



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

Sika MonoTop 612 Data Sheet

Specification notes

Product: **Sika MonoTop 612**

Supplier:

Arcon Construction Supplies
19-20 Prestwood Court
Leacroft Road
Warrington
WA3 6SB

Tel: **01925 852225**

Email: mail@arconsupplies.co.uk

Web: www.arconsupplies.co.uk

Call 01925852225 or visit [Arcon Construction Supplies](http://www.arconconstruction.com) website

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Product Data Sheet
Edition 21/02/2012
Identification no:
010302040010000004
Sika® MonoTop®-612

Sika® MonoTop® -612

Wet sprayed/hand placed fibre reinforced repair mortar

Product Description

Sika® MonoTop®-612 is a cementitious, polymer modified, low permeability, high strength mortar containing silica fume and synthetic fibre reinforcement.

Uses

Sika® MonoTop®-612 is designed as a high strength repair and repointing system for concrete substrates. It is particularly suitable for application on overhead and vertical surfaces using the wet spray method and can also be placed by hand.

Characteristics / Advantages

- Excellent workability characteristics
- Adjustable consistency
- Excellent slump resistance
- Sprayable by the wet spray method
- Good mechanical strength
- Easily sprayed in layer thickness up to 30mm
- Good resistance to water and chloride penetration
- Synthetic fibre reinforced

Tests

Approval / Standards

Product Data

Form

Appearance / Colour Powder Grey when mixed

Packaging 25kg bags

Storage

Storage Conditions / Shelf-Life 6 months in original, unopened packaging. Store in a dry area between +5°C and +30°C. Protect from direct sunlight and moisture.

Construction



Technical Data

Chemical Base Cement and crystalline free silica aggregate

Density Approx. 2,1kg/litre fresh mortar

Layer Thickness Min.5mm - Max.30mm

Mechanical Properties

Compressive Strength (23°C/50% RH) 10 N/mm² @ 1 day 40 N/mm² @ 28 day

System Information

System Structure *Primer:* SikaTop Armatec[®] 110 EpoCem[®] / Sika[®] MonoTop[®]-610

Repair Mortar: Sika[®] MonoTop[®]-612 (5 – 30mm layer thickness)

Application Details

Consumption /Dosage Volume yield: 12 litres per 25kg bag

Substrate Quality The concrete substrate must be sound and of sufficient compressive strength (min.20 N/mm² (MPa) with a minimum pull off strength of 1.5 N/mm² (MPa)).

The surface must be dry and free of all contaminants such as oils, grease, coatings and surface treatments etc.

The substrate must be prepared mechanically to remove cement laitance and achieve a profile open textured surface.

Weak concrete should be removed and surface defects such as honeycombed areas; blowholes and voids must be fully exposed.

Repairs to substrate, filling of blowholes/voids and surface levelling should be carried out using the appropriate product from the Sikafloor[®], SikaDur[®] and SikaGard[®] range of products.

Substrate Preparation / Priming

Precise and efficient surface preparation is essential to achieve the high adhesive qualities of Sika[®] MonoTop[®].

The concrete substrate must be sound, clean and free from oils, grease or surface contaminants. All loose materials and surface laitance must be removed by high pressure water jet blasting or similar mechanical means. Small areas and 'spot' repairs should be mechanically prepared by needle gunning, bush-hammering or similar means.

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated, leaving no standing water. Apply Sika[®] MonoTop[®]-610 as the bonding bridge.

Steel reinforcement should be grit blasted to a bright steel condition to remove all traces of rust and contamination prior to applying Sika[®] MonoTop[®]-610 corrosion protection.

Application Conditions / Limitations

Substrate Temperature Min. 5°C - Max. 30°C.

Ambient Temperature Min. 5°C - Max. 35°C.

Substrate Humidity < 10 %

Relative Air Humidity 80 %

Application Instructions

Mixing (Ratio/Dosage)

3,0 - 3,5 litres water per 25kg powder (depending on application).

Pour clean water in the correct proportion into a clean mixing vessel. Add the Sika® MonoTop®-612 slowly while mixing continuously. To avoid entraining too much air use a slow speed mixer (max. 500 rpm) for minimum of 3 minutes. By gradually adding the powder in portions, the desired application consistency can be obtained.

Application Method / Tools

Thoroughly wet the substrate to a saturated surface dry condition. Apply Sika® MonoTop®-612 by the wet spray method. It can also be applied wet on wet by hand with a trowel or spatula onto the Sika® MonoTop®-610 bonding bridge. For depths greater than 30mm thick, Sika® MonoTop®-612 should be applied in layers.

In this case, as soon as the material has reached initial set, the surface should be given an open texture by rubbing with a wooden or plastic float prior to application of the next layer. Use Sika® MonoTop®-610 bonding bridge for day joints and between layers if they are left to cure for more than 24 hours.

If a finer surface finish is required or a protective coating is to be applied, Sika® MonoTop®-612 can be overcoated with Sika MonoTop®-620 surface leveling compound as required.

Cleaning of Tools

Application and mixing tools should be cleaned with water immediately after use. Hardened material must be removed mechanically.

Waiting Time / Overcoatability

Sika® MonoTop®-612 must be kept moist while curing and protected from sunshine and extremes of temperature. Standard concrete curing practice is recommended.

Notes on Application / Limits

Freshly applied Sika® MonoTop®-612 should be protected from damp, condensation and water for at least 12 hours.

Concrete should be a minimum of 28 days old.

When spray applying Sika® MonoTop® products, water jet blasting is the preferred method of surface preparation and the surface profile should be greater than 2mm.

Sika® MonoTop®-610 should be used as a bonding slurry for hand and spray applied applications.

When curing with polythene sheets, ensure all edges are fastened down and that air movement/circulation over the surface of the fresh mortar cannot occur.

Once Sika® MonoTop®-612 has started to set, it should be discarded. Do not add more water to improve workability.

Local Restrictions

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

Health and Safety Information

Protective Measures

Cement containing material may cause skin irritation. Wear gloves and goggles or apply barrier cream to hands while working with the mortar.

Ecology

Transportation Class

Important Notes

Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.

Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the Material Safety Data Sheet.

Toxicity

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 or accessed on the Internet under www.sika.co.za.



Sika South Africa (Pty) Ltd
9 Hocking Place,
Westmead, 3608
South Africa

E-mail: headoffice@za.sika.com
Phone +27 31 792 6500
Telefax +27 31 700 1760
www.sika.co.za

