

## PRODUCT DATA SHEET

## Sika® Margel VPI-580

## Vapour Phase Corrosion Inhibitor

## PRODUCT DESCRIPTION

Sika® Margel VPI-580 is a patented vapour phase corrosion inhibitor which is inserted inside concrete structural elements close to the reinforcing steel. The product has been specifically developed to ensure the corrosion inhibitors are released over a period of 12-48 months. This results in a well bonded layer of corrosion inhibitor around the reinforcing steel resulting in a passivated protective layer that reduces exposure to chlorides, water and oxygen.

## USES

- Reinforced concrete deteriorating from corrosion.
- Where coatings have been applied and surface applied Corrosion Inhibitors cannot penetrate.
- Car parks and bridge decks.
- Protecting reinforcement at greater depths than surface applied Corrosion Inhibitors can penetrate.
- Chloride contaminated concrete.
- Carbonated concrete.
- Historic structures.

## PRODUCT INFORMATION

<b>Packaging</b>	100 x 10ml cartridges per box Cartridge dimensions = 17mm x 25mm
<b>Shelf Life</b>	24 months
<b>Storage Conditions</b>	Store properly in original unopened, sealed and undamaged packaging between +5°C to +40°C.

## CHARACTERISTICS / ADVANTAGES

- **Proven Technology:** 25-year track record.
- **Focused Protection:** provides localised protection where actual and potential corrosion risks are high.
- **Economical:** low-cost method protecting local areas of reinforcement that are chloride contaminated or contained in carbonated sound concrete, thereby reducing concrete breakout.
- **Versatile:** effective in chloride-contaminated and carbonated concrete.
- **User Friendly:** installation is quick and easy.
- **Low Maintenance:** requires no external power source or system monitoring.
- **Long-lasting:** 10 to 20 year service life reduces the need for future repairs.
- **Full System:** can be used in conjunction with Sika® FerroGard®, Sika® Galvashield®, Sika® Ebonex® and Sikagard® coating technologies to offer a full Total Corrosion Management System.

# SYSTEM INFORMATION

## System Structure

Sika® Margel VPI-580 is part of a Concrete Repair System conforming with the guidelines of BS EN 1504.	
Sika® MonoTop®-1010	Bonding primer and reinforcement coating
SikaTop® Armatec®-110 EpoCem®	Bonding primer and reinforcement coating
Sika® MonoTop®-615	R3 hand and wet spray applied high build repair mortar
Sika® MonoTop®-4012	R4 hand and wet spray applied high build repair mortar
Sika® MonoTop®-630 Rapid	R4 hand applied mortar
SikaCem®-133 Gunit Series	R4 dry spray applied repair mortars
Sika® FerroGard®-903+	Surface applied Corrosion Inhibitor
Sika® Galvashield®	XP and CC Galvanic Anodes
Sika® Ebonex®	Discrete ICCP Anodes

## APPLICATION INFORMATION

Consumption	1 cartridge per 0.5 m <sup>2</sup> or 2 cartridges per m <sup>2</sup> (minimum)
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## 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 leave in unsealed pack.
- Use immediately after opening the pack.
- Do not inhale vapour.
- Avoid skin contact.
- Do not discard into water systems or water courses.
- Ensure backing rod is tightly compressed into hole and in contact with cartridge to avoid vapour leakage and possible staining of coatings and reducing effectiveness of inhibitor.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### APPLICATION

- Drill 19-20 mm diameter holes at least 55 mm deep in a grid pattern spaced 1 metre apart horizontally, and 500 mm staggered vertically. Distances from edges of concrete elements to capsule positions should be  $\leq 250$  mm.
- On beams and columns, the spacing should be no greater than 500 mm apart and applied to one face if section dimensions are  $\leq 500$  mm; if  $> 500$  mm, insert 2<sup>nd</sup> capsule into the hole at a greater depth, or install additional capsules on other faces.
- The drilled hole must be thoroughly cleaned with a blow pump starting from the bottom of the hole and carried out at least 2 times.
- Place a Sika® Margel VPI-580 cartridge into the pre-drilled hole and use a  $>15$  mm diameter rod to push cartridge to bottom of hole.
- After insertion of the Sika® Margel VPI-580 cartridge into pre-drilled hole, cut off a length of 25 mm diameter polyethylene backing rod (thickness between 5.0 - 10.0 mm). The diameter of the backing rod should be greater than diameter of hole, compressed and pushed into hole behind the cartridge ensuring contact between them both.
- Infill remaining space with an R3 or R4 Class Concrete Repair Mortar to a minimum concrete cover depth of existing reinforcement. If cover is less than 5.0 mm use Sikadur® 31+. Ensure good compaction of mortar to help prevent vapour leakage from capsule and staining of any subsequent coatings.

## 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.

### SIKA LIMITED

Watchmead  
Welwyn Garden City  
Hertfordshire, AL7 1BQ  
Tel: 01707 394444  
Web: [www.sika.co.uk](http://www.sika.co.uk)  
Twitter: @SikaLimited



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