

MONOGROUT NS

High flow general purpose non-shrink cementitious grout

Description

MONOGROUT NS is pre-mixed, high flow and chloride free cementitious grout. It contains cement, selected additives, well graded and non-reactive aggregates which when mixed with water provides a precision non-shrink grout with excellent flow, frost resistance and high compressive strength characteristics.

Applications

MONOGROUT NS 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

High flow characteristics, can be poured or pumped into variable gap widths.

- Excellent flow retention characteristics.
- Non-shrink characteristics.
- High early strength development rate allowing for rapid installations.
- Chloride free.

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.

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

TECHNICAL PROPERTIES @ 25°C

Colour:	Grey
Fresh water density	2.3 ± 0.1 g/cm ³
Compressive strength:	≥ 35 MPa @ 1 day
ASTM C109/109M-02	≥ 60 MPa @ 7 days ≥ 70 MPa @ 28 days

Pre-hardening

volume change: Up to +3.0%

ASTM C940

Bleeding: Nil

Flow characteristics: 280 - 290 mm

ASTM C1437

Initial

After 30 min (remix): 200 - 220 mm

Application temperature: 5 to 40°C

ASTM D2369

VOC: < 5 g/ltr

ASTM D2369

Notes:

Typical properties @ 4.0 litre per 25 kg bag. Compressive strength specimens @ 1 day should be kept under sufficient restraint. Compressive strength specimens @ 7 and 25 days are under wet cure conditions. Flow characteristics were tested using the conical mold only without the table.

4.0 litre of clean water for each 25 kg bag should be added to clean container (i.e. water-to-powder ratio = 0.16), then the powder should be 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 - 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 **MONOGROUT NS**.

Curing

Since **MONOGROUT NS** 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 **MONOGROUT NS** or by using wet hessian and polyethylene.

Notes:

- At low temperatures (below 80C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time.
- At high temperatures (350C and above), cold water (less than 200C) must be used for mixing.

CLEANING

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

PACKAGING

MONOGROUT NS is available in 25 kg packs.

Thicknesses and Size Limitations

MONOGROUT NS 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 between 50 - 70% of

MONOGROUT NS

Yield

Approximately 12 - 13 litre per 25 kg bag depending on consistency.

STORAGE

MONOGROUT NS 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, STARKE Technical Department should be contacted for advise.

CAUTIONS

HEALTH AND SAFETY

Since it is powder containing Portland cement and sand, **MONOGROUT NS** 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

MONOGROUT NS is nonflammable.

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