

Chelfix R300

Special cement based, thixotropic, structural repair mortar for thick application



Product Description Chelfix R300 is a single component, special cement-based, thixotropic, polymer modified structural repair mortar which contains silica fume, (alkali and chemical resistance) and PP fiber added. Suitable for vertical and overhead application and it is offered for applications from 10 mm to 40 mm thick.

Areas of Application

- Repair of all types of structural concrete where high strength and extremely low shrinkage properties are required.
- It's used in the filling of shift rod spaces (rod holes/Tie-rod holes) and core spaces in.
- Ports and marine structures.
- Concrete bridges.
- Filling hollows on the surfaces of concrete prefabricated elements and walls.
- Leveling of slab floor before the final coating.
- Repairing of corners and edges.
- For the repair of vertical and overhead elements.
- As a repair mortar for all structural elements in buildings, water retaining structures, industrial plants, bridges, etc.

Advantages

- Shrinkage controlled polymer modified structural repair mortar.
- Single component, easy to apply.
- Extremely low permeability to water, providing excellent protection to steel reinforcements and host concrete.
- Thixotropic properties allowing extra high build for vertical and overhead applications.
- Suitable for internal and external applications.
- Cost effective, hand applied no formwork is required.

Thicknesses and Size Limitations Chelfix R300 can be applied in single applications for sections up to 40 mm.

Application Instructions

Surface Quality: : The surfaces must be clean, smooth, solid, free from any anti-adhesive substance such as dust, oil, dirt, rust, mold oil, detergent and waste. Weak parts on the surface should be removed.

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 - 4,5 it clean, clear water received from normal ambient temperature into a clean container which is free from all kinds of materials which prevent adhesion. Chelfix R300 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 at least 5 minutes, the mortar obtained at the end of the process should be rested for 3 minutes and mixed again until it becomes homogenous for 2 minutes. After the material has entered the reaction, it should not be mixed again with water. Chelfix R300 is applied with a trowel after used as primer to fuse old concrete and new concrete.

Application Notes / Restrictions

- For outdoor applications, the first 3 hours of sunshine should be protected from rain and frost.
- 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.
- 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.
- The prepared mixture should be placed in 5 min. depending on the air temperature and the amount of water.
- 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.
- The prepared mortar is applied to the surface with a trowel. If necessary, clover is applied to ensure surface smoothness. Applications with wall thickness over 40 mm should be done in coats.
- In severe wind and severe environmental conditions, can be applied as curing material in order to prevent cracking of Chelfix R300.

Technical Data

| General Information | |
|--------------------------------------|--|
| Appearance | Grey Powder |
| Shelf Life | 12 months in unopened package in dry environment |
| Package | 25kg kraft bag |
| Application Information | |
| Application Temperature | (+5° C) - (+35°C) |
| Mixture Ratio | 3.5 - 4.5 lit water / 25kg powder |
| Pot Life | Min. 30 min. |
| Time to Put into Service | 1 day |
| Performance Information | |
| Application Thickness | 10 - 40 mm (Single coat) |
| Flexural Strength (EN 12808-3) | > 7,0 N/mm ² |
| Concrete Adhesion Strength (EN 1542) | > 2,0 N/mm ² |
| Compressive Strength (EN 12190) | > 45 N/mm ² |
| Modulus of Elasticity (EN 13412) | > 20 Gpa |
| Limited Shrinkage (EN 12617-4) | > 2,0 N/mm ² |
| Service Temperature | (-30° C) - (+400° C) |

Consumption Table

| CHELFIX R300 | Mixture Density (kg/lit) | 1mm / 1m ² Powder Consumption (kg) | Mixture Water Amount (lit) |
|-----------------|--------------------------|---|----------------------------|
| 25 kg kraft bag | ~2.1 | 1.9 | 3.5 – 4.5 |

Curing

As Chelfix R300 is a cementitious based material, it should be cured in a similar method to concrete.

Storage

Chelfix R300 has a shelf life of 12 months from date of manufacture if stored at temperature between 2 0C and 50 0C.

Fire

Chelfix R300 is nonflammable (A1).

