

SikaGrout[®]-UW

Shrinkage compensated cementitious grout for underwater application

Construction

Description	<p>SikaGrout-UW is a ready to use, cementitious grout that can be used for applications underwater. The grout, when properly mixed, will have no significant 'wash out' of the cement phase.</p> <p>SikaGrout-UW is a blend of Portland cement, carefully selected and graded aggregates, and Sika admixtures, enabling it to achieve excellent flow, non wash-out characteristics, and high compressive strength.</p>
Uses	<p>SikaGrout-UW can be used for free flowing or pumped grout applications underwater, for reinstating concrete:</p> <ul style="list-style-type: none"> • Bridge columns. • Pillars. • Piles. • Slipways. • Dams.
Advantages	<ul style="list-style-type: none"> • There is no significant 'wash-out' of cement phase when placed underwater. • Effectively displaces water. • Shrinkage compensating properties. • High early & 28 day strengths. • Does not segregate or bleed. • Good impact, vibration and thermal resistance. • Non-corrosive to steel or iron. • Complies with MP20-Part 3 Class A Grout.
Shelf life	Stored in the original sealed packaging in dry conditions, this product will keep at least nine (9) months.
Instructions for Use	
Surface Preparation	<p>All surfaces must be clean, sound and free from oils, grease or other surface contaminants. If the concrete surface is defective, or has laitance, it must be cut back to a sound base.</p> <p>Permanently immersed substrates should be prepared by sand blasting or high pressure water jet. Non-permanently immersed substrates can also be prepared this way, or by scabbling.</p>
Formwork	The formwork used must be leak proof to allow SikaGrout UW to be free flowing.
Mixing Equipment	SikaGrout-UW must be mechanically mixed using a mechanical forced action grout mixer. It is essential that mixing is carried out in a manner so that the grouting operation may continue without interruption.
Mixing	Add the powder to approximately 70% of the total water content while mixing. The remaining 30% of the water component is to be added while continuing to mix. The total water content is 3.7 litres for each 20kg bag of powder. Mix the grout until it appears homogenous (3 to 5 minutes). Allow to stand so any entrapped air can escape. Do not add more water to increase flow of grout if a mix has stiffened due to time delays. If grout is unworkable, discard.
Placement	SikaGrout-UW can be poured or pumped through a flexible tube (minimum diameter of 50mm) to the lowest section of the form. The grout flow must be restricted during the pour so that the water is not entrapped. The flexible tube can be raised to reduce back pressure, however, it should never be raised above the surface level of the grout.
Placement Thickness	<p>SikaGrout-UW can be placed in thicknesses of up to 50mm above water, and 100mm underwater. Any grout pour that exceeds this should be done in stages, or have stone aggregate added to it, to reduce the exothermic heat.</p> <p>When adding aggregate, use smooth rounded aggregate, ranging from 2mm to 10mm. It is recommended that the maximum aggregate addition is 20kg of SikaGrout-UW.</p>

Curing	Curing will not be required in submerged situations. However, grout cast above the water should be cured using suitable methods such as plastic sheeting, wet hessian, or Antisol liquid membranes.	
Cleaning	Uncured SikaGrout-UW should be cleaned from tools and equipment using hot water. Hardened material can only be removed mechanically.	
Technical Data (Typical)		
Form	Grey Powder	
Density	2200 kg/m ³ approx. (mixed)	
Potlife @ 20°C	20 minutes approx.	
Yield	11 litres per 20kg bag	
Setting Time @ 20°C	Initial	5 hrs 30 mins
	Final	6 hrs 15 mins
Compressive strength (MPa)	1 day	>30
	3 days	>40
	7 days	>60
	28 days	>70
Tensile bond strength	2.2MPa to submerged concrete	
Packaging	20 kg paper bag	
Specification	<p>All underwater grouting must be carried out with a specialised grout for underwater applications such as SikaGrout-UW. It should exhibit no significant wash out of the cement phase.</p> <p>The grout shall be mixed using clean water to the specified requirement (refer to material suppliers technical data sheet for water content details).</p> <p>The grout should exceed a compressive strength of 70MPa after 28 days and a tensile bond strength to submerged concrete of 2 MPa.</p>	
Important Notes	<ul style="list-style-type: none"> • Store SikaGrout-UW in dry conditions in unopened original packaging. • Do not apply SikaGrout-UW in temperatures below 5°C. • Never raise the tube used to place SikaGrout-UW above the surface level of the grout. 	
Handling Precautions	<ul style="list-style-type: none"> • Avoid contact with the skin. • Protective gloves and clothing are recommended when mixing or using this product. • A full Material Safety Data Sheet is available from Sika on request. 	
Important Notification	<p>The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.</p> <p>PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.</p>	

