CHELFIX CONSTRUCTION CHEMICALS

Chelfix SH300

Corundum Aggregate Dry Shake Surface Hardener

TS EN 1504-2

Public Pos. No: 04.613/3F10

Product Description

Applied to fresh concrete surfaces, hard aggregate, chemical cement corundum and similar additives, special color pigments and polymer additives, powder surface hardener.

Areas of Usage

- Indoor and outdoor,
- Car park, garage ramp,
- Hangars and mechanical workshop,
- Underpasses, subway stations,
- In material stores, factories, fair grounds, shopping malls where human traffic is intense, industrial buildings, gas stations, stations, airplane hangar etc.

Features and Benefits

- High wear resistance is applied in requested localities.
- It is used by sprinkling on fresh concrete by hand or with a machine.
- Provides resistance to dust.
- It is more resistant to wear.
- It is more resistant to strike.
- It increases the strength of the concrete.
- It increases the impermeability of concrete.

Application Instructions

Surface Quality: It is very important that the floor is ready before the application of CHELFIX SH 300. Otherwise, cracks will occur in the concrete. Dirt surface to be applied; Squeeze should be done very well. For this reason, after squeezing the ground with rollers, it should be wetted through the sprinklers and then cross over the cylinder again. Surface tests such as layer test should be done to check that the hardener can be made. These procedures must be repeated until the ground is well pressed. In order to prevent the concrete to lose juice and to prevent cracks, sera nylon is laid on the surface. If CHELFIX SH300, ground hardener will be applied by pouring screed concrete on the existing concrete, after the concrete surface is cleaned, floats or monolithic screed application should be chosen according to the project needs. The surface should be roughened with various methods where necessary and cement sherbet should be removed. The exiting concrete surface should be saturated with water at least one day before the application starts and free water should be prevented from leaving the surface. Application should be done on saturated concrete. Before the application, the ano should be formed in square form by planning according to the determined and the screed should be made according to these principles. If the box profiles will be used while anos are constituted, the mortar used for fixing should be removed when the screed is poured. Ano molds should be cleaned before each application and mold separator should be used to remove the edges of the screed concrete. Ano molds used when pouring screed concrete should be designed at the height of the screed. The fact that the molds to be used have a lamp with a tenon structure will prevent the concrete under loan from collapsing through the cold pointing sections. Steel reinforcement to be used according to the project should be placed in place using concrete over. If the reinforcement is laid on the existing floor without using a rust share, it will not prevent the concrete tension and cause the ano to crack under load, since the reinforcement will not have any adherence to the s creed concrete. If single layer of reinforcement is to be used, the reinforcement should be laid in the middle of the concrete thickness. Reinforcement should not be carried out outside the ano's border.

Reinforcement is to be solved with welded wire fabric, welded wire fabric should be laid on top of each other. Cold and crack control joints should be formed in order to control the shape and location of the reinforced concrete floor under load without creating cracks in the concrete. In order to the movements in these joints to occur only in the horizontal and in the desired direction, ano must be removed and must be connected to the ano formed. The remaining parts of the joint reinforcement outside the ano should be plastic pipe or hose and the other ano should be poured the concrete in this way. This application will prevent the vertical and longitudinal movements of cold joints during the movement of anos. In monolithic screed application, CHELFIX BOND AD epoxy primer should be used to ensure adherence between old concrete and new concrete. Before taking the CHELFIX BOND AD cure, it is necessary to ensure that the surface is sanded sufficiently. If the old concrete moisture cannot be removed CHELFIX BOND 300 NB moisture barrier primer should be preferred. In floating screed applications, plastic sheets should be laid on the old concrete and the cement should be prevented from adhering to the old concrete. Cracks that may occur in the screed concrete under faulty design and application and service loads will be reflected on the surface hardener. The recommended concrete Compressive Resistance should be at least C25 according to the Turkish Standards Institute 206. The thickness of the screeds should be above 12 cm and the water/cement ratio should be above 0.45.

Surface Preparation: minimum 2 cm thick thermal insulating board is placed in, such as walls, curtain concrete around the floor to be applied to the surface hardener application. In the middle column, elevator partitions, partitions around the minimum 2 cm thermal insulating board is applied. By this means, a gap is created to allow the concrete to run. This allows the cap to dilate and shrink freely without cracking.

When pouring concrete between ano, it should compress the concrete using a vibrated floating rule. The necessary adjustments must be made by using the control floating rule and wood float before the concrete surface is exposed to water. The water on the concrete surface should be swept with a long sleeved wooden floating rule.

CHELFIX SH300 should be sprinkled in such a way that it will not separate when applied.

Base coat process according to the environment and weather conditions, when the concrete is on 0,5 -1 ,5 cm deep footprints should be applied after hard enough to remain. The material should not be poured on the ano as a heap, sprinkled as homogeneously as possible and corrected with a squeegee. If the material is poured onto the ano surface and spread with a squeegee, the material should be scraped off and cleaned from the surface where the first poured material remains thicker. In the first stage, 2/3 of total consumption should be sprinkled on the concrete surface and spread with the help of a squeegee or a machine. The spreading material should be expected to be moistened by taking the water of the concrete (color change) and the surface hardener should be coalesce with the concrete by making enough disc polishing (helicopter tray polishing). After that, the remaining 1/3 of the amount is sprinkled on the fresh concrete surface and polishing is done with the help of disc polishing. Honing process is continued until the intended surface quality is reached. The surface material spilled on the ano should be continuously with a spatula while disc polishing. Otherwise, the elevation difference between the two ano and the bad jointing appearance may occur. After the coarse polishing, the delicate polishing should be started, delicate polishing is the polishing with a knife. Knife polishing should be done until the desired brightness is achieved.

Curing Stage: after polishing, cure material must be used to protect the concrete surface. Cure material increases the concrete strength value and decreases the rate of evaporation of water in the concrete and allows the concrete to make a socket with the amount of water available. Prevents shrinkage cracks and surface dust. Cure application should be made in summer and winter. After the concrete is hardened enough, ano's should be cut at least 4mm width and the joints should be formed.

Application Notes / Restrictions

- In order to obtain performance from the product, the application time of polishing must be determined very well.
- The application of surface hardener is done with the time varying according to the quality and type of concrete to be applied. When applying, should be paid attention to the socket stages of concrete.
- The product, may cause sensitization by skin contact. Safety gloves or goggles should be worn.

Protective cream can also be applied to the hands before starting work. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Application should be avoided in windy, extreme cold and hot weather conditions.

In cases where relative humidity drops below 40%, efflorescence may occur depending on the type of cement used in the concrete used.

Joint cutting should be done as soon as possible, after the application. If it is cut after 3 days, it will be difficult to cut and concrete cracks will be seen on the surface.

For CHELFIX SH300 application, concrete ano, tray polishings, base coat and surface finish equipment for special applications, polyurethane sealant gun is required.

Application time for surface hardeners is affected by every variable that affects the placement of concrete, and therefore varies according to dominant conditions.

In mechanical applications with automatic ejector and laser screed spreader, the sprinkler process can start immediately after the concrete release to allow the surface hardener to wet.

Compression with trowel can be started when the weight of the helicopter trowel is met by the concrete.

In manual application, the surface hardener should be sprinkled after 3 to 5 mm without leaving any fingerprints.

Periodically checking the status and development of concrete ensures the correct decision about the stages and turn of the application.

Application of surface hardener should not be done in very windy or arid conditions.

Some of the cement is replaced with volatile ash, concrete is more sticky and workability is low should not be used.

- Changes in concrete requirement such as water and cement content can cause slight tailing.
- Surface hardeners can make a difference in color based on the natural variety of concrete applied.
- To provide color consistency and continuity, the floor placement process should be done as clean and protected from the environment as possible.
- During the drying process, color variations are normal and this situation is expected. Each process must provide a regular CHELFIX SH300 application.
- Right timing and polishing techniques are obligatory.
- Wash hands with warm water and soap immediately after application.

Technical Data

General Information	
Color	Grey, Red and Green
Shelf Life	12 months in dry environment in unopened packaging
Package	25 kg kraft bag
Application Information	
Outlay	4-8 kg/m²
Implementation Temperature	(+5°C) - (+30°C)
Cleaning Duration	4 hours (+20°C)
Performance Information	
Bending Resistance	≥ 9 N/mm²
Compressive Strength	≥ 70 N/mm²
Wear Resistance (according to the Taber method)	≤ 3,0 gr (H22, 1000 gr, 1000 circulation)
Fire Resistive	A1