BUILDING TRUST

PRODUCT DATA SHEET

Sikalastic®-1K ES

ONE COMPONENT, FIBER REINFORCED AND FLEXIBLE MORTAR FOR WATERPROOFING AND CONCRETE PROTECTION

PRODUCT DESCRIPTION

Sikalastic®-1K ES is a one-component, crack bridging, fiber-reinforced mortar, based on cement modified with special alkali-resistant polymers. Sikalastic®-1K ES is suitable for application by brush or trowel.

USES

- Flexible waterproofing and protection of concrete structures including tanks, basins, pipes, etc.
- Waterproofing of bathrooms, showers, swimming pool before the application of ceramic tiles bonded with adhesives
- Exterior waterproofing of buried walls
- Interior waterproofing of walls and basements with negative water pressure
- Flexible protective coating for reinforced concrete structures against freeze-thaw effect and carbon dioxide attack to improve its durability

CHARACTERISTICS / ADVANTAGES

- It is a one-component product, only need to add water
- Adjustable consistency, easy to apply by brush or trowel
- Good sag resistance and easy to apply on vertical surfaces
- Good crack-bridging ability
- Very good adhesion on many substrate including concrete, mortars, stone and masonry
- Can be applied on damp substrates

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete. Principle 1, Method 1.3 Suitable for protection against ingress; Principle 2, Method 2.2 Suitable for moisture control; Principle 8, Method 8.2 Suitable for increasing resistivity.
- CE Marking and Declaration of Performance to EN 14891 - Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesives

PRODUCT INFORMATION

Chemical Base	Cement modified with alkali resistant polymers, selected agregates, additive and fibers
Packaging	20 kg bag
Appearance / Colour	Light gray
Shelf Life	12 months from date of production
Storage Conditions	Store properly in the original packaging, in cool and dry conditions. Protect from water.
Maximum Grain Size	D_{max}: 0,3 mm

TECHNICAL INFORMATION

Tensile adhesion strength

≥ 0.8 N/mm² — EN 1542:1999

	Requeriments	UNE EN 14891:2017
Initial tensile adhesion strength A.6.2	≥ 0,5 N/mm²	
Tensile adhesion strength after water contact A.6.4	≥ 0,5 N/mm²	
Tensile adhesion strength after heat aging A.6.5	≥ 0,5 N/mm²	
Tensile adhesion strength after freeze-thaw cycles A.6.6	≥ 0,5 N/mm²	
Tensile adhesion strength after contact with lime water A.6.9	≥ 0,5 N/mm²	
Tensile adhesion strenght after contact with chlorinated water A.6.8	≥ 0,5 N/mm²	
Elongation at break	0.97 mm (23º C) 0.76 mm (-5º C)	

* Value obtained with 2 layer with a consumption of 1,8 kg/m2 each one with 22% water

Crack Bridging Ability

Class A3 > 500 µm at 23ºC — UNE-EN 1062-7:2004
Class A3 > 500 µm at -10ºC

Reaction to Fire

Walls and ceiling: B-s1,d0 — EN 13823:2021
Floor: B_{fl}-s1

Freeze Thaw De-Icing Salt Resistance

2,3 N/mm² — UNE-EN 13687-1:2002
Type B break

* Value obtained with 2 mm thickness

Permeability to Water Vapour

Class I S_d < 5 m — UNE EN ISO 7783:2012

Capillary Absorption

~ 0,02 kg/m²$h^{0,5}$ — UNE EN 1062-3:2008

Water Penetration under Pressure

No penetration after 3 days at 5 bar — UNE-EN 12390-8

* Values obtained with 2 layers of 1,5 mm each one

Water Penetration under Negative Pressure

No penetration after 3 days at 5 bar — UNE-EN 12390-8

* Values obtained with 2 layers of 1,5 mm each one

Permeability to CO2

i = 3,1 g/m²d Sd > 50 m — UNE-EN 1062-6:2003

Water permeability

W < 0.1 kg/m²$h^{0.5}$ — EN 1062-3
No penetration and weight gain ≤ 20 g — UNE EN 14891:2012, A.7

APPLICATION INFORMATION

Mixing Ratio

Applicatio method	Water dosage
By brush	6 liters water per 20 kg bag
By trowel	4,4 liters water per 20 kg bag

Consumption

This depends on the substrate roughness; as a guide: ~1,2 kg/m²/mm

Layer Thickness

3 mm with constant thickness, applied in minimum 2 layers.
Maximum recommended thickness per layer is 2 mm when applied by trowel and 1 mm when applied by brush

Ambient Air Temperature

5 °C min. / 35 °C max.

Substrate Temperature

5 °C min. / 35 °C max.

Pot Life

~35 min at +20 °C

Waiting Time / Overcoating

Sikalastic®-1K ES must be completely hardened before over-coating or water contact.
Guide for waiting times at the following temperatures:

	+ 20ºC	+ 10ºC
Horizontal covering with tiles	~ 2 days	~ 7 days
Vertical covering with tiles	~ 2 days	~ 3 days
Water emulsion coating	~ 2 days	~ 3 days
Immersion in water	~ 2 days	~ 7 days

* Waiting times will depend on the ambient humidity and the support

Fresh mortar density

~1,5 kg/l

SYSTEM INFORMATION

System Structure

The mortar can be placed with Armatop®-100 reinforcement.

Armatop®-100

Material	Anti-alkali fiberglass mesh
Weight	0.172 kg/m²
Thickness	0.8 mm
Tensile strength	Wrap: 180 daN/5 cm Plot: 180 daN/5 cm
Packing	Roll of 1 m x 50 m

VALUE BASE

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

LIMITATIONS

- Sikalastic®-1K ES can't be smoothed with a sponge or trowel.
- Protect from rain for the first 24-48 hours immediately after application.
- Do not apply on frozen substrate or in the course of thawing.
- Avoid direct contact with chlorinated water i.e. in swimming pools, by using suitable protection.
- Take into account waiting times for tiling.
- If a solvent based paint is to be applied on Sikalastic®-1K ES, carry out preliminary testing in order to ensure the solvents do not attack and damage the waterproofing layer.
- Where Sikalastic®-1K ES will be visible after completion of the works, then use the white colour version, which is aesthetically more pleasing, should be used

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

Electric mixer, special mixing paddle for viscous mortars, trowel, notched trowel, hard-haired brush and roller.

SUBSTRATE PREPARATION

Remove deteriorated concrete by mechanical means, sandblasting or pressurized water, until a healthy and rought, 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.
In the presence of waterway, it must be sealed with Sika®-4A Mortero Rápido or SikaSeal®-75 Plug.
All singular points should be treated first with SikaMonotop®-125 Thick ES or another from SikaMonotop® appropiate range.
Before applying the flexible mortar Sikalastic®-1K ES, the substrate must be moistened until saturated without flooding it (saturated surface dry).

MIXING

- Sikalastic®-1K ES can be mixed with a low speed (< 500 rpm) electrical mixer.
- Mix for 4 minutes until you get a homogeneous paste.
- Don't add more water or other ingredients.
- Each bag must be thoroughly mixed to avoid a faulty distribution of aggregate particle sizes.

APPLICATION METHOD / TOOLS

Special Requirements:
All connections between the substrate and pipe entries, plant and equipment, light switches etc., must be sealed and watertight.
Joints in concrete, pipes or anywhere else in the struc-

ture must also be sealed and watertight.
The maximum recommended thickness in each layer will be 2 mm. The final thickness will depend on the type of application and the degree of waterproofing required.
Wait until the first coat is dry to apply the next coats.
It is possible to sand Sikalastic®-1K ES once it is cured.
Brush application:
The application by brush should be done with the utmost care to evenly cover the entire surface.
The maximum recommended layer thickness is 1 mm per layer.
The application of a minimum of 2 or 3 coats is recommended (subsequent coats must be applied crosswise).
Trowel application:
The application must be done covering the whole surface of the substrate with uniform thickness.
Press the trowel firmly against the surface.
At least, 2 coats must be applied, with a final thickness of at least 3 mm.

CLEANING OF TOOLS

Tools should be thoroughly cleaned with water before the material has set. Hardened mortar 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 the 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.

SIKA IRELAND LIMITED
Ballymun Industrial Estate
Ballymun
Dublin 11, Ireland
Tel: +353 1 862 0709
Web: www.sika.ie
Twitter: @SikaIreland