

PRODUCT DATA SHEET

SikaGrout®-780 (HGG)

(formerly Davco® High Grade Grout Eco)

HIGH STRENGTH NON-SHRINK GROUT FOR PRESSURE GROUTING



DESCRIPTION

SikaGrout®-780 (HGG) is a high strength cementitious non-shrink grout with a low embodied carbon footprint. SikaGrout®-780 (HGG) has high fluidity and is ideal for pressure grouting applications. It is easy to use and needs only on-site addition of water to provide a non-shrink free-flowing grout with good performance. It is pre-mixed in the factory to ensure consistent product quality.

USES

SikaGrout®-780 (HGG) is used in applications that need high compressive strength and where shrinkage is undesirable.

Primary uses :

- bedding, filling and grouting applications requiring high strength
- under plate grouting
- repairs to precast concrete
- anchor bolt fixing, cable grouting and crane rail assembly.

CHARACTERISTICS / ADVANTAGES

- Non gaseous grout, free of bleeding, settlement and shrinkage
- Consistent good performance as product is premixed in factory
- No shrinkage in both plastic and hardened phases
- Increased strength when fully restrained
- Superior workability

APPROVALS / STANDARDS

Singapore Green Building Product (Leader) Cert. No. SGBP 3615

PRODUCT INFORMATION

Reinforcing Material	Graded Sand
Packaging	25 kg/bag
Appearance / Colour	Grey Powder
Shelf Life	12 months from the date of production
Storage Conditions	Store properly in original, unopened and undamaged sealed packaging in dry conditions. Keep away from direct sunlight and frost.

TECHNICAL INFORMATION

Compressive Strength	$\geq 70 \text{ N/mm}^2$	(ASTM C942 : 2015)
Shrinkage	0 %	(ASTM C940:2016)
Expansion	$\leq 0.4 \%$	(ASTM C940:2016)

APPLICATION INFORMATION

Mixing Ratio	Flowable consistency	3.90 - 4.75 ltr
	Plastic consistency	2.70 - 3.50 ltr
Yield	$\sim 0.012 \text{ m}^3$	
Pot Life	30 - 45 min Depend on weather condition	
Flowability	10 - 30 sec	(ASTM C939 : 2016a)
Initial Set Time	$\geq 1 \text{ hr}$	(ASTM C953 : 2010)
Final Set Time	$\leq 10 \text{ hours}$	(ASTM C953 : 2010)

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS OF USE

- *Holding Pressure* - 10 psi / min or site requirement
- Non-shrink grout contains additives which expand either during the plastic stage and / or the hardening stage to compensate for the shrinkage of the cementitious matrix. However, this 'non-shrink' property will be effective only if the material is not subjected to water loss.
- This is confirmed by a note in the ASTM C 1107 Standard Specification for packaged dry, hydraulic cement grout (non-shrinkable), which clarifies the behaviour of the non-shrink grout when subjected to some drying:

"Note 1: Since all conditions of use cannot be anticipated, this specification requires non-shrink grout to exhibit no shrinkage when tested in a laboratory controlled moist-cured environment, and requires only the reporting of the observed height change, usually shrinkage, when test specimens are subject to some degree of drying."

ECOLOGY, HEALTH AND SAFETY

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

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Clean off oil, dust, dirt, paint, curing compound and thoroughly damp the surface before application.

MIXING

Dampen the electric mixer blades with water before mixing the first batch of SikaGrout®-780 (HGG). Ensure the mixing pail is free of standing water. Measure the recommended amount of water for the 25kg bag of product.

Flowable consistency

Pour 80% of the required water into the mixing pail and slowly add powder to the water while mixing continuously. Add more amount of water and continue to mix until the desired consistency is achieved and then discard balance water. Mix for 3 to 5 minutes to achieve a homogeneous consistent grout.

Plastic consistency

Pour 60% of the required water into the mixing pail and slowly add powder to water while mixing continuously. Continue to add more amount of water while mixing, to get the desired consistency. Discard balance water.

APPLICATION

Holding Pressure

10 psi / min or site requirement

Preplaced Aggregate Grout

Pump or pour grout into place. The concrete compressive strength will be slightly lower when compared to flowing grouts.

Underplate

Seal the formwork to get a minimum hydrostatic head of 100 mm. Ensure enough material is available to complete the work. Keep a continuous fill, pouring from one side to avoid air entrapment, and keep a head on the grout to promote flow. Do not vibrate, instead use rods, straps and chains to aid filling.

Grouting Large Volumes

For grouting thickness greater than 50 mm, mix a maximum of 15 kg well-graded 10mm aggregate to one bag of grout to reduce temperature rise. Use conventional concrete pan mixers and pumps for mixing and placement.

Semi-precast Plastic Grout Applications

For applications needing pasty grout, use about 2.7 to 3.5 litres of water to 25kg bag of grout. When placing grout over a large area, it is important to maintain a continuous flow throughout. Work sequence must be properly organised to ensure an uninterrupted flow.

APPLICATION METHOD / TOOLS

Pumping

Use piston, ram or diaphragm type grout pumps fitted with ball valves to place SikaGrout®-780 (HGG).

CURING TREATMENT

Thoroughly cure all exposed area with water, or curing compound, immediately after finishing.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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