

PRODUCT DATA SHEET

Sika® High Strength Rapid Repair Mortar

Rapid repair mortar with high early strength

PRODUCT DESCRIPTION

Sika® High Strength Rapid Repair Mortar is a structural, non-shrink ultra-fast bedding and general repair compound. Suitable for 10 mm to 100 mm depths in one application*. Its formulation is based on magnesium-phosphate, premixed with selected aggregates. When mixed with water, a chemical reaction takes place that produces heat and initiates the setting process within approximately 15 minutes (at +20 °C). The mortar develops sufficiently high early strength to withstand heavy traffic in only 45 minutes (+15 to +20 °C) and is resistant to de-icing salts. It can also be used as an installation and repair mortar in low and sub-zero temperatures down to -20 °C.

*The addition of 10 mm aggregate can be used for depths over 100 mm.

USES

For use in repair situations where minimum delay and work disruption is of the utmost importance:

- Installing and repairing manhole covers, concrete slabs, blocks and kerbs.
- Filling potholes in concrete pavements.
- General repairs to concrete and stonework.
- Bedding street ironwork, gratings, beams, lintels, sills and around fixing bolts.
- Patching industrial concrete floors, cold store floor areas, warehousing and loading bays (interior and exterior).
- Repairing roads, nosings (edges), rail installations and bridge decks.
- Carrying out repairs to coastal defences.

PRODUCT INFORMATION

Packaging	25 kg bag.
Colour	Grey.
Shelf Life	Shelf life is 6 months from the date of manufacture when stored in unopened bags.
Storage Conditions	Store in cool, dry conditions at temperatures between +5 °C and +30 °C.

CHARACTERISTICS / ADVANTAGES

- Trafficable in 45 minutes.
- High early strength.
- Apply even in sub-zero temperatures.
- Easy mixing, just add water.
- No secondary bonding agents required.
- Durable - resistant to de-icing salts.
- No-shrink formula.

APPROVALS / STANDARDS

Conforms to EN 1504-3, CLASS R4.

Density	2200 kg/m ³ (wet).
Compressive Strength	1 Hour after placement - 25 N/mm ² 2 Hours after placement - 30 N/mm ² 24 Hours after placement - 40 N/mm ² 28 Days after placement - 52 N/mm ²
Shrinkage	0.02 % 28 days. Shrinkage compensated grade (zero shrinkage compensated grade).
Mixing Ratio	Mix Proportions: Standard Mortar Mix: Add 25 kg/1 bag Sika® High Strength Rapid Repair Mortar to 1.5 L water. Small Batches: Add 1 kg Sika® High Strength Rapid Repair Mortar to 60 ml Water. Concrete Mix (larger areas >100 mm deep): Add the coarse aggregate 10 kg (max) to 1.5 L water first and then add 25 kg/1 bag Sika® High Strength Rapid Repair Mortar to the mix.
Yield	Approximately 11.6 L per 25 kg bag when mixed as directed. The addition of 10 kg coarse aggregate as per the instruction above will increase the yield by approximately 30 %.
Layer Thickness	10 mm -100 mm For depths greater than 100 mm, a 10 mm single-sized coarse aggregate (to EN12620) may be added up to 10 kg per 25 kg of Sika® High Strength Rapid Repair Mortar.
Initial set time	15 minutes at +20 °C. 35 minutes at +8 °C.
Final set time	Approx 45 minutes @ 20 °C.

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.

LIMITATIONS

- Do not use limestone-based aggregate.
- Always mix with clean, fresh water.
- Never exceed the stated water dose, as this will significantly reduce strength and may result in failure.
- Do not try to rework or reconstitute the product once it has started to set.
- Do not use any admixtures.
- Do not apply to painted surfaces: all paint must be completely removed beforehand.
- Setting times and strength development are indicative and may be accelerated at higher temperatures or delayed at lower temperatures.

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

- Before application, ensure that the area to be treated is clean and free from dirt, oil and grease.
- No priming or secondary bonding agents are required.
- A suitable mixer (e.g. a tilting-drum mixer) should be located as close as possible to the work area.
- The quantity mixed should never exceed the amount that can be transported, placed, compacted, and finished within 10 minutes.

MIXING

Pre-wet the mixer before use, ensuring any excess water is drained away prior to mixing. Mix by hand or machine for a minimum of 1 minute according to mixing instructions given in the table, according to the batch size.

- Always add the powder to the water.
- Do not mix more product than can be placed in 4 minutes and compacted within 10 minutes.
- The product will be stiff to mix initially, but workability will improve as mixing continues.
- Do not add extra water, as this will considerably reduce the strength of the mortar.

APPLICATION

- The substrate should be thoroughly pre-wetted with clean water. Ensure any standing water is removed before application.

- Apply the material by trowel to the pre-wetted area within 4 minutes of mixing. Compact the mortar firmly into position and level the surface using a straight-edged tamping bar. All repair edges should be square-cut and must not be feather-edged.
- Cold Weather Working - for applications at temperatures ranging from +5 °C to cold-store temperatures of -20 °C, pre-warm the mixer and equipment using warm water before use. For mixing, use warm water at a temperature of +25 °C to +30 °C.
- Hot Weather Working - where ambient temperatures reach +30 °C, keep the mixing equipment cool by rinsing it with cold water and use chilled water for mixing to extend the working time.
- Wet Weather Working - if rain is imminent, protect the treated area for a minimum 30 minutes using suitable coverings, such as temporary tenting.

CLEANING OF TOOLS

Clean all tools and equipment immediately with water before the mortar dries.

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.

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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