

PRODUCT DATA SHEET

SikaCem[®]-511

(formerly MSeal 511)

Acrylic based polymer for making site-batched cementitious waterproof slurry coating and polymer modified mortar

DESCRIPTION

SikaCem[®]-511 is a milky-white, acrylic co-polymer based liquid. SikaCem[®]-511 is specifically designed for use with cement compositions. It is used in cementitious slurry as a polymer modifier to increase resistance to water penetration, improve abrasion resistance and durability. It is also used with cement as a reliable water-resistant bonding agent. It is also used to prepare polymer modified mortars for repairs, coverings, packing of penetrations, etc.

USES

- Waterproofing of roof slab, sunken slabs, basements, water tanks, sunshades etc.
- Bonding agent for uses in repair and plastering
- Making polymer mortar for repairs mortars
- Treatment for leaching and saltpetre action
- Multipurpose mortar admixture for injection grouts
- Additives to cement based paints for waterproofing

CHARACTERISTICS / ADVANTAGES

- Improves impermeability when used as a slurry coating
- Improves adhesion to most substrates
- Improves mechanical, flexural strength and abrasion resistance properties
- Non-toxic. - Can be used with potable water
- Makes mortar plastic, improving workability and watertightness
- Improves resistance to salt permeation

PRODUCT INFORMATION

Chemical base	Acrylic co-polymer and additives
Packaging	5kg, 20kg & 210kg.
Shelf life	12 months from date of production
Storage conditions	The product must be stored properly in undamaged and unopened original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from frost and direct sunlight.
Appearance / Colour	Milky white liquid
Density	1700 ~ 1900 Kg/m ³ (Fresh Wet Slurry)
Specific gravity	1.01 ± 0.01
Solid content by weight	28 ± 1%

TECHNICAL INFORMATION

Mortar mix design	As Slurry Coating(By Weight) : Cement :SikaCem®-511 : 5 Kg :2.5 Kg Potlife : ≈ 60 min at 25°C ≈20 min at 40°C (May vary at site depending on humidity,ventilation,temperature,etc)	
Tensile adhesion strength	> 1 MPa (To Concrete)	(ASTM D4541)

APPLICATION INFORMATION

Consumption	Consumption depends on application and the profile of the substrate. On fair-faced concrete, one mm thick polymer modified waterproof slurry requires approximately 0.6 – 0.8 Kg of polymer per m ² .	
Ambient air temperature	+10 °C min. / +40 °C max	
Substrate temperature	+10 °C min. / +40 °C max	
Application time	6 – 12 hours (Intercoating time)	

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.

FURTHER DOCUMENTS

Waterproofing Capability (When Used as a Slurry Coating)

Minimum thickness	Hydrostatic Pressure Head
1 mm	≥ 4 bar
2 mm	≥ 7 bar

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

Surface preparation

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance and any other contaminants that may affect the bond adversely. Suitable cleaning methods include high pressure water jetting and grit blasting. Mechanical wire brushing may be appropriate for small areas. After the above surface preparation, surfaces must be thoroughly washed with clean potable water to remove all dust and loose particles. Spalled concrete should be cut back to sound concrete and made good with using SikaCem®-511 modified cementitious mortar. All cracks and blow holes must be cut

out and filled solid with using SikaCem®-511 modified cementitious

slurry.

SikaCem®-511 modified waterproofing slurry is suggested only on sound substrate such as reinforced concrete slabs and tanks and do not use for waterproofing leaking brick-bate coba or lime terracing.

Mixing

Prepare a waterproofing slurry, Cement: SikaCem®-511= 1.5 to 2 parts cement to 1 part SikaCem®-511 by volume,mixed to a lump-free creamy, consistency. Take a clean mixing container and fill with the measured quantity of SikaCem®-511. Slowly add the cement to the liquid and mix, using a slow speed drill 300-500rpm fitted with a suitable paddle. Leave the mixed material to stand for 5 minutes to allow for full saturation to take place. Remix to restore the consistency. Do not mix more material than can be used in half an hour.

Application

Always apply waterproofing slurry coat modified with SikaCem®-511, to pre-dampened surface. High-suction substrates require more dampening

then dense substrates. However, make sure there is no free-standing water. Apply by brush or broom.

Mixed material must be used within 30 minutes,

Under hot weather conditions the workable time at site may be lesser

First Coat: Brush or broom the mix firmly onto the pre-dampened, prepared surface. Care must be taken not to spread the material too thinly. When the material begins to drag or “ball”, do not add more liquid/water but dampen the surface again.

Second Coat: Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. Brush or broom the mix onto the surface (as above) finishing in the opposite direction to the first coat.

Top protection coat (optional) and recommended for

the permanently submerged conditions or on exposed conditions (subjected to light foot traffic). Dry-shake quartz sand on the second coat of waterproofing slurry, when still tacky to form anchors for better adhesion of protection coat to the waterproofing slurry. Prepare a protection coat of 1 parts cement, 2 part quartz sand to 1 part SikaCem®-511 & 0.5 part water by volume, mixed to a lump-free creamy consistency. Apply using flat trowel to the required thickness. (5mm thick render shall require 2 kg of SikaCem®-511, 3 Kg of cement, 5 Kg of sand & 1 litre water per m²)

Repair Mortar

Mix SikaCem®-511, cement & quartz sand (Zone II) in 1:5:15 proportion by weight. Add required amount of water to achieve trowellable consistency (not exceeding 30% by weight of cement). Use this SikaCem®-511 modified mortar for repairs of substrate & filling the cracks; and making vata at the corners. (20 mm thick render shall require 2 kg of SikaCem®-511, 10 Kg of cement, 30 Kg of sand & 1-2 litre water per m²)

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 exact product data and uses.

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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Product Data Sheet

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