

## PRODUCT DATA SHEET

# SikaTop<sup>®</sup>-209 Plus ES

Flexible waterproofing mortar, based in supplementary cementitious materials

### DESCRIPTION

SikaTop<sup>®</sup>-209 Plus ES is a 2 component flexible waterproofing mortar, based in supplementary cementitious material, with selected aggregates and modified polymers.

### USES

It can be used for waterproofing and protection of surfaces where flexibility is required in order to bridge small cracks. Some of the most common places where it can be used are:

- Tanks, swimming pools, canals or other elements intended to contain water, whether buried or not
- Interior waterproofing of basements
- External waterproofing of underground walls
- Protection of surfaces exposed to the action of frost and de-icing salts: bridges, terraces and roof overhangs, cornices, etc.
- Protection of concrete surfaces in marine environments

### FEATURES

- Low modulus of elasticity, thus achieving good flexibility, reducing the risk of cracking and improving the ability to bridge shrinkage cracks and microcracks
- Waterproof and water vapour permeable
- Withstands both positive and negative pressure
- Predosed

- Excellent adhesion on healthy substrates including concrete, cement mortars, stone, bricks, etc.
- High resistance to de-icing salts and freeze-thaw attack
- Stops the progression of carbonation
- Good crack bridging properties
- Approved for contact with drinking water

### SUSTAINABILITY

- IBU Environmental Product Declaration (EPD) available
- Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations
- Conformity with LEED v4 MRc 3 (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials
- Conformity with LEED v4 MRc 4 (Option 2): Building Product Disclosure and Optimization - Material Ingredients
- SikaTop<sup>®</sup>-209 Plus ES is part of the Sika BREEAM product portfolio and contributes to 5 assessment issues of BREEAM ES VIVIENDA 2020

### CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating
- CE Marking and Declaration of Performance to EN 14891 - Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesives
- Suitable for contact with drinking water according to RD 3/2023, LABAQUA, Test report nº 4192972

### PRODUCT INFORMATION

#### Composition

Part A: Liquid polymer and additives

Part B: Supplementary cementitious materials, selected aggregates and admixtures

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SikaTop<sup>®</sup>-209 Plus ES  
July 2024, Version 02.01  
020701010020000350

THIS DOCUMENT SERVES ONLY AS AN ILLUSTRATION OF A SIKA PRODUCT DURING THE SALES PROCESS AND THEREFORE, IS NOT BINDING FOR LOCAL SALE. PLEASE CONSULT THE LOCAL COUNTRY PRODUCT DATA SHEET FOR SPECIFIC TERMS AND CONDITIONS.

<b>Packaging</b>	Pre-weighed batch of 32 kg <ul style="list-style-type: none"> <li>▪ Part A: 8 kg pail</li> <li>▪ Part B: 24 kg bag</li> </ul>
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged and unopened original sealed packaging in dry and cool conditions
<b>Storage conditions</b>	Liquid component must be protected from frost.
<b>Appearance and colour</b>	Part A: White liquid Part B: Grey powder
<b>Maximum grain size</b>	0,3 mm

## TECHNICAL INFORMATION

<b>Crack bridging ability</b>	Class A4	23 °C	UNE EN 1062-7 Static
	Class A3	-10 °C	

<b>Tensile adhesion strength</b>	≥ 0,8 MPa	EN 1542
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\*Values obtained with 2 mm thickness

	Test Method	Value obtained	Requirement	UNE EN 14981:2017
Initial tensile adhesion strength	A.6.2.	0,9 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	
Tensile adhesion after water contact	A.6.4.	0,6 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	
Tensile adhesion after heat ageing	A.6.5.	1 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	
Tensile adhesion after freeze-thaw cycles	A.6.6.	0,7 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	
Tensile adhesion after contact with lime water	A.6.9.	0,5 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	
Tensile adhesion after chlorinated water	A.6.8.	0,6 N/mm <sup>2</sup>	≥ 0.5 N/mm <sup>2</sup>	

\*Values obtained with 2 layers with 1.5 mm thickness each one

<b>Elongation at break</b>	1,56 mm	23 °C	EN 14891:2017 A.8.2. and A.8.3.
	1,14 mm	-5 °C	
	0,79 mm	-20 °C	

<b>Thermal compatibility</b>	≥ 0.8 MPa	UNE EN 13687-1 UNE EN 13687-2
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<b>Capillary absorption</b>	w < 0.1 kg/m <sup>2</sup> h <sup>0,5</sup>	EN 1062-3
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<b>Water permeability</b>	No penetration after 7 days at 1,5 bar	EN 14891:2012 A.7
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\* Values obtained with 2 layers of 2 mm each one

<b>Water penetration under pressure</b>	0.9 MPa	DTU 14.1 Anexo
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<b>Water penetration under negative pressure</b>	0.6 MPa	DTU 14.1 Anexo
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Permeability to water vapour	Class I: Sd < 5m	EN ISO 7783-1 EN ISO 7783-2
Permeability to carbon dioxide	Sd > 50 m	UNE EN 1062-6:2003
Chloride ion diffusion resistance	0,05 % Cl <sup>-</sup>	EN 13396:2005

Reaction to fire

## SYSTEM INFORMATION

System structure	The mortar can be placed with Armatop®-100 reinforcement.	
	Armatop®-100:	
	Material	Anti-alkali fiberglass mesh
	Weight	0.172 kg/m <sup>2</sup>
	Thickness	0.8 mm
	Tensile strength	Warp: 180 daN/5 cm Plot: 180 daN/5 cm
	Packing	Roll of 1 m x 50 m

## APPLICATION INFORMATION

Fresh mortar density	~ 1.70 kg/l (at +20°C)
Consumption	~ 1.7 kg/m <sup>2</sup> per mm of thickness (excluding allowances for loss wastage, surface profile and porosity, etc.)
Layer thickness	1 mm min. 2 mm max.
Consistency	t = 0 min.; 196 mm
Ambient air temperature	+ 8°C min. / + 35°C max.
Mixing ratio	A:B 1:3 (parts by weight)
Substrate temperature	+ 8°C min. / + 35°C max.
Pot Life	30 - 40 min. (at +20°C)

## 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.

## IMPORTANT CONSIDERATIONS

Time for immersion in water: 3 days at 20°C  
Time for immersion in drinking water: 7 days at 20°C  
Handling is similar to a cement base mortar  
For an effectively work of the product, apply at least 2 layers with a minimum thickness of 2 mm  
Do not apply the second layer until the first layer begins to set (approx. 4 at 20°C)  
The finish can be performed by trowelling  
Do not add water to SikaTop®-209 Plus ES

## 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.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

Electrical mixer, trowel, hard-haired brush, long hair roller or by spraying

### SUBSTRATE QUALITY

The concrete "pull off" (tensile adhesive) strength must be > 1.0 N/mm<sup>2</sup>

### SUBSTRATE PREPARATION

Remove deteriorated concrete by mechanical means, sandblasting or pressurized water, until a healthy and-drought, cohesive substrate is obtained. The substrate must be sound, clean, free of grease, oil, friable parts, laitance.

In case of irregularities in the substrate, it can be first regularized with SikaMonotop®-125 Thick ES or another from SikaMonotop® range.

All singular points should be treated first with SikaMonotop®-125 Thick ES or another from SikaMono-

top® appropriate range.  
Before applying SikaTop®-209 Plus ES, the substrate must be moistened until saturated without flooding it.

## MIXING

SikaTop®-209 Plus ES must be mechanically mixed with a low speed (< 500 rpm) electrical mixer. Mix for 3 minutes until you get a homogeneous paste. It is not suitable to use a concrete mixer.

## APPLICATION METHOD / TOOLS

The application can be done by trowel, brush, long hair roller or by spraying. The projection equipment will be of type Wagner PC 5, Turbosol T6, Putzmeister gun, etc.

The SikaTop®-209 Plus ES can be installed with or without reinforcement.

### *Without reinforcement:*

If a notched trowel is used, with teeth of 3-4 mm, the first layer is applied with the toothed edge and the second with the plain edge, following the direction of the grooves.

The second layer of mortar should be applied when the first has hardened sufficiently (4 hours at 20 °C). If a brush, roller or spray is used for the application, apply two coats waiting for the first to harden before applying the second.

SikaTop®-209 Plus ES will extend as evenly as possible, avoiding accumulating material in corners, cavities or slits where cracks may appear.

### *With reinforcement:*

SikaTop®-209 Plus ES coatings armed with ArmaTop®-100, an anti-alkaline fiberglass mesh, are capable of absorbing certain movements that may occur in the element on which they are applied, as well as acting as a bridge in the event that the support presents shrinkage cracks.

The reinforcement must be carefully placed, avoiding any air occlusion due to the formation of folds or bags in the fiberglass mesh. The fiberglass mesh is joined by overlapping with a width between 3 and 5 cm.

The amount of SikaTop®-209 Plus ES to be applied must be the necessary amount to cover the entire reinforcement.

## CURING TREATMENT

Measures should be taken to prevent the SikaTop®-209 Plus ES from drying out too quickly by using polyethylene sheets, wet sackcloths or Sika® Antisol® 3 E curing agent.

## CLEANING OF EQUIPMENT

Clean all the tools and application equipment with water immediately after use. Hardened material can only be removed mechanically.

## 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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