

Non-shrink Grout

ST-NSG (100)

General purpose shrinkage compensated cementitious grouting material with superior flowability, ultra high compressive strength and non-shrink properties.



PRODUCT DESCRIPTION

ST-NSG (100) is a dry packed proprietary premixed shrinkage compensating cementitious precision grout complying with PCCS-RM Class S. It is specially designed for the use of grouting at gaps, holes and base plates, etc. where excessive shrinkage is prohibited for the filling material. It can also be used, when mixed to a lower workability, as a patching material for minor repairs for honeycombs or for filling up tie-holes in concrete. ST-NSG (100) is composed of Ordinary Portland Cement, graded sand and non-shrink additives, which impart controlled expansion in both the plastic and hardened states.

SUBSTRATE PREPARATION

The substrate surface must be free from oil, grease, or any kind of loose particles. Interfaces must be patched up to avoid scales, coatings, recessives, pockets, etc. to avoid hindrance of the flow/spread of grout. Bolt holes or fixing pockets must be blown clean to get rid of any dirt or debris. Pressure relief holes/exit should be provided to allow venting of isolated high spots. At appropriate time before grouting, normally several hours, interfaces must be pre-soaked with fresh water and clear up all free water on surfaces thereafter. When leveling shims are used and are to be removed after the grout goes hardened, they should be treated with a thin layer of grease before installation. Formwork should be leak-proof. Rubber/polystyrene stoppers or sealants can be used at joints or bolt holes.

FEATURES & BENEFITS

- ◆ Premixed in factory
- ◆ Easy Storage
- ◆ High flowability
- ◆ Shrinkage compensation
- ◆ Ready to use
- ◆ Free from chlorides, nitrates and sulphates
- ◆ High ultimate strength & low permeability
- ◆ No bleeding or segregation

AREAS OF APPLICATION

- ◆ Filling up gaps between reinforced concrete and/or precast concrete elements
- ◆ Patching material for minor repairs
- ◆ Filling up tie-holes in concrete
- ◆ Bridge bearings
- ◆ Machine base plates, etc.
- ◆ Consult ScoreTech's staff for other suitable applications

MIXING & INSTALLATION

1. Mix ST-NSG(100) with electric hand drill mixer in a bucket or all-in-one grouting pump until the required consistency is achieved homogeneously.
2. When mixing with electric drill for grouting purpose, mix the material with ~80% of the recommended quantity of water for about 2-4 minutes, then add the remaining water and mix for another 1-2 minutes to achieve the best effect of flowability.
3. Sufficient grout must be made available in order to ensure continuous grout pour is achieved. The mixed grout should be poured only from one side to the other side to reduce entrapment of air.
4. For large volume of grouting, ST-NSG(100) can be applied by pump such as heavy-duty diaphragm pump, screw feed pump or piston pump.
5. For details application procedures, please refer to the method statement.

CURING

Under normal circumstances, natural air curing is proved adequate for ST-NSG(100). However, water mist curing is beneficial to ensure the best performance of ST-NSG(100) under dry or windy

PACKAGE

25 kg bag

SHELF LIFE

ST-NSG(100) has a shelf life of 6 months if well kept in dry condition on lifted floor.

HEALTH & SAFETY

Wear NIOSH approved face mask or equivalent personal protective equipment when handling the material. ST-NSG(100) contains cement which may cause an allergic effect or irritation to eyes and skin. When contact with eyes, flush immediately with large quantity of water.

REFERENCE STANDARDS

- ◆ British Standard: BS 6319;
- ◆ Hong Kong Standard: ArchSD General Specification; HKHA MTS Spec. Part D; CS1:2010; Product Certificate PCCS-RM (Class S)

PRODUCT INFORMATION

Colour	Grey	
Maximum Grain Size	1.8mm	
Pot Life at 27 °C	~ 30 minutes	
Consistency	Plastic (for concrete repair / filling up tie holes)	Flowable (for filling bearing plates / grouting)
Wet Density	~ 2200 kg/m ³	~ 2150 kg/m ³
Water Demand	4.6 - 5.4 litre	6.6 - 7.4 litre
Yield (1 m ³)	~ 74 bags	~ 68 bags

PRODUCT PERFORMANCE

Compressive Strength at 28 days	CS1:2010-12	≥ 100 N/mm ²	≥ 80 N/mm ²
Tensile Strength at 28 days	HKHA MTS Spec. Part D Cl.2.1.3 & BS 6319-7	≥ 2 N/mm ²	--
Bond Strength at 28 days	HKHA MTS Spec. Part D Cl.2.1.14 & BS 6319	≥ 2 N/mm ²	--

* Note: The test standards for the product performance stated above refer to laboratory test only.

DISCLAIMER

Note: As the application condition may vary from site to site and may not be identical to the same condition under which the parameters in the brochure are drawn, the information provided on this Technical Data Sheet is for general guidance only. Warranty will not be given to the ultimate performance and application results of this material when the material is not kept, mixed, applied or cured strictly in accordance with the requirements and/or instructions listed out in this brochure or in other supplementary document.

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