SikaGrout®-214
High precision, non shrink, expanding pouring grout

### Product Description

- Cement based flowable, two stage expanding grout with selected aggregate.

### Uses

- To grout bearings, machine foundations, columns joints in precast construction etc.
- To grout anchors in concrete
- To grout cavities, gaps and voids in concrete

### Characteristics / Advantages

- Easy to use (ready to mix powder)
- Easy to mix, only add water
- Adjustable consistency
- Very good flow characteristics
- Rapid strength development
- High final strengths
- Initial expansion by gas generation
- Impact- and vibration resistant
- Non-corrosive
- Not flammable, non-toxic
- Shrinkage compensated

### Product Data

#### Form

<table>
<thead>
<tr>
<th>Appearance / Colour</th>
<th>Grey powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>30 kg bags</td>
</tr>
</tbody>
</table>

#### Storage

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

#### Technical Data

<table>
<thead>
<tr>
<th>Chemical Base</th>
<th>Cement, selected fillers and aggregates, special additives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Density</td>
<td>~1.2 kg/l (of fresh grout) at 27 °C</td>
</tr>
<tr>
<td>Grading</td>
<td>2.36 mm down</td>
</tr>
<tr>
<td>Layer Thickness</td>
<td>20 mm min. / 100 mm max.</td>
</tr>
<tr>
<td>Standards</td>
<td>ASTM C 1107</td>
</tr>
</tbody>
</table>
Mechanical / Physical Properties

Compressive Strength

Ambient temperature: +30°C (According to ASTM C 109, 70mm Cube)

<table>
<thead>
<tr>
<th></th>
<th>1 day</th>
<th>3 days</th>
<th>7 days</th>
<th>28 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 N/mm²</td>
<td>35 N/mm²</td>
<td>45 N/mm²</td>
<td>65 N/mm²</td>
</tr>
</tbody>
</table>

Flexural Strength

Ambient temperature: +30°C (According to ASTM C 293-79)

<table>
<thead>
<tr>
<th></th>
<th>7 days</th>
<th>28 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7 N/mm²</td>
<td>9 N/mm²</td>
</tr>
</tbody>
</table>

E-Modulus

~ 37'000 N/mm²

System Information

Application Details

Consumption

~1900 kg/m³

At water: powder ratio 0.14

Substrate Quality

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

The concrete “pull off” (tensile) strength should be > 1.0 MPa.

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

Substrate Preparation

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blast cleaning, scrabbles, 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 remove all excess or standing water from within any formwork.

Application Conditions / Limitations

Substrate Temperature

+5°C min/+40 °C max

Ambient Temperature

+5°C min/+40 °C max

Application Instruction

Mixing

For Flowable:
Water : Powder = 0.14 to 0.16 by weight (4.2 l to 4.8 l water per bag).

For Pourable:
Water : Powder = 0.12 to 0.14 by weight (3.6l to 4.2 l water per bag).

Mixing Time

3 minutes minimum

Mixing Tools

Mix grout powder mechanically in the correct ratio with water with low speed (max. 500 rpm) electric drill to avoid entraining too much air.

Put around 80 to 90% of required water in the mixing drum, followed by SikaGrout® 214 and then add the balance water.

Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted. Don’t use concrete tilting mixer.

Do not mix more grout, which cannot be used within Pot Life. DO NOT ADD EXTRA WATER.
| **Application Method** | Pour grout immediately after mixing into the prepared openings. Ensure that air displaced by the grout can easily escape; otherwise entrapped air will prevent full contact grouting. Wet porous substrates to saturated surface dry condition.

When grouting base plates etc., ensure that a continuous and sufficient head of pressure is maintained to keep the grout flowing. To make optimum use of the products expansion properties, apply the grout as quickly as possible (within max. 15 minutes). |
| **Cleaning of Tools** | Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be mechanically removed. |
| **Pot life** | ~ 20 minutes at +30°C |
| **Notes on Application / Limitations** | Use SikaGrout-214 for grouting only; do not use SikaGrout®-214 for patch repair work etc.

Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.

Use chilled water for mixing in case of high ambient temperature.

Use hot water for mixing in case of very low ambient temperature.

Depending on requirements and site conditions the addition of dry, single size and clean aggregates is possible. Trials are recommended to confirm suitability of aggregates to be used.

For large bedding holes and higher gaps duly washed coarse aggregates of size 6mm down may be mixed with SikaGrout®-214 in the proportion of grout: aggregate= 2:1 (by weight).

For additional technical information on SikaGrout®-214 or other grouting materials contact the technical services department. |
| **Curing Details** | **Curing Treatment** Keep any visible, exposed grout surfaces as small as possible and protect from premature drying out by suitable measures (keep moist, cover with wet Hessian etc.). |
| **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 containing physical, ecological, toxicological and other safety-related data. |
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