PRODUCT DATA SHEET

Sika®-4a

Rapid setting cement additive to stop leaks

PRODUCT DESCRIPTION

Sika®-4a is a rapid setting water stopping cement additive. When mixed with ordinary Portland cement and water, it sets rapidly to seal areas of moderate water infiltration through concrete, rock or masonry.

USES

Sika®-4a is used as preliminary waterproofing work on wet surfaces or where there is general infiltration of water, prior to the application of subsequent cementitious render or gunite. Typical applications are tunnels and culverts, mine galleries, water reservoirs, concrete pipes and manholes. It can also be used in quick setting mortar for assembly work, e.g. for fixing anchors, bolts and other fitting subject to early loading in rock or concrete.

CHARACTERISTICS / ADVANTAGES

The benefits of Sika®-4a include, but are not limited to the following:

- Rapid setting for rapid leak plugging and/or fixing.
- Ready to use, just add clean water and Ordinary Portland Cement.
- Does not contain chlorides.
- Solvent free.

PRODUCT INFORMATION

Chemical Base	Blend of inorganic chemicals
Packaging	5 L
Shelf Life	12 months.
Storage Conditions	Store properly in undamaged, original sealed packaging in dry cool conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight, frost and contamination.
Appearance / Colour	Clear liquid
Density	~1.3 g/cm³
pH-Value	~12
Total Chloride Ion Content	≤ 0.1 %

Effect on Setting	Sika®-4a 1: 1 water 15 - 45 seconds when mixed with cement at 0.35 L/ 1 kg Sika®-4a 1: 4 water 5 - 10 minutes when mixed with cement at 0.18 L/ 1 kg

APPLICATION INFORMATION

Ambient Air Temperature	+5 °C min. / +35 °C max.
Substrate Temperature	+5 °C min. / +35 °C max

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

- Only use with fresh Ordinary Portland Cement.
- Setting times will be affected by ambient temperature, water and Sika®-4a temperature, supplier and age of Ordinary Portland Cement. Trials are recommended varying the Sika®-4a water dosage, temperature and type of Ordinary Portland Cement until the required performance is achieved.
- Not suitable for direct contact with potable or drinking water, must be overcoated.

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

SUBSTRATE QUALITY / PRE-TREATMENT

Surfaces to be treated with Sika®-4a shall be thoroughly cleaned, roughened, and washed with fresh, clean water to remove any dirt, debris, loose, particles or contaminants. Level off any sharp surface protrusions. Cracks may need to be enlarged to increase the bond.

MIXING

- Before starting to work with the material wear suitable protective clothes, gloves and googles.
- Mix Sika®-4a with clean water at the desired dilution rate, depending on the application and water pressure.
- Pour the liquid into a clean mixing container.
- Quickly pour the cement in until the liquid is covered (approximately 3 parts of cement to 1 part liquid).
- Mix the materials quickly and thoroughly into a paste and use immediately. Do not mix more product that can be placed immediately.

APPLICATION METHOD / TOOLS

- Mould the Sika®-4a paste by gloved hand into a plug and place it immediately into the hole, pressing firmly until the mix has set.
- Once sealed Sika®-4a must be overcoated with a coating of Sika® waterproofing mortar.
- In areas of medium to heavy water infiltration, divert the water to discharge points formed of short lengths of plastic tube bonded into drilled holes using Sika®-4a. This will reduce the pressure until the waterproofing final render has fully hardened. The plastic tubes can then be removed and the holes plugged using a mix of Sika®-4a (diluted 1:1 with water) with cement. Do not apply final layer of the render until discharge tubes have been removed and water infiltration has stopped.
- Where high water pressures are experienced, the prepared area around the discharge tubes may need to increase to provide a larger surface area for bonding the Sika®-4a paste.

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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