

Chelfix Grout 100

Cementitious, Fast Setting, non-shrink
Flowable Grout



Product Description Chelfix Grout 100 is a cement-based, pre-mixed, chloride-free, self-compacting cementitious fast-setting grout. It is a high-strength, flowable, non-shrink mortar despite 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 industrial machines on foundations.
- Filling hollows and craters in concrete.

Advantages

- Mixed with water only and applied easily.
- Extremely dense with low permeability.
- High compressive strength.
- Not affected by moisture because it contains no metal.
- High fluid consistency; can be poured or pumped into variable gap widths down to 10 mm.
- Resistant to various chemicals.
- Free of bleeding.
- Resistant to water and adverse weather conditions.
- Perfect bonding to concrete and steel.
- Non-shrink.

Application Instructions

Surface Quality: The application surface must be clean, smooth, solid, and free from any anti-adhesive substances such as dust, oil, dirt, rust, mold oil, detergents, and waste. Any cracks or hollows on the floor must be repaired beforehand using appropriate Chelfix R200 repair mortars, and Chelfix Grout100 should be applied 3 to 4 days after these repairs.

Surface Preparation: All cement slurry and weakened concrete parts must be removed to ensure no oil, dirt, or rust remains. Absorbent surfaces must be thoroughly pre-wetted to saturation, ensuring no free standing water or droplets are left on the application area.

Mixing: Pour 3.5 to 4.0 liters of clean, clear water at normal ambient temperature into a clean container that is free of any contaminants. Gradually pour the entire 25 kg bag of Chelfix Grout100 powder into the water. Mix continuously with a low-speed mixer for approximately 1 minute until a smooth, homogeneous, lump-free mixture is achieved. The resulting mortar must not be rested and must be applied immediately. Once the material begins its reaction, do not re-mix it or add additional water.

Application Instructions: To prevent air entrapment and avoid void formation, Chelfix Grout100 must be poured continuously from one side only when filling four-sided enclosed gaps. During casting, a long iron bar may be used to gently rod the material

from one side to accelerate flow. The single-layer application thickness should be kept between 10 mm and 60 mm. A preliminary test is recommended when installing small-diameter anchors. For application thicknesses exceeding 60 mm, clean aggregates with a diameter of 5–12 mm can be added at a rate of 30% by weight of the material. Aggregate addition can be carried out using two methods. In the first method, the aggregates are added directly into the fully mixed mortar and mixed for an additional 3 minutes once a homogeneous consistency is reached. In the second method, the aggregates are spread or poured directly onto the application area first, and the prepared Chelfix Grout100 is then poured over them. The self-leveling mortar thoroughly encapsulates the aggregates, forming a high-strength concrete structure.

Application Notes / Restrictions

- For outdoor applications, the product should be protected from rain, frost, and direct sunlight for approximately 2 hours.
- In cement-based products, reaction times are directly affected by ambient and ground temperatures; reaction times are shortened in hot environments and extended in cold conditions.
- Hot water should be used for mixing in cold weather, whereas chilled or iced mixing water should be used in hot environments.
- During application, personal protective equipment suitable for occupational health and safety rules must be worn, including appropriate work clothes, protective glasses, and dust masks.
- After application, the material must be protected against adverse weather conditions such as direct sunlight, high temperatures (above +35 °C), rain, and frost.
- Equipment and tools should be cleaned thoroughly with water immediately after application before the material hardens. Uncured product residues on surfaces can be cleaned using water and detergent; once fully cured and hardened, the material can only be removed using mechanical methods.

Technical Data

Solid content	100%
Color	Grey
Grain Size (Dmax)	3 mm
Mixture Ratio	3.0 – 4.0 L water / 25 kg powder
Workability Time	Minimum 5 - 10 minutes
Mortar Density	2.3±0.1 kg/L
Time to put into Service	Approximately 2 hours
Application Thickness	Min. 10 mm / Max. 60 mm
Compressive strength (28 days)	~90 MPa (BS1881, part 116, TS EN 196 & ASTM C109/109M-02)
Flexural strength (28 days)	≥ 9.0 MPa (BS 6319, Part 3, 1998)
Application temperature	+5°C to +35°C
Service temperature	-30°C to +200°C
Adhesion Strength (28 days)	≥ 2.0 MPa (TS EN 1542)
Capillary Water Absorption (28 days)	< 0.5 kg/(m ² ·h ^{0.5}) (TS EN 13057)
Consumption (25 kg craft bag)	2.3±0.1
Mixture Density	~21
Powder consumption per 1 liter mortar (kg)	3.5-4.0
Mixture Water Amount (lt)	

Placing and Finishing Under Base Plate	Ensure sufficient material is prepared prior to application to maintain a continuous, uninterrupted pouring process. Grout must be poured from one side only to prevent air entrapment. To achieve maximum flow distance, erect a side shutter feed with a height between 100 mm and 250 mm to build the necessary hydrostatic head pressure.
Formwork Preparation	Formwork must be completely waterproof and structurally resistant to the hydrostatic pressure exerted by the grout. All formwork joints must be tightly sealed to prevent cement paste leakage. Design a pouring opening with a minimum width of 5 cm. To ensure constant pressure for effective self-compaction, maintain maximum possible formwork height on the pouring side. For large base plates, utilize special piping and pumping systems or prepare the mixture with an additional 5% water. Forms must fit flush against the concrete surface without gaps or tolerances to avoid pressure loss.
Curing	As Chelfix Grout 100 is a cementitious product, it requires curing methods similar to standard concrete. Curing can be performed using a suitable liquid curing compound (such as Chelfix Curing Compound) or by covering the surface with wet hessian and polyethylene sheeting.
Yield	Approximately 13.0 – 13.5 liters per 25 kg bag, depending on the mixed consistency.
Packaging	Chelfix Grout 100 is supplied in 25 kg bags.
Storage	12 months from the date of manufacture when stored in unopened original packaging at temperatures between +2 °C and +50 °C. If storage conditions exceed this range, contact the Chelfix Technical Department for guidance.
Fire Reaction	Chelfix Grout 100 is non-flammable.