substrate and its absorbency and by the environmental conditions during installation.

PACKAGING

25 kg tank.

STORAGE

12 months in its original sealed packaging, in a dry place and at temperature between + 5°C and + 40°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available on our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.



TECHNICAL DATA (typical values)

TYPICAL DATA OF THE PRODUCT

Consistency	liquid
Colour	milky white
Density (ISO 758)	1.02 g/cm ³
pH – (ISO 4316)	11.5

FINAL PERFORMANCE

Performance characteristic	Test method	Requirements	Product performance
Water retention 72h (consumption /m ² 0,4 l)	ASTM C-156	<0.55 kg/m ²	0.25 kg/m ²

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

TECHNICAL SPECIFICATIONS

Supply and installation of a water-based solution of modified lithium silicates and polymers with anti-evaporating, consolidating, and water-repellent effect (such as **Mapecrete Lithium Cure** by Mapei S.p.A.), for the surface treatment of new concrete floors. The solution will be applied by spraying with a low-pressure pump on the flooring to be treated, and will seal the pores of the cementitious paste, improving the mechanical resistance of the surface of the flooring, its compactness, reducing the formation of microcracks and dust and increasing resistance to stains and efflorescence. After the treatment the flooring will have a shinier aesthetic appearance will be easier to clean.

The product must have the following characteristics:

Consistency	liquid
Colour	milky white
Density (ISO 758)	1.02 g/cm ³
pH – (ISO 4316)	11.5
Water retention 72h (consumption /m ² 0,4 l) (ASTM C-156)	0.25 kg/m ²
Fulfills GEV EMICODE EC1 Plus requirements	

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