

Flo-Grout 3

General purpose non-shrink cementitious grout



Description

Flo-Grout 3 is pre-mixed, pre-packed chloride free cementitious grout. It contains cement, selected additives, well graded, and non-reactive aggregates and is designed to give excellent flow properties, shrinkage compensation, frost resistance, and high compressive strength.

Applications

Flo-Grout 3 is ideally designed for use in the following applications:

- ▲ Machine beds.
- ▲ Stanchion bases, struts, railings, and guardrail assemblies.
- ▲ Filling of shutter tie rod openings.
- ▲ Anchoring of tie bars, and bolts.
- ▲ Pile top re-profiling.

Advantages

- ▲ Good non-shrinkage characteristics.
- ▲ Extremely dense and low permeability.
- ▲ High early strength development allowing for rapid installation.
- ▲ High flow can be poured or pumped into variable gap widths down to 10 mm.
- ▲ Easy to apply, single component which require only addition of water.

Standards

Flo-Grout 3 complies with ASTM C1107, Grade A.

Method of Use

Substrate Preparation

- ▲ The Substrate should be sound, clean and free from contamination. Surface laitance should be removed by acid etching.
- ▲ All surfaces should be soaked with water enough to reach saturated surfaces prior to grouting.
- ▲ A water tight formwork should be erected to avoid any grout loss.

Technical Properties:

Compressive strength: ASTM C109/109M-11	≥ 25 MPa @ 1 day ≥ 50 MPa @ 7 days ≥ 60 MPa @ 28 days
Flexural strength: ASTM C348	≥ 8 MPa @ 28 days
Colour:	Grey & white
Expansion characteristics: ASTM C827/C827M-10	Up to 3%
Fresh wet density:	2.1 ± 0.05 g/cm ³
Bleeding: ASTM C940	Nil
Application temperature:	4 - 50°C
Initial setting time @ 25°C: ASTM C191	4 hr
Final setting time @ 25°C: ASTM C191	8 hr
Service temperature:	-20 - 200°C

*Notes: Typical properties @ 3.6 litre/25 kg @ 25°C.
Compressive strength @ 1 day is under restraint.*

Mixing

- ▲ To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.
- ▲ For a flowable consistency, the addition of 3.5 - 3.6 litre of clean water should be added to clean container. The 25 kg powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until uniform consistency is obtained.

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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 100 - 250 mm high should be erected and used to build the required head.

Formwork:

As the mixed grout possesses high fluidity characteristics, all formwork and shutters should be water tight. This can be obtained by sealing underneath the formwork and at the joints by using an appropriate mastic.

The unrestrained areas should be kept to a minimum due to the expansive nature of Flo-Grout 3.

Curing

Since Flo-Grout 3 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 Setseal 22 or by using wet hessian and polyethylene.

Notes:

- ▲ At low temperatures (below 8°C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time.
- ▲ At high temperatures (35°C and above), cold water (less than 20°C) must be used for mixing

Cleaning

All tools should be cleaned immediately after finishing by clean water. Hardened materials can be cleaned mechanically.

Packaging

Flo-Grout 3 is available in 25 kg bags.

Thicknesses and Size Limitations

Flo-Grout 3 can be applied in a single layer at thickness between 10 - 100 mm. For greater thickness, an 8 – 12 mm washed aggregate should be added at a ratio of 15kg of washed aggregate to 25 kg of Flo-Grout 3.

Yield

Approximately 13.5 – 14 litre/25 kg bag depending on consistency.

Storage

Flo-Grout 3 has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

Cautions

Health and Safety

Since it is powder containing Portland cement and sand, Flo-Grout 3 may cause irritation to skin or eyes.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advise.

For further information refer to the Material Safety Data Sheet.

Fire

Flo-Grout 3 is nonflammable.

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Note:

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