

Sika® MonoTop®-615SD

High build polymer modified cementitious patch repair mortar

Construction

Product Description

Sika® MonoTop®-615SD is a 1-part, thixotropic, high build, polymer modified, cementitious mortar containing silica fume. Sika® MonoTop®-615SD cures to produce a medium strength mortar with enhanced polymeric properties. Sika® MonoTop®-615SD exhibits high bond strength, greatly reduced water and carbon dioxide permeability and improved resistance to oils and chemicals.

Uses

Fast repairs to **overhead**, horizontal or vertical concrete or mortar surfaces above and below ground level

- Filling/repair mortar for voids, honeycombed areas, etc.
- Repair of spalled concrete caused by reinforcement corrosion
- Repairs with improved resistance to oils, sewage, chemicals, etc.

Characteristics / Advantages

- Fast and easy to apply in layers up to 60 mm thick (vertical application)
- 1-part system requiring only the addition of clean water
- Compatible with the thermal expansion properties of concrete
- Chloride free
- Non-corrosive to reinforcing steel
- Non-toxic, suitable for potable water
- Contain fibres to prevent micro cracks
- Non-shrink
- Excellent freeze / thaw resistance
- Good resistance to long term water immersion

Product Data

Form

Appearance / Colour Concrete grey powder

Packaging 25 kg bag

Storage

Storage Conditions / Shelf-Life 12 months from the date of production if stored in undamaged and unopened, original sealed containers, in dry conditions at temperatures between +5°C and +30°C.



Technical Data

Density ~ 1.5 kg per litre (freshly mixed mortar)

Layer Thickness 5 mm to 60 mm (vertical application)

Mechanical / Physical Properties

Compressive Strength (at 25°C)

- 1 day > 6 N/mm²
- 28 days > 25 N/mm²

Flexural strength (at 25°C)

- 1 day > 3 N/mm²
- 28 days > 6 N/mm²

Bond Strength On Concrete > 1.5 N/mm² (with bonding bridge)

Modulus of Elasticity < 20,000 N/mm²

System Information

System Structure Sika® MonoTop® System comprises:

- Sika® MonoTop®-610 bonding bridge and reinforcement protection
- Sika® MonoTop®-615SD or Sika® MonoTop®-R or Sika® MonoTop®-R40 repair mortar
- Sika® MonoTop®-620 pore sealer / fairing coat

Application Details

Material Consumption ~ 52 bags (25 kg) per m³ (1 bag yields ~ 19 litres of mortar)

Substrate Quality

Concrete
Surfaces must be sound, clean, free from oils, grease, standing water and any loose or friable adhering particles and any other surface contaminants. The concrete "pull off" (tensile) strength must be > 1.0 N/mm².

Steel Reinforcement

Surfaces must be clean from rust products, oil, grease and other loosely adhering particles to provide a rust free surface.

Substrate Preparation

Concrete

Proper surface preparation is essential to achieve the high adhesive qualities of Sika® MonoTop®-615SD. For large areas, grit or grit-water blasting, scarifying or scabbling is recommended. For small areas and for 'spot' repairs, needle gunning or scabbling is effective.

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated but with no surface water. This condition is referred to as saturated surface dry (SSD) and care should be taken to remove any cement slurry or dust produced during surface preparation. The use of a "fan" shaped water jet is ideal. Steel reinforcement should have all traces of rust removed and be primed with 2 coats of Sika® MonoTop®-610.

Steel Reinforcement

Surfaces must be prepared using approved abrasive blast cleaning techniques.

Bonding Bridge

Concrete

Prior to application of Sika® MonoTop®-R40, Sika® MonoTop®-610 should be applied as a bonding bridge. Always work "wet-on-wet" onto the bonding bridge (refer to Sika® MonoTop®-610 data sheet).

Reinforcement

2 coats of Sika® MonoTop®-610 should be brush applied to the prepared steel (refer to product data sheet).

Application Conditions / Limitations

Application Temperature +5°C min. / +40°C max.

Application Instructions

Mixing 3.7 – 3.9 litres of clean water per 25 kg bag to suit desired consistency.

Sika® MonoTop®-615SD should be mechanically mixed in a clean drum using a drill and paddle. A normal tilting drum concrete mixer is **not** suitable. Place clean water into a clean drum and add Sika® MonoTop®-615SD slowly while mixing.

A minimum mixing time of 3 minutes is recommended to thoroughly blend the components with a maximum speed of 500 rpm to minimise air entrainment.

Application Method / Tools Work wet-on-wet the mixed mortar well into the substrate using a placing rather than a rendering technique to fill all pores and voids. Compact well. Force material against the edge of the repair, working towards the centre.

For repairs in excess of 60 mm deep, apply in layers and form keys for subsequent layers. If previous layers are over 48 hours old, needle gun the surface and dampen before applying the next layer. Steel trowel the final coat if required.

The Sika® MonoTop®-615SD and surrounding areas can be further treated with SikaTop® Seal 107 or Sika® MonoTop®-620 to provide a water and carbonation resistant finish.

Cleaning of Tools Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

Pot Life (at +20°C) 30 minutes

Notes on Application / Limitations

- Repairs with Sika® MonoTop® System **cannot** bridge live cracks or moving joints, etc.
- Repairs in excess of 60 mm must be layered.
- Sika® MonoTop® mortars that are wetted during the initial cure period may produce a white "bloom" on the surface which does **not** affect the long term properties of the mortar.

Curing Details

Curing Treatment To achieve the full potential of any cement based product, curing is essential. This can be carried out with the application of a curing compound such as Antisol®-E or with other curing practices such as covering with polythene sheets or damp hessian for 3 days.

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

Health and Safety Information For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet (available upon request) containing physical, ecological, toxicological and other safety-related data.

Legal Note

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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