

INNO-CRETE FOX GROUT FC155

Cement Based, High Strength Grout Mortar

Definition

FOX GROUT FC155 is a cement-based, high-strength, non-shrinkage, self-compacting grout mortar.
Public Works exposure No: 04.613/3c
Complies with EN 1504-3:2005 standard/R4 class.

Fields of Application

- In the manufacture of curtain and column headings,
- In the assembly of prefabricated concrete building elements,
- In power plants,
- In fixing steel columns to the foundation,
- Fixing all kinds of industrial machines, generators, compressors and pumps,
- Reinforced concrete and steel wrapping (sheathing) is used to fill the gaps left in a controlled manner in reinforcement applications.

Advantages

- It can only be mixed with water, poured into the mold and applied easily.
- Provides high adherence to concrete and reinforcement,
- It has high pressure resistance,
- Resistant to Freeze-Thaw cycle,
- It shows high fluidity,
- Does not vomit water,
- Expands in plastic and early hardening stages,
- Weather conditions do not change its physical properties during the service period,
- It is water impermeable, resistant to chlorine, sulfate attacks and oils,
- It does not cause shrinkage.

Technical specifications

Structure of the Material				Special cement with mineral fillers and polymer reinforcement
Density				2,25±0,05 kg/lt
Color				Grey
Compressive Strength	EN 196		1 day	≥30 N/mm ²
			7 day	≥50 N/mm ²
			28 day	≥60 N/mm ²
Flexural Strength	EN 196		28 day	≥12 N/mm ²
Adhesion Strength	EN 1542	Concrete to steel	28 day	≥2 N/mm ²
			28 day	≥2 N/mm ²
Elasticity Modulus			28 day	20 KN/mm ²
Chloride Ion Content	EN 1015-17			≤%0,05
Limited Shrinkage/Expansion	EN 12617-4			R4 ≥2,0 MPa
Response to Fire	EN 13501-1			A1
Application Thickness				10 mm-80 mm
Applicable Ground Temperature				+5°C /+30°C
Service Temperature				-20°C /+400°C
Usage Time				40-45 min
Walkable Time				24 hour
Full Curing Time				28 day



The above values are given at +23°C and 50% relative humidity. High temperatures shorten the time, low temperatures extend the time.



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Application Procedure

Preparation of Machinery and Foundation

Before placing the machine, loose and damaged areas in the concrete should be cleaned and damaged areas should be repaired. Surfaces where grout will be applied must be roughened. Any foreign matter that may affect performance, such as oil, grease and dust on the bolt and base surface, must be cleaned. Air discharge holes must be drilled in the base plate beforehand. The machine should be placed, its position and scale should be adjusted, and its position should not be changed after that. If the adjustment wedges (shims) will be removed later, they should be lightly oiled to prevent the grout from sticking. After placing and adjusting the machine, the foundation concrete must be saturated with water 6 hours before grout pouring.

Preparation of Molds

Molds should be made of solid material that will not absorb or leak the water of the grout mortar, and should be mounted to withstand the forces it will encounter during the process. On the side where the grout mortar will be poured, a casting gap of about 5 cm should be left between the edge of the base plate and the mold. In order to give the grout mortar the pressure that will enable it to spread, the mold height should be considered on the casting side depending on the situation. In order to fill the bottom of very large sized plates, it may be necessary to take precautions such as creating a pressure height of up to 1.5 m or using equipment such as pumps and pipes, pouring the first batch with mortar containing 5% more water than normal and making the surface of the foundation concrete slippery. The edges of the molds must remain free of gaps to prevent leakage and pressure loss.

Mixing

The appropriate amount of water described on the packaging is poured into a clean mixing bowl. While **FOX GROUT FC155** is slowly added into the water, it is mixed with a 400-600 speed electric mixer and a suitable mixing tip for approximately 3-4 minutes until it becomes homogeneous. There should be no lumps left in the material. After the material is left to rest for 3 minutes, it is mixed again for 1 minute to make it ready for application.

Mixing Ratios

25 kg/1 bag for **FOX GROUT FC155**; Approximately 3.25 lt±0.25 water should be used.
1 kg **FOX GROUT FC155**; Approximately 120±10 ml of water should be used.

Application

If there are other machines operating around the machine to be filled with foundation, the vibration on the surface of a container of water placed on the base plate should be observed to determine to what extent the vibrations from the environment are transmitted. If necessary, operating machines should not be operated at +20°C for at least 10 - 12 hours until the grout mortar sets. The prepared grout mortar should be poured onto the surface continuously from only one side of the mold, with a minimum thickness of 10 mm in a single layer. In large areas, 8 cm thickness should not be exceeded and single piece casting should not be done. Depending on the grout casting details, thicker applications can be performed in 2 or 3 layers. Or aggregate can be added to the grout mortar for single layer casting. The aggregate to be used should be selected as crushed stone number 1 with a diameter of 5-16 mm and should be washed clean before application. Two-sided casting should be avoided to avoid air trapping in the mold. To ensure that all cavities inside the mold are filled, placement should be done using a steel drum with a hooked end, and a vibrator should not be used. After application, the molds should not be removed before 18-24 hours. Large surfaces open to the atmosphere, especially hot, dry and windy environments, should be protected against rapid evaporation with a cloth, water or curing agents for 24-48 hours. If you want to break the exposed edges, they can be broken after setting has started and the mortar and mold have hardened. Adjustment wedges should not be taken before 2 days. After the machine is put into operation, the looseness of the nuts and bolts should be checked and tightened if necessary.

Cleaning Application Tools

After application, the tools and equipment used should be cleaned with water. **FOX GROUT FC155** can only be cleaned from the surface mechanically after hardening.

Consumption

Approximately 1.9 kg/m² of powder product should be used to obtain 1 mm thickness.



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Matters to be taken into consideration

- **FOX GROUT FC155** should be applied within 45 minutes at +20°C.
- For outdoor applications, it should be protected from sun, rain, wind and frost for the first 24 hours.
- Working and reaction times of cement-based repair mortars are affected by air temperature, humidity and ground temperatures. High temperatures accelerate hydration and the working time is accordingly shortened. Low temperatures slow down hydration, which increases operating time. In order for the material to complete its cure, the applied ground temperature and ambient temperature must not fall below the minimum allowed temperature.
- It should not be used in contact with plasters whose pH value is lower than 5.5.
- A vibrator should never be used while placing the material.
- For applications at low temperatures (between +5°C and +10°C), **FOX GROUT FC155** should be stored in warm places.
- Mixing water should be heated between +30°C and +50°C and used. Areas to be filled with **FOX GROUT FC155** should be covered and protected from cold before application.
- For applications at high temperatures (between +25°C and +30°C), **FOX GROUT FC155** should be stored in cold places. Mixing water should be made using cold or even ice.

Packaging

25 kg polyethylene reinforced kraft bag

Shelf life

When stored correctly at room temperature, between +5°C and +30°C, away from direct sunlight, the shelf life is 12 months from the date of production. Opened packages should be closed and consumed within 1 week.

Storage

It should be stored in its unopened original packaging, in a cool and dry environment, protected from frost. For short-term storage, a maximum of 3 pallets should be stacked on top of each other and shipment should be made on a first-in, first-out system. For long-term storage, pallets should not be stacked on top of each other.

Security precautions

It is dangerous to approach storage and application areas with fire. Storage and application areas should be ventilated. During application, work clothes, protective gloves, glasses and masks in accordance with occupational and worker health rules should be used. It should not be contacted with skin or eyes during storage and application. In case of contact, it should be washed immediately with plenty of water and soap. If swallowed, a doctor should be consulted immediately. Food and beverage materials should not be brought into application areas. It should be stored in places inaccessible to children. For detailed information, please refer to the Material Safety Data Sheet.

Disclaimer

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Dop No: 0018

EN 1504-3:2005

Fox Grout FC155

It is a cement-based, high-strength, non-shrinkage, self-compacting grout mortar.

Methods 3.1, 3.2

Compressive strength / Class R4 ≥ 45 Mpa

Chloride ion content / $\leq 0,05$ %

bond formed by adhesion / Class R4 $\geq 2,0$ Mpa

Limited shrinkage / expansion / Class R4 $\geq 2,0$ Mpa

Response to Fire / Class A1



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