

PRODUCT Nº 3.175

HIDROTECMA-SP

SEALER, HARDENER, MINERALIZER AND PERMEABILITY REDUCER FOR CONCRETE FLOORS AND PAVEMENTS

Description:

HIDROTECMA-SP is a chemical compound, formulated with base of modified sodium silicates and other additives, water based.

HIDROTECMA-SP when applied on concrete or mortar substrates, penetrates in their interior through the pores, small cracks and capillaries, crystallizing inside after chemical reactions and filling them. Characteristics of concrete and mortar are this way enhanced: protection, durability, resistance, reduction of water permeability among others benefits.

Characteristics:

HIDROTECMA-SP is a liquid, clear colorless transparent, alkaline product with high contents in solids. A durable protection is created against moisture and water penetration in concrete floors and pavements, after reactions and crystallization inside the concrete. Part of the formed crystals are hygroscopic, they swell by absorbing water, creating a silica gel that forms a waterproofing membrane inside the concrete structure.

The use of **HIDROTECMA-SP** for the treatment of concrete floors and pavements produces, among others, the following benefits:

- High reduction of water permeability
- Permanent sealing of a great part of the existing micro cracks in the surface.
- Strong reduction of the diffusion coefficient of chloride ions, that could proceed from marine water, anti freezing salts, etc..
- Higher resistance to the freeze-thaw cycles.
- Higher resistance to many aggressive chemical agents.
- Reduction of alkali-silica reactions produced inside the concrete due to contact of cement with water.
- Protection of steel bars of reinforced concrete.
- Protection against efflorescence formation.
- Protection against cracks formation in concrete due to thermal variations.

Fields of application:

HIDROTECMA-SP is specially formulated for the treatment of surfaces and slabs made from cementitious materials such as concrete and mortar in:

- Parking Lots
- Bridges (roads and railways)
- Airport runways
- Concrete roads and highways
- Sea ports and marine structures
- Roof decks
- Panels and precast concrete elements
- Walkways
- Industrial surfaces and floors, etc.

- Bullfighting arenas
- Stadiums and amphitheatres
- Racing circuits

Application:

It is recommended, before starting the application, to protect all those elements made of glass, wood, ceramic floors, etc. that are near to the area of application.

a.- On new fresh concrete:

1. Apply **HIDROTECMA-SP** as soon as the concrete slab has a surface strong enough to walk on it and before that the first micro cracks and cracks created by the effect of temperature variations start to appear. Keep all the surface damp with **HIDROTECMA-SP** for approximately **30** minutes.
2. When **HIDROTECMA-SP** start to dry on the surface, damp a little with water all the surface.
3. Once **HIDROTECMA-SP** start to dry again, clean the surface with water and remove it totally by means of a nylon brush or a cleaning scraper, so that the surface be totally dry, to eliminate this way an excess of **HIDROTECMA-SP**.

In exterior applications and on surfaces finished with nylon brush or broom, it is not necessary cleaning with water; any apparent excess of **HIDROTECMA-SP** must be removed with brush or broom after **40-45** minutes.

In the case that concrete slab is going to be covered, steps 2 and 3 can be eliminated, letting the product fully dry on the surface.

Once the application is finished, let cure this concrete in similar way than non treated concrete.

b.- On old concrete (totally cured):

HIDROTECMA-SP must be always applied on concrete surfaces that are perfectly clean, dry and free of dust.

Surfaces, before its application, must be free of possible curing agents. Any product that may impede or delay the infiltration of the product in the substrate must be eliminated. Those areas where cracks or holes appear should be repaired, after cleaning the surface, with a cement based repair product (such us our **PREMHOR**).

It is necessary, before the application, to clean the concrete surface either with water and pressure hose or, preferably, with the help of an appropriate cleaner, that besides cleaning could open the pores and capillaries in order to improve the penetration of **HIDROTECMA-SP**.

In case of stains of oil, grease or any other pollutant, proceed to eliminate them with a full cleaning with detergents and degreasers. Rinse with plenty of water and let it dry totally before continuing with the application.

The necessary elimination of dust and loose particles of the surface to be treated can be done with the help of an air compressor.

1. Damp the surface to be treated with clean water almost up to saturation.
2. Eliminate any water excess or pool formed by means of a cleaning scraper. Let the surface to dry for **two-three** hours (total drying).
3. Stir thoroughly the packages of **HIDROTECMA-SP**
4. Start the saturation of the surface with **HIDROTECMA-SP** (see issue W) in such way that all the surface be damped with **HIDROTECMA-SP** for at least **30** minutes.
5. After that, one of the following situations could happen:
 - 5.1 If after other **40-50** minutes, the bigger part of **HIDROTECMA-SP** has been absorbed by the substrate, eliminate the remainders (pools) by means of brush, broom or cleaning scraper so that this excess be absorbed in the closer areas or just remove it from the surface.
 - 5.2 If after those **40-50** minutes the most part of **HIDROTECMA-SP** is still on the surface, wait approximately more **two hours** and afterwards, clean all the surface with clean water and remove it totally using a cleaning scraper until the surface be totally dry.

Issue W: **HIDROTECMA-SP** can be applied for the saturation of surfaces, as described in former issue 4, by low pressure spray equipments, rollers, nylon brushes or brooms or cleaning scrapers. It is recommended its application by low pressure spray equipments in large areas such as parking lots or airport runways.

The treated surfaces can be used as soon as the application is finished and the surface is again dry to touch.

Coverage:

The coverage and quantities of use to be recommended for each particular treatment depend on several factors such as kind and porosity of the substrate; as these two characteristics mainly condition the absorption capacity and in the application of this kind of products is always convenient to reach a high rate of surface saturation.

Taking this into account, an average coverage could be **4-5 m² per liter** of **HIDROTECMA-SP**.

Precautions:

Safety protection measures must be taken during its use and storing, as it happens with most of chemical products used in construction. It is an irritant product for eyes, skin, and mouth and nose tracts. Avoid contact of this product with these areas. Keep away from children. In case of contact with eyes, clean thoroughly with plenty of water for at least 15 minutes. In case of contact with skin, wash with plenty of water and soap.

HIDROTECMA-SP is an alkaline product, so all surfaces made of glass, wood, glazed elements, etc. near to the application area, should be protected.

Storage:

HIDROTECMA-SP should be stored in cool and dry places (+5° C to +30°C) . Very low temperatures may cause the product to crystallize by freezing. Shelf life of **HIDROTECMA-SP** can be 24 months since its production date provided it is kept in its original containers and stored according to the described conditions.

Packaging:

HIDROTECMA-SP is packaged in non recoverable plastic containers of **25, 200 and 1.000 litres** net.

BENEFITS

- EASY TO APPLY.
- IT DOES NOT CONTAIN SOLVENTS OR VOCs.
- MINERALIZER AND HARDENER OF DEGRADED SURFACES.
- IT REDUCES THE WATER ABSORPTION COEFFICIENTS OF CONCRETE FLOORS AND PAVEMENTS.

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