

## PRODUCT DATA SHEET

## SikaEmaco® S 810

(formerly MEmaco S 810)

Cementitious spray applied repair mortar

## DESCRIPTION

SikaEmaco® S 810 is a ready-to-use, cement based spray applied repair mortar with reduced rebound. It is specially designed for civil and mining applications using either the wet or dry shotcreting systems. It gives high early strength, reduced rebound and allows for maximum application thickness and with resistivity values in the range accepted for cathodic protection (CP) overlays.

## USES

- Large area concrete repairs.
- Refurbishment of columns, bridges, tunnels and retaining walls.
- Repair of large concrete surface of Cooling Tower
- Single application, high build application.
- Repair of fire damaged structures, marine structures, piers, quays, off shore platforms etc.
- Sealing of mine roadways, tunnels, etc.
- Rock and embankment stabilisation.
- Swimming pool construction.
- Cathodic protection (CP) overlays.

## CHARACTERISTICS / ADVANTAGES

- Single component - ready to use.
- High build - up to 150mm can be applied at one pass.
- Low rebound - grading and formulation allow for excellent penetration and compaction with minimum loss of aggregate through rebound.
- Low dust - formulation ensures dust is kept to a minimum.
- Safe to handle - no added caustic accelerators.
- Excellent adhesion to concrete and steel.
- Rapid strength gain.
- Low water absorption and chloride ion diffusion.
- High resistance to carbon dioxide penetration.

## PRODUCT INFORMATION

Packaging	25 Kg bag
Appearance / Colour	Grey granular powder
Shelf life	Shelf life is 06 months when stored as above.
Storage conditions	Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction.
Density	Dry bulk: 1700kg/m <sup>3</sup>
Maximum grain size	5 mm

## TECHNICAL INFORMATION

Compressive strength	1 Day	20N/mm <sup>2</sup>	(ASTM C109)
	28 Days	40N/mm <sup>2</sup>	
Electrical Resistivity	<50,000Ωcm		
Chloride ion diffusion resistance	Very low		

## APPLICATION INFORMATION

Consumption	~ 2400 kg/m <sup>3</sup> At Water: Powder ratio of 0.08 ~ 0.09 Site trials are advisable to obtain accurate wastage factors due to variances in surface preparation, equipment and nozzlemen.
Yield	One 25kg bag of SikaEmaco® S 810 mixed with 2 ~ 2.25 L water yields approximately 13.5litres (0.0135m <sup>3</sup> )
Layer thickness	SikaEmaco® S 810 can be applied in a layer thickness from 10 ~ 150mm in one pass.
Ambient air temperature	+5 to +35 °C
Substrate temperature	+5 to +35 °C
Open time	Approx. one hour at 23°C
Curing time	Proper curing is extremely important. Wet curing is recommended for the first 3~5 days, after that continue curing by the use of a quality curing compound such as Sika® Antisol® A-4

## BASIS OF PRODUCT DATA

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.

## IMPORTANT CONSIDERATIONS

- Protect newly applied SikaEmaco® S 810 from heavy rain or frost.
- Over application should be avoided to prevent slumping away from prepared concrete surfaces or steel.
- Movement joints should be continued through the applied SikaEmaco® S 810 and sealed with a suitable sealant from the Sikaflex range.

## ECOLOGY, HEALTH AND SAFETY

As with all chemical products, care should be taken, during use and storage, to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product has fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. For further information, refer to the material safety data sheet.

## SURFACE PREPARATION

All surfaces to be treated should be sound and clean. All traces of oils, greases or surface contaminants and laitance should be removed by water, grit blasting or

scabbling. All traces of rust and corrosion products should be removed by wet or dry blasting from exposed reinforcing steel to achieve SA 2½ according to Swedish standard SIS 055900.

The prepared substrate should be thoroughly soaked with clean water and all standing water removed before the application of SikaEmaco® S 810. Sandblasting of reinforcement is recommended. In case of chloride contamination of the concrete or when depth of cover is less than 10 mm, the reinforcement must be protected by using protective primers like e.g. Sika MonoTop®-1010 IN.

## APPLICATION

SikaEmaco® S 810 should be emptied directly into the hopper of the dry process shotcrete pump. The amount of water added at the spraying nozzle will be controlled by the nozzleman - too low an addition will increase rebound and dust emission, too wet a mix will slump.

Any necessary trowelling or profiling should be done immediately after spraying has finished. If overcoating is to follow, finish with a wooden float or damp sponge.

## APPLICATION METHOD / TOOLS

An extensive range of dry and wet process shotcreting and ancillary equipment can be used for application.

## CURING TREATMENT

Normal good practice is necessary. Curing can be by

use of hessian maintained in a damp condition by properly secured plastic sheeting. The most convenient method is by spray application of a film forming curing membrane from the Sika® Antisol® A-4.

## CLEANING OF TOOLS

All tools and equipment should be cleaned with water immediately after use.

SikaEmaco® S 810 must not be left in spraying equipment or delivery hoses. Hardened SikaEmaco® S 810 can only be removed by mechanical means.

## 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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### Product Data Sheet

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