

SmartNSGrout SP

Non-Shrink Grout for Semi-Precast and Repair

SmartNSGrout SP is a pre-packed single component cementitious grout, it is non-shrink and chloride-free, consists of graded sand, cement and chemical additives. It is ideal for in-situ connection, small patch repairs.

FIELDS OF APPLICATION

- Wall Panel joint mortar grout
- Chloride wall patch repair
- Filling of Precast joints and gaps

BENEFITS

- Non shrink
- Chloride free
- Good workability
- Pre-packed and premixed allow convenient handling in mixing, minimizes error of site blending (e.g. use of grout aid)
- Suitable for interior and exterior applications

TECHNICAL DATA

- “ Fluid ” mixture has a flow of 10 to 30 s (when tested in accordance with ASTM C939).
- “ Flowable “ mixture has a flow of 125% to 145% (when tested in accordance with ASTM C827 at five drops).
- “ Plastic “ mixture has a flow of 100% to 125% (when tested in accordance with ASTM C827 at five drops).
- “ Stiff Plastic “ mixture has a flow less than 100% (when tested in accordance with ASTM C827 at five drops).

Property	Typical Results			
Consistency	Compressive Strength (N/mm ²) ASTM C109			
	1D	3D	7D	28D
Plastic	29	41	46	48
Stiff Plastic	37	48	59	67
Semi Precast	38	53	60	68
Flow Consistency # (BS 4551)	30 - 45% (25 strokes)			
Volume Change (ASTM C 827)	+1.5%			
Setting Time (BS 4550 : Section 3.6)	Initial Set		Final Set	
	2 -3 hrs		4 - 5 hrs	
Bond Strength (BS 6319 : Pt 4 : Appendix B)	3 N/mm ²			

* All the data shown are based on controlled laboratory test (T=27±2°C and RH=60%)

In actual site application, slight water/powder ratio adjustment can be made to achieve consistency desired.

APPLICATION PROCEDURE

SURFACE PREPARATION

- All defective concrete should be removed until sound concrete is found.
- Avoid feather edging, edges of the areas for repair must be saw cut to a depth of at least 10mm.
- Ensure surfaces to be treated are clean and free from any loose dust, oil grease or other contaminants.
- Exposed reinforcing bars must be cleaned and protected with re-bar primer.
- In order to ensure optimal bonding, the substrate should be pre-wet or primed with a bonding agent of a **SmartNSGrout SP** slurry (2part of **SmartNSGrout SP** to 1 part of water). Wet-on-wet application of the **SmartNSGrout SP** mortar is essential in this case.

MIXING

- **SmartNSGrout SP** should be mixed with a variable speed drill fitted with a paddle type mixer blade.
- Add in slowly 25kg of **SmartNSGrout SP** into approximately 3 - 3.5 litres of water in a mixing pail.
- Mix for 3 - 5 minutes until a lump-free homogeneous consistency is obtained.

DISCLAIMER

All information was prepared carefully, using current references available to us. Information provided is to the best of our knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself/herself as to the suitability and completeness of information provided here for their intended use. We do not accept liability for any loss or damage that may occur from the use of this information.

PLACING

- The well-mixed **SmartNSGrout SP** is applied with trowel, float, gloved hand or other suitable tools.
- For horizontal application, **SmartNSGrout SP** can be applied at a thickness of 10 - 40mm in one layer. For vertical wall, the wet mix can be adjusted to dryer patching consistency for application of up to 40mm in one layer.
- **SmartNSGrout SP** is not recommended for overhead application.
- Thicker layers may be applied in several operations. Scratch the preceding layer to provide a mechanical key. Application of the next layer may proceed as soon as the preceding one has fully set.

CURING & TREATMENT

- Protect the casting against rapid drying due to strong winds and / or high ambient temperatures by covering with plastic film, wet hessian or liquid membrane curing / sealing compounds.
- Curing compound is recommended on the finished surface but not on intermediate layers.
- Rapid moisture loss from the exposed surface may result in plastic cracking as well as excessive dusting in later age.

COVERAGE / YIELD

Consistency	Mixing water	Yield
Plastic	3.75 lit	12.7 lit
Stiff-Plastic	3.25 lit	12.2 lit
Semi-Precast	3.15 lit	12.0 lit

PRECAUTIONS

- Avoid eye and skin contact as the product is alkaline.
- Gloves, goggles and dust mask should be worn.
- Avoid inhalation of dust during mixing.
- Wash thoroughly after handling.
- In case of eye contact, flush with plenty of water. Seek medical help immediately.

PACKAGING & STORAGE

SmartNSGrout SP is supplied in 25kg paper bag and has a shelf life of 9 - 12 months if stored in a cool and dry place in sealed packing with sheltered protection from rain and sunlight.

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