

Flo-Grout HT

High flow heat resistant cementitious precision grout



Description

Flo-Grout HT is a pre-mixed, pre-packed, high strength and heat resistant (up to 400°C) cementitious grout. It contains cement, selected additives, well graded, and non-reactive aggregate designed to give excellent flow properties, shrinkage compensation, and high compressive strength.

Applications

Flo-Grout HT is ideally designed for grouting areas where high temperature resistance and high early strength grout is required.

Advantages

- ▲ Non-shrink grout.
- ▲ Suitable for use in hot areas.
- ▲ 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 requires only addition of water.
- ▲ Chloride free.

Standards

- ▲ Flo-Grout HT complies with U.S. Corps of Engineers Specifications CRD – C588-79 and CRD – C621 in term of workability.
- ▲ 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 pre-soaked with clean water for minimum of 4 hours prior to grouting.

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used. Depending on the consistency required, 4.5 litre (Fluid) or 3.75 litre (Flowable) of clean water should be added to clean container.

Technical Properties:

Compressive strength: ASTM C109/109M-11	≥ 40 MPa @ 1 day ≥ 60 MPa @ 7 days ≥ 75 MPa @ 28 days
Tensile strength: ASTM C190	4 MPa @ 28 days
Flexural strength: ASTM C348	12 MPa @ 28 days
Colour:	Grey
Expansion characteristics: ASTM C827/C827M-10	Up to 2%
Bleeding: ASTM C940	Nil
Initial setting time @ 25°C: ASTM C191	7 hr
Final setting time @ 25°C: ASTM C191	11 hr
Fresh wet density	≈ 2.0 g/cm ³

*Notes: Typical properties @ 3.75 litre/25 kg @ 25°C.
Compressive strength @ 1 day is under restraint.

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.

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

Formwork:

As the mixed grout possesses high fluidity characteristics, all formworks and shutters should be water tight.

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This can be obtained by sealing underneath the formwork and at the joints by using appropriate mastic. The unrestrained areas should be kept at a minimum due to the expansion nature of Flo-Grout HT.

Notes:

- ▲ At low temperatures (below 5°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.

Curing

As Flo-Grout HT is a cementitious material, it should be cured in a similar method to concrete. Curing can be conducted using a good concrete curing compound such as Setseal 44 or by using wet hessian sheets covered with polyethylene sheets.

Cleaning

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

Packaging

Flo-Grout HT is available in 25 kg bags.

Thicknesses and Size Limitations

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

Yield

Approximately 13 – 14 litre/25 kg bag depending on consistency.

Storage

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

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

Cautions

Health and Safety

Flo-Grout HT 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 if necessary.

For further information refer to the Material Safety Data Sheet.

Fire

Flo-Grout HT is nonflammable.

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Note:

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