

PRODUCT DATA SHEET

Sikacrete® UW-10

SHRINKAGE COMPENSATED CEMENTITIOUS MICROCONCRETE FOR UNDERWATER APPLICATION

DESCRIPTION

Sikacrete® UW-10 is a ready to use, cementitious microconcrete that can be used for applications under water. The microconcrete, when properly mixed, will have no significant 'wash out' of the cement phase. Sikacrete® UW-10 is a blend of portland cement, carefully selected and graded aggregates, and Sika admixtures, enabling it to achieve excellent flow, non washout characteristics and high compressive strength. Suitable for use in hot and tropical climatic conditions.

USES

Sikacrete® UW-10 can be used for applications underwater, for reinstating concrete:

- Bridge columns
- Pillars
- Piles
- Slipways
- Dams

CHARACTERISTICS / ADVANTAGES

- No significant 'wash-out' of cement phase when placed underwater.
- Effectively displaces water
- Shrinkage compensated
- Does not segregate or bleed
- Good impact, vibration & thermal resistance
- Non-corrosive to steel and iron

PRODUCT INFORMATION

Composition	Portland cement, selected fillers and aggregates, special additives.
Packaging	40 kg bag
Appearance / Colour	Grey powder
Shelf life	12 months minimum from date of production.
Storage conditions	Store in original unopened packaging in cool and dry condition between 5 °C and 35 °C. Protect from direct sunlight, heat and moisture.
Maximum Grain Size	10 mm

TECHNICAL INFORMATION

Compressive Strength	4.1 L water per bag	1 Day	7 Day	28 Day	(ASTM C109)
	w/p ratio = 0.1025	~35 N/mm ²	~48 N/mm ²	~65 N/mm ²	
Tensile Adhesion Strength	≥ 1.5 N/mm ² (28 d)				

APPLICATION INFORMATION

Mixing Ratio	4.0 - 4.2 L of water per 40 kg bag		
Fresh Mortar Density	~2.4 kg/l		
Yield	~18.5 L per 40 kg bag		
Layer Thickness	under water	above water	
	Min. 50 mm	Min. 50 mm	
	Max. 1000 mm	Max. 500 mm	
Pot Life	~3 h (25 °C)		

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, rough, sound and free from oil, grease, cement laitance and all loosely adhering particles.

Permanent immersed substrates can be prepared by high pressure water jet. Non-permanent immersed substrates can be prepared by high pressure water jet, sand blasting or by scabbling.

Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

MIXING

Mixing Equipment:

Sikacrete® UW-10 must be mechanically mixed using force action mixer.

It is essential that mixing is carried out in a manner so that the grouting operation may continue without interruption.

Mixing:

Always empty the full contents of the bag into a suitable mixer.

Do not mix by hand or mix part bags!

For best results, first add 3.4 to 3.5 litre of water and mix for at least 3 minutes or until the larger aggregate has thoroughly dispersed and a uniform, free flowing consistency is obtained. Then add remaining water and mix for additional 2 minutes.

Leave Sikacrete® UW-10 to stand in the normal mixing vessel until the majority of entrained air bubbles have dispersed. Do not add more water to increase flow of grout if a mix has stiffened due to time delays. If grout is unworkable, discard.

APPLICATION

Placement:

Sikacrete® UW-10 can be poured or pumped through a

flexible tube (minimum diameter of 250mm) to the lowest section of the formwork. The grout flow must be restricted during the pour so that 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.

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 Sika Antisol WB curing agent.

CLEANING OF EQUIPMENT

Clean equipment and mixer after application with water. Hardened material can only be removed mechanically.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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.

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All products are supplied
under a management
system certified to conform
to the requirements of the
quality, environmental and
occupational health &
safety standards ISO 9001,
ISO 14001 and OHSAS
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Product Data Sheet

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