

SikaGrout®-111GP

Cementitious General Purpose Grout

Product Description

SikaGrout® 111 GP is a one part flowable shrinkage compensated general purpose cementitious grout.

Meets the requirements of BS EN 1504-6. Anchoring of reinforcing bars.

Uses

- General purpose grouting
- Under stanchion plates
- Filling cavities, voids, gaps and recesses
- Sealing around penetrations
- Machine & base plates
- Post fixings
- For exterior and interior use

Characteristics / Advantages

- Easy to use (ready to mix powder)
- Pre batched for quality
- Just add water
- High compressive strength gain
- Easy to mix and apply
- Contains no chloride admixtures
- Shrinkage Compensated
- Fire rating and protection properties comparable to concrete
- Can be pumped or poured
- Good mechanical properties

Product Data

Form

Appearance / Colour Grey powder

Packaging 25 kg bags

Storage

Storage Conditions / Shelf-Life 6 months from date of production if stored properly in dry conditions in undamaged and unopened original sealed packaging.

Construction



Technical Data

Chemical Base	Cement, selected fillers and aggregates, special additives
Density	~ 2310 kgm ³ (wet density)
Grading	D _{max} : 1.0 mm
Layer Thickness	10 mm min. / 150 mm max.

Mechanical / Physical Properties

Compressive Strength

1 day	7 days	28 days	Test
~ 20 N/mm ²	~ 45 N/mm ²	~ 60 N/mm ²	EN 12190

Early Expansion	~ 1.2%	
Flexural Strength	~ 10 N/mm ² (28 days)	(EN 196)
Adhesive Bond	~ 2.5 N/mm ² (28 days)	(EN 1542)
Secant Modulus of Elasticity	~ 36 N/mm ²	(EN 13412)
Drying Shrinkage	~ 0.09% (<1mm/M)	
Flow (10 Secs)	~ 610 mm (0 mins) 560 mm (30 mins)	(EN 13395-2)
Stiffening Time (mins)	Initial ~315 Final ~405	(EN 13294)
Chloride Ion Content	~0.01%	(EN 1015-17)
Pull out (Wet & Dry)	Displacement ≤ 0.6mm at load of 75KN (BS EN 1504-6)	(EN 1881)
Fire Classification	Class A1	(EN 13501-1)

System Information

Application Details

Consumption Depends on the substrate roughness and thickness of layer applied. As a guide, 1 bag yields approximately 13.0 litres of mortar

Substrate Quality *Concrete, mortar, stone:*
Surfaces must be sound, thoroughly clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants.

Steel, iron:
Clean, free from oil or grease, rust and scale etc.

Shutter/Formwork:
Where formwork is to be used, all formwork should be of adequate strength, treated with release agent and sealed to prevent leakage. Sealing can be achieved by using Sikaflex[®] -11FC+ sealant beneath or around formwork and between joints. Ensure formwork includes outlets for extraction of the pre-soaking water. A header box/hopper should be constructed on one side of the formwork so that a grout head of 150-200 mm can be maintained during the grouting operation.

Substrate Preparation The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blastcleaning, scabblers, etc. The concrete substrates should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation.

Immediately before pouring grout, remove *all* excess or standing water from within any formwork, cavities or pockets.

Application Conditions / Limitations

Substrate Temperature +5°C min. / +30°C max.

Ambient Temperature +5°C min. / +30°C max.

Application Instructions

Mixing Water : mortar powder = 1 : 6.25 parts by weight. (4.0 – 4.5 litres of water per bag).

Mixing Time 3 minutes minimum

Mixing Tools Place the water into a forced action grout mixer or in a clean drum. Slowly add complete bag of SikaGrout® 111 GP into the water and continuously mix for 3 minutes in mixer to achieve a uniform and lump free consistency. Alternatively use a slow speed drill (200-500 rpm) and spiral paddle mixer.

Application Method Pour the mixed grout into the header box/hopper ensuring continuous grout flow during the complete grouting operation to avoid trapping air. Use steel banding or chains to assist flow where necessary. For large volume placement, grout pumps are recommended.

For cold weather working consider using warm water to assist with achieving strength gain & other physical properties.

Cleaning of Tools Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be mechanically removed.

Notes on Application / Limitations

- Do not exceed water addition
 - Not to be used for concrete repair works
 - Do not use vibrating pokers
 - Use only on clean, sound substrate
 - Avoid application in direct sun and/or strong wind.
 - Pour or pump from one side only
 - Keep exposed surfaces to a minimum
 - Do not add additional water during the surface finishing as this will cause discoloration and cracking
 - Protect freshly applied material from freezing and frost
 - To avoid cracking in warm temperatures keep bags cool & use cold water
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Curing Details

Curing Treatment

After the grout has initially hardened, remove formwork and trim edges while concrete is 'green'. Cure all exposed grout surfaces using

Protect the fresh material from premature drying using appropriate curing method e.g. curing compound such as Sikafloor® ProSeal ,moist geo-textile membrane, hessian, polythene sheet etc.

In cold weather apply heat blankets to maintain a constant temperature.

Value Base

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.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

Health and Safety Information

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

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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