Product Data Sheet
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Construction

# SikaTop® Armatec® 110 EpoCem®

## Epoxy-Cement Based, Bonding Agent and Anti Corrosive Rebar Coating

### Product Description

**SikaTop® Armatec® 110 Epocem®** is a cement-based, epoxy-modified, three-component, anti-corrosive coating and bonding agent. .
Suitable for use in tropical and hot climatic conditions.

### Uses

As an anti-corrosion coating for reinforcement steel:
- For repairs to reinforced concrete where there is corrosion of the underlying reinforcement steel.
- For the preventive protection of reinforcement steel in thinly reinforced concrete sections.

As a bonding agent for use on concrete, mortar or steel:
- For repairs to concrete using Sika Monotop and SikaTop patching and repair mortars
- For bonding new concrete to old

### Advantages

**SikaTop® Armatec® 110 Epocem®** provides the following advantages:
- Excellent adhesion to steel and concrete
- Acts as an effective barrier against penetration of water and chlorides
- Contains corrosion inhibitors
- Provides an excellent bonding coat for subsequent application of repair mortars (cement and epoxy-based)
- Not affected by moisture
- High degree of mechanical strength
- Pre-measured, ready-to-use packs
- May be spray-applied
- Non-flammable

### Test Report

Issued by the Official Building Materials Testing Institute (Technical University of Braunschweig).
Laboratory for Preparation and Methodology (Beinwil am See, Switzerland).

## Product Data

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| **Type** | Cementitious, Epoxy composition | |
| **Form** | Comp. A: | White liquid |
| | Comp. B: | Whitish liquid |
| | Comp. C: | Grey powder |
| | Mixed: | Grey mortar / slurry |
| **Packaging** | 20 kg units | |
| | Component A: | 1.14 kg pail |
| | Component B: | 2.86 kg pail |
| | Component C: | 16 kg bag |

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| **Storage Condition** | Store in a dry area between 5ºC and 35ºC. Protect from direct sunlight |
| **Shelf life** | 12 months minimum from production date if stored properly in original unopened packaging |

## Technical Data

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| **Pot life (30°C)** | 90 - 180 minutes |
| **Density** | Approximately = 2.00 kg/lt. (Fresh mortar) |
| **Adhesion (Pull-off)** | 2.0 $N/mm^2$ (concrete failure) |
| **Index of Vapor diffusion** | Approximately μ $H_2O$ = 100 |
| **Index of $CO_2$ diffusion** | Approximately μ $CO_2$ = 14,000 |
| **Yield** | Approximately 10 liters per 20kg unit |
| **Consumption** | **Bonding agent**<br>Not less than 1.0 kg per m², depending on the roughness of the concrete substrate.<br>**Anti-corrosion coating**<br>2 - 4 kg per m² (for two coats), depending on the method of application. |

## Application Details

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| **Substrate preparation** | Substrate must be sound, free from dust, loose particles, cement laitance, curing compounds, oil, grease or any other contamination.<br>**Metal surfaces (steel and iron)** should be free from scale, rust, oil and grease.<br>Large spalled areas, cracks and pot holes should be raked out and cleaned.<br>Use Sika MonoTop-612 for substrate repairs, which can be applied in thicknesses from 5 - 30 mm per layer.<br>**Pre-wet substrate to a saturated surface dry condition prior to application**.<br>Avoid puddles and standing water. |
| **Mixing** | Shake Component A and B vigorously before opening. Pour both liquids into a suitable mixing pan and mix for 30 seconds. Add Component C slowly while continuing to stir the mixture. Mix mechanically for 3 minutes, using a slow-speed electric stirrer (250 rpm) in order to entrain as little air as possible. Leave to stand for 3-5 minutes, until the mixture exhibits a brushable, slow-dripping consistency.<br>**Always use full kits only.** |
| **Application** | **When used as an anti-corrosion coating**:<br>Apply a coating approx. 0.5 - 1 mm thick to the cleaned and de-rusted reinforcement steel, using a stiff paintbrush, roller or spray gun.<br>Leave to dry for 1 - 2 hours (at an ambient temperature of 30°C), then apply a second coat of similar thickness.<br>Leave to dry for a similar period of time before applying patching mortar to the repair. In the course of application, some of the coating material will inevitably be deposited on the surrounding concrete, but this has no detrimental effect on the finished repair.<br>**When used as a bonding agent for repair mortar or concrete**:<br>Wet down the prepared substrate until the concrete is fully saturated with water, apply a bonding coat not less than 0.5 mm thick, using a stiff paintbrush, roller or suitable spray gun. For best results, work the bonding slurry well into the substrate to ensure complete coverage of all surface irregularities. Apply the freshly mixed patching mortar or concrete wet on wet over the bonding slurry.<br>Maximum waiting times between application of slurry coat and application of patching mortar or concrete:<br>30°C 8 hrs.<br>20°C 12 hrs.<br>10°C 16 hrs.<br>5°C 20 hrs. |
| **Curing** | Standard concrete curing practices must be followed. |
| **Cleaning** | Use water to remove uncured material from tools and mixing equipment. Once cured, **SikaTop® Armatec® 110 EpoCem®** can only be removed mechanically. |

Construction

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| **Remarks** | ■ Minimum Application temperature (ambient air and substrate ) +5$^0$C<br>■ Maximum Application temperature (substrate ) +40$^0$C<br>■ The recommended dosage should be strictly adhered to<br>■ On no account should water be added to the mix |
| **Notes** | 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. |
| **Safety** | 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 containing physical, ecological, toxicological and other safety-related data. |

## 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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