PRODUCT DATA SHEET

SikaGrout®-111 GP

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 INFORMATION

<table>
<thead>
<tr>
<th>Chemical Base</th>
<th>Cement, selected fillers and aggregates, special additives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>25 kg bags</td>
</tr>
<tr>
<td>Appearance / Colour</td>
<td>Grey powder</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>6 months</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>Store properly in dry conditions in undamaged and unopened original sealed packaging.</td>
</tr>
<tr>
<td>Density</td>
<td>~2200 kgm$^3$ (wet density)</td>
</tr>
<tr>
<td>Maximum Grain Size</td>
<td>D$_{max}$: 1.0 mm</td>
</tr>
<tr>
<td>Soluble Chloride Ion Content</td>
<td>~0.01% (EN 1015-17)</td>
</tr>
</tbody>
</table>

TECHNICAL INFORMATION

<table>
<thead>
<tr>
<th>Compressive Strength</th>
<th>1 day</th>
<th>7 days</th>
<th>28 days</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>~20MPa</td>
<td>~40MPa</td>
<td>~45MPa</td>
<td>EN 12190</td>
</tr>
</tbody>
</table>

| Modulus of Elasticity in Compression | ~28 MPa | (EN 13412) |

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Flexural Strength ~9MPa (28days) (EN 196)
Tensile Adhesion Strength ~2.5MPa (28 days) (EN 1542)
Shrinkage ~0.07% (<1mm/M)
Expansion ~0.55%
Reaction to Fire Class A1 (EN 13501-1)

APPLICATION INFORMATION

Mixing Ratio Water : mortar powder = 1 : 6.25 parts by weight. (4.0 – 4.5 litres of water per bag)
Consumption Depends on the substrate roughness and thickness of layer applied. As a guide, 1 bag yields approximately 13.0 litres of mortar
Yield As a guide 1 bag yields approximately 13 litres of mortar
Layer Thickness 10mm min / 150mm max
Flowability ~695mm (0 mins) ~480mm (30mins) (EN 13395-2))
Ambient Air Temperature +5°C min. / +30°C max
Substrate Temperature +5°C min. / +30°C max
Setting Time Initial ~210 mins Final ~300 mins (EN 13294)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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.

MIXING

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

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.

CURING TREATMENT

After the grout has initially hardened, remove formwork and trim edges while concrete is ‘green’. 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.

CLEANING OF TOOLS

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

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
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.

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.