

# PRODUCT DATA SHEET

## SikaGrout® UW NZ

### CEMENTITIOUS GROUT FOR UNDERWATER APPLICATIONS

#### DESCRIPTION

SikaGrout® UW NZ is a cementitious grout formulated to ensure exceptional resistance to 'washing-out' of the cement phase when placed in stationary or moving water. It contains materials that provide positive expansion in the plastic phase. SikaGrout® UW NZ is a one component grout and only requires the addition of clean, fresh water.

#### USES

SikaGrout® UW NZ is used in free flow or pumped grouting application underwater or in tidal zones. Applications include bridge columns, wharf piles, concrete piling, slipways and dams. Use for gaps 6 mm to 80 mm in above ground applications, and for gaps up to 180 mm in underwater applications.

#### CHARACTERISTICS / ADVANTAGES

- No risk of significant 'wash-out' of cement phase when placed underwater
- Displaces water effectively
- Positive shrinkage compensation
- High early age strength development
- High final strengths
- High flow characteristics

#### PRODUCT INFORMATION

Packaging	25 kg bags
Appearance / Colour	Grey powder
Shelf Life	Six (6) months from date of manufacture when stored as stated.
Storage Conditions	Store in unopened, original containers free from frost and below +25°C.
Density	~ 2,050 kg/m <sup>3</sup>

#### TECHNICAL INFORMATION

Compressive Strength	24 hours	~ 20 MPa	(BS 1881)
	7 days	~ 45 MPa	
	28 days	~ 50 MPa	

## APPLICATION INFORMATION

Mixing Ratio	Maximum water content: 5.5 litres/25 kg bag
Yield	As a pourable grout (approx): 25 kg = 14.5 litres when mixed with 5.5 litres of water

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

#### Surface Preparation:

- Concrete surfaces should be clean, sound and free from dust, oils, grease, loosely adhering particles or any other surface contaminants that will affect bond.
- The surface must be scabbled or sandblasted to remove all weak cement laitance.
- Dry concrete substrates shall be saturated with water for some time, and the surface allowed to dry (to achieve what is referred to as a 'saturated surface dry' condition) before grouting commences.
- Metal surfaces (iron and steel) should be free from rust, scale, oil, grease, etc.

#### Formwork Preparation:

- Formwork must be constructed to prevent any leakage of the plastic grout.
- Formwork should be constructed in such a manner as to ensure that a minimum horizontal surface area is left exposed. The formwork must be able to rigidly confine the grout during its expansion process.
- When filling any detail ensure that an adequate volume of mixed grout is available to allow for a continuous and uninterrupted flow.
- In areas of formwork where air pockets may occur it is necessary to install bleed tubes or openings that will allow entrapped air to escape.
- In many cases it may be necessary to install grouting tubes or pipes that enable the cavity to be filled from bottom to top. This will force any air upwards and help to eliminate the possibility of air locks being formed.
- Ensure that all formwork has been thoroughly treated with a suitable mould release agent.

### MIXING

**Application temp: +5°C – +25°C.** Pour the required amount of clean, fresh water into a suitable mixing container and slowly add all of the powder while mixing continuously with a Sika mixing paddle attached to a low speed electric drill (max. 500 rpm). Mix for 2-3 minutes until a smooth, lump free consistency is achieved.

### APPLICATION

- Grout should be placed into forms immediately after mixing, taking care to ensure no air is trapped.
- When grout is being placed underwater ensure that the end of the hose or tremie is kept within the grout being placed. The hose or tremie can be raised during pouring to reduce any back pressure but should not be raised above the level of the grout.

### CURING TREATMENT

Formwork should be left in place for at least 5 days if possible, to prevent moisture evaporation and provide restraint to early age hardened expansion. In above ground applications, once formwork is removed the use of a suitable curing membrane such as Sika Anti-sol® should be applied to any exposed faces. Refer to separate data sheet for further information.

### CLEANING OF TOOLS

Clean all tools and equipment with water immediately after use. Hardened SikaGrout® UW NZ can only be removed mechanically.

### LIMITATIONS

- SikaGrout® UW NZ is designed for use as a grout and should not be used in unconstrained applications.
- Large volumes of cement rich grout can generate excessive amounts of heat whilst hardening as a result of the cement hydration process. This heat build up may in some cases lead to thermal cracking within the grout as it cools down. For applications requiring larger volumes it is recommended that our high strength Sika MonoTop®-438 R (refer separate data sheet) be used.

### 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.

### 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 Safety Data Sheet (SDS) 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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