

## SYSTEM DATA SHEET

# Sika<sup>®</sup>-1 Mortar Waterproofing System

### PRE-BAGGED STRUCTURAL WATERPROOFING SYSTEM

#### PRODUCT DESCRIPTION

Sika<sup>®</sup>-1 Mortar Waterproofing System mortars are pre-bagged kiln dried blends of specially graded aggregates and cements with waterproofing admixtures packaged in 4 grades at the appropriate mix ratios for optimum application performance and durability. When mixed with the water they provide the multi-coat components for the structural waterproofing systems.

#### USES

- Internal waterproofing of below ground structures to meet the requirements of BS8102:2009 Grades 1 - 3
- Waterproofing of swimming pools and other water retaining structures
- Waterproofing of basements, cellars and vaults
- Waterproofing of tunnels

#### CHARACTERISTICS / ADVANTAGES

- Type A waterproofing system according to BS8102-2009
- Proven resistance to hydrostatic back pressure
- Fully bonded waterproofing barrier
- Can be applied to wet substrates
- For use on concrete, brick and structural blockwork
- Can be used internal and externally
- Can be applied to wall, floors and soffits
- Quality controlled system
- Used for negative or positive water pressure situations

## System Structure

### Materials:

Sika®-1 Pre-bag Spritz Mortar  
Sika®-1 Pre-bag Render Mortar  
Sika®-1 Pre-bag Finishing Mortar  
Sika®-1 Pre-bag Screed Mortar

### Walls:

Sika®-1 Mortar Waterproofing System for walls consisting of 3 coats as follows:

- 1st coat Sika Spritz Mortar @ 6mm
- 2nd coat Sika Render Mortar @ 6mm
- 3rd coat Sika Finishing Mortar @ 6mm

Total System Thickness – minimum 18mm.

Additional coats of Sika Render Mortar can be applied if necessary.

### Floors:

Sika®-1 Mortar Waterproofing System for floors consisting of 3 coats as follows:

- 1st coat Sika Spritz Mortar applied as a bonding slurry
- 2nd coat Sika Spritz Mortar at 10 mm
- 3rd coat Sika Screed Mortar at 20 mm

Total System Thickness – minimum 30mm

All the above are minimum thickness, maximum thickness depends on substrate, working conditions and requirements.

Loading conditions may require the screed mortar thickness to be increased.

---

## PRODUCT INFORMATION

### Packaging

Sika®-1 Mortar Waterproofing System Pre-bagged mortars are supplied in 25kg Packs with a coloured band

Sika®-1 Pre-bag Spritz Mortar	Magenta band
Sika®-1 Pre-bag Render Mortar	Brown band
Sika®-1 Pre-bag Finishing Mortar	Green band
Sika®-1 Pre-bag Screed Mortar	Blue band

### Shelf Life

Sika®-1 Mortar Waterproofing System Pre-bagged mortars - Minimum 6 months in original unopened sealed packs

### Storage Conditions

Sika®-1 Mortar Waterproofing System Pre-bagged mortars must be stored in dry condition at temperatures between +10°C and +30°C

---

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

The substrate must be structural sound and generally brickwork, dense concrete block and concrete normally provide satisfactory substrates. All surfaces should be clean and free from surface contaminants and laitance to achieve an adequate bond.

### SUBSTRATE PREPARATION

#### Walls/Brick:

All existing treatments shall be completely removed and the exposed surfaces roughened by mechanical or water blasting techniques, followed by washing down and brushing to ensure full removal of all loose material. Mortar joints should be bonded and sound. Any defective mortar joint should be raked out to a depth of 12.0mm and repointed using Sika Finishing Mortar made up with clean water.

#### Walls/Concrete:

All laitance shall be removed to expose coarse aggregate by mechanical or water blasting techniques.

On new concrete walls Sika® Rugasol® MH Concrete Retarder or similar can be applied to the face of the shuttering followed by wire brushing and washing of concrete surfaces.

### Floors/General:

All existing treatments shall be completely removed and the exposed concrete floor mechanically prepared, washed down and brushed to ensure full removal of all loose debris to give an exposed aggregate finish, free of laitance, and surface contamination

### MIXING

Place the correct amount of clean water into a mixer and add the mortar and mix until the water has been evenly dispersed, approximate 3 minutes. The Sika®-1 Mortar Waterproofing System mortars should be mechanically mixed using a forced action mixer or drill and paddle mixer to limit the amount of air entrapment. A tumble mixer is not suitable for mixing.

### APPLICATION

Ensure the substrate is structurally sound before in-

stalling Sika®-1 Mortar Waterproofing System. Consideration must be made to the affects of applying a render/screed system to the existing structure.

Immediately prior to application the substrate must be soaked with clean water however no standing water or puddles should be present.

#### **Walls:**

**First coat** – Sika Spritz Mortar applied as a 6 mm spritz coat by casting on vigorously over the complete wall surface.

**Second coat** – Sika Render Mortar applied by trowel at 6 mm as soon as the first coat has stiffened sufficiently (typically 4-5 hours later), with a coved trowel used at internal corners. A splatter coat of Sika Render Mortar or Sika Spritz Mortar is then applied to serve as a key for the third coat.

**Third coat** – Sika Finishing Mortar applied by trowel at 6 mm, finished with a wooden float to achieve a closed surface with neat arrises.

Should additional coats be required, Sika Render Mortar is repeated on the second day and subsequent days before the application of the Sika Finishing Mortar final coat.

#### **Decorative Finishes**

Refer to Architectural and Engineering Considerations.

#### **Floors:**

**First coat** – Sika Spritz Mortar is applied as a bonding coat in sections by vigorously working into the surface using a stiff brush or broom.

**Second coat** – Sika Spritz Mortar is applied by trowel by waiting for the mortar to become a plastic consistency. This coat is laid whilst the first coat is still wet at a minimum overall thickness of 10 mm.

**Third coat** – When second coat has hardened sufficiently to walk on, apply the third coat. Sika Screeding Mortar is prepared to a semi-dry consistency and is applied in a coat of 20 mm minimum thickness whilst the previous coat is still green. Tamp vigorously, until moisture rises to the surface and finish off with a wooden float to achieve a flat, closed surface or to achieve a surface finish to suit the final floor covering. If the third coat exceeds second coat by more than 24 hours, apply another bonding coat of Sika Spritz Mortar.

**Corner Fillet** – Use Sika Render Mortar to form any optional cornet fillets.

#### **FORMATION OF LAP JOINTS:**

When applying Sika®-1 Mortar Waterproofing System, successive coats must be lapped to eliminate a continuous butt joint through the mortar. The joints between successive coats of render and screed at day work joints must be stepped back to allow overlaps of a minimum 100 mm in length between coats. Before continuing with the new work the lap must be prepared by brushing and priming with a bonding coat of Sika Spritz Mortar.

#### **CURING TREATMENT**

Sika®-1 Mortar Waterproofing System must be kept moist during the work period and for a minimum 7 day period after final application to stop drying out and reduce cracking. Surfaces should be prevented from being exposed to sudden changes in air temperature, air movement and relative humidity.

## **FURTHER DOCUMENTS**

#### **Levelling of walls and screeds**

Undulating surfaces should be levelled after application of the Sika®-1 Mortar Waterproofing System for optimum performance.

**All Construction and Movement Joints**, including wall/floor joints, must be sealed using Sikadur Combiflex SG joint system prior to the application of the Sika®-1 Mortar Waterproofing System. Cracks leaking water should be sealed with Sika Injection systems or plugged using Sika 4a.

#### **Fixings**

Fixings can be applied to Sika®-1 Mortar Waterproofing System by bonding to the cured surface or creating pockets before installation. See standard detailing sheet. Timber battens can be adhered onto Sika®-1 Mortar Waterproofing System using Sikaflex 11FC to facilitate the application of a dry lining system. Sikadur Combiflex Adhesive or Sikadur 31 CF can be used to structurally bond fixtures to Sika®-1 Mortar Waterproofing System.

#### **Overcoating**

Sika®-1 Mortar Waterproofing System is not designed as a finished surface. To provide a smooth finish suitable for decorating, use a non-gypsum based, breathable renovating plaster.

Sikagard and Sikafloor coatings can be applied directly to Sika®-1 Mortar Waterproofing System to enhance durability and aesthetics.

**Sealing of Pipes and Ducts** – Refer to detailing sheet.

**Installation** should be carried out by Sika Registered Contractors.

Reference should always be made to the Detailing, Architectural and Engineering Consideration Sheets, Agreement Certificates and Installation Guides.

## **LIMITATIONS**

- Puncturing the system can compromise its integrity.
- Do not expose to frost while curing.
- Allow Sika®-1 Mortar Waterproofing System to sufficiently dry out before over coating.
- **The structure and its elements must be capable of withstanding the developed water pressure and other anticipated loadings without cracking or delaminating.**
- Advice should be sought from independently qualified personnel with knowledge of the structure and local ground conditions.
- Never score or scratch any of the render coats to provide a key.
- Do not use gypsum based plaster over Sika®-1 Mortar Waterproofing System. Refer to plaster manufacturer for advice on suitability of product for use in waterproofing works.

## **VALUE BASE**

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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## 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.

### SIKA LIMITED

Watchmead  
Welwyn Garden City  
Hertfordshire, AL7 1BQ  
Tel: 01707 394444  
Web: [www.sika.co.uk](http://www.sika.co.uk)  
Twitter: @SikaLimited

### SIKA IRELAND LIMITED

Ballymun Industrial Estate  
Ballymun  
Dublin 11, Ireland  
Tel: +353 1 862 0709  
Web: [www.sika.ie](http://www.sika.ie)  
Twitter: @SikaIreland



System Data Sheet  
Sika®-1 Mortar Waterproofing System  
April 2019, Version 01.01  
020701900000000001

Sika-1MortarWaterproofingSystem-en-GB-(04-2019)-1-1.pdf