

SikaGrout® GP

General purpose, pumpable, shrinkage-compensated cementitious grout

Product Description

SikaGrout® GP is a pumpable, shrinkage-compensated, flowable cementitious grout with extended working time to suit local ambient temperatures.

Uses

SikaGrout® GP is a general purpose grout suitable for the following applications:

- Grouting works for machine foundations, anchor bolts, bridge bearings, etc.
- Filling of cavities, gaps, recesses, etc.
- Concrete repairs (pre-packed grouting)

For precision grouting, SikaGrout®-215 is recommended.

Characteristics / Advantages

- Easy to mix and apply
- Flowable consistency (according to mix)
- Rapid strength development
- Non-corrosive
- Non-toxic
- Iron and chloride free
- Shrinkage-compensated
- Good pumping properties

Product Data

Form

Appearance / Colours Grey premixed powder

Packaging 25 kg bags

Storage

Storage Conditions / Shelf Life 6 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10°C and +25°C. Protect from direct sunlight.



Technical Data

Wet Density ~ 2.2 kg/ltr (depending on consistency and temperature)

Aggregate Size 1 – 2 mm max.

Layer Thickness (neat grout) 50 mm max. per pour / 10 mm min. per pour

Mechanical / Physical Properties

Typical Results

Tests carried out at +20°C

Mix Designs		Flowable (Water content 4.5 ltr/25 kg bag)
Flow at 3 mins	BS Cone	270 mm
Initial setting time		3 h :30 m
Bleeding at 3 hours		0 %
Expansion at 24 hours		0.8 %
Compressive strength	1 day 3 days 7 days 28 days	25.6 N/mm ² 32.0 N/mm ² 40.0 N/mm ² 50.0 N/mm ²

The above tests were conducted under laboratory conditions in accordance with the following standards:

- Initial setting ASTM C 191
- Bleeding & Expansion ASTM C 940
- Compressive strength ASTM C 109

The results above are typical data and given as a guide only. Site results may differ according to mixing process, placing, curing, etc. Preliminary tests are always recommended.

Fire Resistance Fire rating, Classified A1 - SikaGrout® GP will not contribute in any state of the fire including the fully developed fire. (EN 13501-1)

System Information

Application Details

Typical Yield

Flowable consistency

SikaGrout® GP	1.82 kg	25 kg	73 x 25 kg bag
Water	0.33 ltr	4.5 ltr	330 ltr
Volume Mortar	1 ltr	13.7 ltr	1 m ³

Pourable consistency

SikaGrout® GP	1.94 kg	25 kg	78 x 25 kg bag
Water	0.29 ltr	3.75 ltr	290 ltr
Volume Mortar	1 ltr	12.9 ltr	1 m ³

Substrate Quality

Concrete, mortar and stone

Surfaces must be sound, clean, free from frost, oils, grease, standing water and all loosely adhering particles and other surface contaminants.

Metal surfaces (iron and steel)

Surfaces should be clean, free from scale, rust, oil and grease.

Substrate Preparation The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water, breakers, grit blasting, scabblers, etc.

All absorbent surfaces must be well saturated with clean water, but free of any surface water or puddles prior to the application of SikaGrout®-215.

Application Conditions / Limitations

Application Temperature (neat grout) +10°C minimum

Application Instructions

Mix Ratio	Consistency	Water (ltr) per 25 kg of grout
	Flowable	4.3 – 4.5
Pourable	3.6 – 4.0	

These mix ratios are a guide and preliminary trials at local temperatures / humidity conditions are recommended.

Mixing Place about 70 – 80% of the premeasured clean water (depending on consistency required – refer to “Mix Ratio”) into a clean container and gradually add the whole bag of SikaGrout® GP into it while continuously mixing. Add the remaining water until the desired consistency is obtained.

Mixing Time Mix for 2 – 3 minutes with a low speed drill (500 rpm max.).

Application Method / Tools After mixing, stir lightly with a spatula for a few seconds to release any entrapped air. The grout is then poured immediately into the prepared formwork. When carrying out baseplate grouting, ensure sufficient pressure head is maintained for uninterrupted mortar flow. For formwork repair, the prepared formwork must be firmly in place and kept watertight. 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. In large areas, SikaGrout® GP may be pumped using heavy duty diaphragm pumps. Screw feed and piston pumps may also be used.

Specific Areas of Application

- Grouting under baseplate – use pourable consistency
- Formwork grouting (e.g. deep honeycombs, column reinforcements, etc.):
 - Pouring method – use flowable / pourable consistency
 - Prepacked method – use flowable consistency
- Grouting anchor bolts – use stiff consistency
- Grouting large volumes – for sections thicker than 50 mm, it is necessary to fill the SikaGrout® GP with graded 10 mm silt free aggregates to minimise temperature rise generated during the curing stage. The quantity of aggregates should not exceed 1 part aggregates to 1 part SikaGrout® GP by weight. For such mixes, a conventional concrete mixer and pump may be used. To further ensure that air entrapped during mixing is allowed to fully escape, it may be necessary to make breather holes. Use steel rods or chains to assist the flow of grout where necessary. Preliminary trials are recommended.

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

Notes on Application / Limitations

At temperatures +20°C and below, setting time and strength development will be slower.

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."

Curing Details

Curing

If formwork type repair is used, leave the formwork in place for at least 3 days. Upon removal of the formwork, cure the exposed surfaces immediately with Antisol® curing compound or use other approved curing methods.

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.

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 (available upon request) containing physical, ecological, toxicological and other safety-related data.

Legal Note

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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