

T1 – Grout 199

(High Strength Non-Shrink Grout)

DESCRIPTION

T1-Grout 199 High Strength Non-Shrink Grout is a high-strength, non-metallic. Portland cement-based material with expansive additives which control expansion whilst the grout is in a plastic state.

SUITABLE FOR

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

ADVANTAGES

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

PACKING

25kg/bag

SHELF LIFE

9 months from date of production if stored in original, unopened and undamaged sealed packaging (recommended to store in dry conditions at temperature between + 5°C and 30°C)

CURING

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

APPLICATION PROCEDURE

Substrate 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 soaked with clean water prior to grouting leaving no standing water. Place the grout quickly and continuously using light rodding to eliminate air bubble.

Mixing

Water consistency (litres) per 25kg 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 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.

Dry Pack Grout	Add 2.7-2.9 liters water per 25 kg bag
Trowelable Grout	Add 3.0-3.4 litres water per 25 kg bag
Flowable/Pourable Grout	Add 3.6-4.0 litres water per 25 kg bag

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 be bleed affecting performance. Add the grout to the water and mix for 3-5 mins until a homogeneous consistency. Do not add additional water other than specified. Grout that is watery, unworkable or harden should be discarded.

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TECHNICAL SPECIFICATION

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

Bond Strength	
Age (Days)	Strength (MPa)
7	> 5.0 MPa
28	> 10.0 Mpa
Tested at ASTM C882	

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 inside 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 to 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.

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.