



NON SHRINK GROUT 510X

PRODUCT DESCRIPTION

Non Shrink Grout 510X is a high strength, non-metallic, Portland cement-based material with additives that control expansion whilst the grout is in a plastic state..

BENEFITS

- Shrinkage compensated.
- Gaseous expansion while in plastic eliminates shrinkage and settlement.
- Non- metallic iron content eliminates staining.
- Can be troweled or poured.

FIELD OF APPLICATION

- General purpose.
- Grouting underneath precast panels and concrete sections.
- Anchor bolts filling.
- Filling in cavities, gaps and base infill's.
- Filling in core holes created in panels by core drilling.
- Suitable for block work in core filling.

PACKING

25kg bag

BOND STRENGTH

| Age (Days) | Strength (MPa) |
|---------------------|----------------|
| 7 | > 5.0 MPa |
| 28 | > 10.0 MPa |
| Tested at ASTM C882 | |

- Bleeding & Expansion ASTM C 940.
- Compressive strength ASTM C 109.
- Flexural strength BS 4551.

The results above are typical data and given as a guide only. Site results may differ according to mixing process, placing, curing, etc. Preliminary tests are always recommended.

APPLICATION INSTRUCTION

SURFACE PREPARATION

- Surfaces to receive the grout must be clean and free of any type of foreign matter, grease, paint, oil, dust or efflorescence.
- In some cases, it may be necessary to roughen smooth surfaces or etch old ones with acid.
- The area should be flushed and soaked with clean water prior to grouting leaving no standing water.
- Place the grout quickly and continuously using light rodding to eliminate air bubble.

PRODUCT INFORMATION

- Appearance: Grey powder (grey when mixed).
- Fresh wet density: Approx. 2190 kg/m3 (flowable/pourable).
- Application Temp:10 °C - 30 °C.
- Expansion characteristics: Expansion 1-2%.
- Bleed: 0%.

| SETTING TIMES | | | |
|------------------------------------|-----------|------------|-----------|
| Consistency | Dry Pack | Trowelable | Flowable |
| Initial Set (hours) | 1.5 | 3.0 | 4.5 |
| Final Set (hours) | 2.5 | 4.5 | 6.5 |
| Water Requirement (litres per bag) | 2.7 - 2.9 | 3.0 - 3.4 | 3.6 - 4.0 |
| Tested at 20° C,50% RH | | | |

| COMPRESSIVE STRENGTH | | |
|----------------------|----------------------------|-------------------------|
| Age (Days) | Compressive Strength (MPa) | Flexural Strength (MPa) |
| 1 | > 30.0 | > 1.0 |
| 3 | > 45.0 | > 3.0 |
| 7 | > 55.0 | > 8.0 |
| 28 | > 75.0 | > 9.0 |

SHELF LIFE

Shelf life 9 months from date of production if stored properly in original, unopened and undamaged sealed packaging. Storage conditions Store in dry conditions at temperatures between +5 °C and +30 °C.

MIXING INSTRUCTION

| Water consistency (litres) per 25 kg bag. | |
|---|-----------|
| Flowable | 4.0 - 4.4 |
| Pourable | 3.6 - 4.0 |

Note: The quantity of water used depends on the consistency required. Mixing should be carried out as follows: -

- By high-speed mixer for a fluid consistency.
- By machine or hand-mix for a plastic consistency.
- Mixing time: 5 minutes minimum. Do not mix by hand.

Note:

Always add the grout powder to pre-measured amount of water. Mix in a suitable container. Do not add additional water as grout will bleed affecting performance. Add the grout to the water and mix for 3 – 5 mins until a homogenous consistency. - Do not add additional water other than specified. Grout that is watery, unworkable or harden should be discarded.

CURING

A damp cure of at least 3 days is necessary to control the non-shrink characteristics and maintain strength levels.

ECOLOGY, HEALTH AND SAFETY

For information advice on handling the storage and disposal of chemical products, users should refer to the most recent Safety Data Sheet (SDS) containing physical ecological, toxicological and other relevant safety data.

PRECAUTIONS

- Additions of cement or other materials will eliminate the designed product qualities.
- Water quantities may be affected by temperature, mixing method and batch size.
- Non-Shrink Grout should not be re-tempered.
- Grout temperature should be maintained from 50 - 90 degrees F (10 - 32°C) to achieve specified results.
- Use cold water in hot weather or hot water in cold weather to achieve desired grout temperature.
- Do not pour grout if temperature is expected to go below 32 degrees F (0 °C) within a 12- hour period.
- Mix material sufficiently that can be used in 30 minutes.



FORMWORK

The formwork that is to be constructed should be leak proof and watertight. The formwork should be constructed that will allow and ensure a grout head is maintained onside above the level of the underside at the base plate. The formwork should allow for gravity flow of grout with a suitable grout head allowing for continuous flow between the base plate and the concrete substrate. To ensure easy removal of formwork, it should be coated with release oil before grouting. It is recommended Maker Seal Non Shrink Grout HS should be kept in cool environment and the use of cold water for mixing. It is recommended that in instances where the temperature is above 30°C, the grouting should be conducted early in the day or late in the evening and sheltered from direct heat.