CHELFIX
CONSTRUCTION CHEMICALS

Chelfix Grout100

Cementitious, Fast Setting, non-shrink Flowable Grout

Product Description

Chelfix Grout100 is a cement based , pre-mixed chloride free self compacting cementitious fast setting grout. It is high strength flowable mortar, which is non shrink mortar despite of its very high flowability.

Areas of Application

- Machinery foundations and machine beds.
- Stanchion bases, struts, railing, and guardrail assemblies.
- Joints of prefabricated concrete elements.
- Filling of shutter tie rod openings.
- Between anchors of steel constructions.
- Mounting of tanks and silo columns.
- Pile top re-profiling.
- Exterior concrete, partition and column heads, determination of track beds.
- Fixing of the industrial machines on the foundations.
- Filling of hollows and craters in concrete.

Advantages

- Mixed with only water and can be applied easily.
- Extremely dense and low permeability.
- High compressive strength.
- It is not affected by moisture because it does not contain metal
- High fluid consistency can be poured or pumped into variable gap widths down to 10 mm.
- It is resistant against various chemicals.
- Free of bleeding.
- Resistant to water and weather conditions.
- Perfect bonding to the concrete and steel.
- Non-shrink.

Application Instructions

Surface Quality: The surfaces must be clean, smooth, solid, free from any antiadhesive substance such as dust, oil, dirt, rust, mold oil, detergent and waste. If there is crack, hollow on the floor to be applied, it should be repaired with appropriate Chelfix R200 repair mortars. Chelfix Grout100 should be applied 3-4 days later. Surface Preparation: Cement slurry and weakened parts should be removed, and there should be no materials such as oil dirt and rust on the surface. Absorbent surfaces must be pre-wetted, but there should be no water droplets or drops. Mixing: 3.5 – 4.0 litr clean, clear water received from normal ambient temperature into a clean container which is free from all kinds of materials which prevent adhesion. Chelfix Grout100 in 25 kg bag as powder is poured into a container filled with water. The product is mixed with a low speed mixer until a homogeneous mixture without lumps is obtained. Mixing time should be approximately 1 min. The mortar obtained at the end of the process should not be rested. It should be applied without waiting. After the material has entered the reaction, it should not be mixed again with water.

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Application Instructions

Chelfix Grout100 should be poured from one side in order to fiil under the gaps surrounded by four sides and covered. So it discharges air and prevents gaps. it can be pushed from one side with a long piece of iron during casting to speed up flow. The thickness of the casting should be 10-60 mm as a layer thickness at a time. it is advisable to carry out a preliminary test if small diameter anchors are to be used.
For applications thicker than 60 mm, it is possible to add aggregates of 5-12 mm in diameter at the rate of 30% of the material.
Aggregate addition is done in two ways.
The aggregate is added into the prepared mortar. When a homogenous mixture is obtained, this process is continued for 3 minutes.
Aggregate is poured or spread on the floor to be applied. The mixture is then poured onto the prepared Chelfix Grout100. The self-leveling mortar also allows the possibility of wrapping around the aggregate to obtain a high-strength concrete.

Application Notes/ Restrictions

- For outdoor applications, It should be protected from rain, frost and sunshine approximately for 2 hours.
- In cement based products, reaction times are affected by ambient and ground temperatures. Reaction times are shortened in a hot environment, and extend in a cold environment.
- Hot water should be used in cold conditions.
- In hot environments, iced mixture water should be used.
- During the application of the product, work clothes suitable for occupational health and safety rules should be worn and appropriate glasses and masks should be used.
- It must be protected after application against adverse weather conditions such as direct sunlight, high air temperature (above +35°C), rain and frost. The product should be cleaned thoroughly with water and detergent before it is fully cured and hardened.
- Immediately after application, before hardened, the equipment should be cleaned with water. After the product is hardened, it should be cleaned by mechanical methods.

Technical Data

Property	
Solid content	100%
Color	Grey
Grain Size	Dmax: 3 mm
Mixture Ratio	3.0 – 4.0 litr water/25 kg powder
Workability Time	Minimum 5 - 10 min.
Mortar Density	2.3 ±0. 1 kg/lit
Time to put into Service	Approximately 2 hours
Application Thickness	minimum 10 mm / Maximum 60 mm
Compressive strength: BS1881, part 116 , TS EN 196 & ASTM C109/109M-02	≥ 60 MPa @ 28days
Flexural strength: BS6319,Part3,1998	≥ 9.0 MPa @ 28 days
Application temperature	(+5°C) - (+35°C)
Service temperature	-30 0C to 200 0C
Adhesion Strength (28 days) (TS EN 1542)	≥ 2.0 MPa
Capillary Water Absorption (28 days) (TS EN 13057)	Less than 0.5 kg/(m2 .h0-5)
Consumption (25 kg craft bag): Mixture Density: Powder consumption per 1 litr mortar (kg): Mixture Water Amount (lt):	2.3±0.1 ~21 3.5-4.0

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Placing and Finishing Under Base plate	Enough material should be available to achieve continuous fill and to complete the work. Pouring of the mixed grout should be started from one side only to avoid air entrapment. To obtain maximum flow distance, a side shutter feed between 100mm to 250mm high should be erected and used to build the required head.
Formwork Preparation	The form material should be waterproof and resistant to hydrostatic forces of the grout. Formwork installation should be done against the possible leakage of the cement paste. An opening should be designed in the formwork with a width of 5 cm at minimum for pouring the grout. For providing a constant pressure for easy compacting of the grout the forms should be as high as possible in the pouring side. In grouting of huge base plates, special pipe and pump systems can be used or grout can be prepared with 5% extra water. For preventing the pressure releases, the forms should be placed without any tolerances and gaps between the concrete and form material.
Curing	Since Chelfix Grout100 is a cementitious based material, it should be treated in a manner similar to concrete. Curing can be conducted by either using concrete curing compound such as Chelfix curing compound or by using wet hessian and polyethylene.
Yield	Approximately 13-13.5 liter/25kg bag depending on consistency.
Packaging	Chelfix Grout 100 is available in 25 Kg bags.
Storage	Chelfix Grout100 has a shelf life of 12 months from date of manufacture if stored at temperatures between +2 0C to 50 0C . If these conditions are exceeded, Chelfix technical department should be contacted for advice.
Fire	Chelfix Grout100 is nonflammable.