



PRODUCT DATA SHEET

SikaTop® Armatec®-110 EpoCem®

ANTI-CORROSION COATING AND BONDING AGENT



PRODUCT DESCRIPTION

SikaTop® Armatec®-110 EpoCem® is a 3-component, water-based epoxy resin, anti-corrosion coating and bonding agent.

WHERE TO USE

- **As an anti-corrosion coating for reinforcing steel:**
 - For repairs to reinforced concrete where there is corrosion of the underlying reinforcement steel
 - For preventive protection of reinforcement steel in thin reinforced concrete sections
- **As a bonding agent for use on concrete, mortar or steel:**
 - For repairs to concrete using SikaTop® Plus, Sika MonoTop® and SikaRepair® patching and repair mortars
 - For bonding new concrete and mortar to old

CHARACTERISTICS / ADVANTAGES

- Excellent adhesion to steel and concrete
- Acts as an effective barrier against penetration of water and chlorides
- Non-vapour barrier
- Contains corrosion inhibitors

PRODUCT INFORMATION

CSC MasterFormat®

03 01 00 | MAINTENANCE OF CONCRETE

Packaging

Small unit : 8 kg (4 L) or 17.6 lb (1.05 US gal.)
Large unit : 25 kg (12.5 L) or 55 lb (3.3 US gal.)

Shelf Life

1 year in original, unopened packaging.

- Provides an excellent bonding coat for subsequent applications of repair mortars
- Extended open time
- Not affected by moisture
- High mechanical strength.
- Premeasured, ready-to-use kits
- May be spray-applied
- Non-flammable
- Solvent-free

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations
- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Material Ingredients
- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Sourcing of Raw Materials

APPROVALS / CERTIFICATES

- Ministère des Transports du Québec (MTQ) acceptance

Storage Conditions	Stored (unopened) in a dry place, at temperatures between +5 °C and +32 °C (41 °F and 89 °F).	
	Components A and B	Protect from freezing. If frozen, discard.
	Component C	Protect from humidity.
Appearance / Colour	Component A	Liquid / White
	Component B	Liquid / Yellowish
	Component C	Powder / Light Grey
	Components A+B+C	Dark Grey
Density	Component A	1.1 kg/L (9.2 lb/US gal.)
	Component B	1.03 kg/L (8.6 lb/US gal.)
	Component C	1.25 kg/L (10.4 lb/US gal.) (dry bulk density)
	Components A+B+C	2 kg/L (16.7 lb/US gal.)
Volatile organic compound (VOC) content	<10 g/L	

TECHNICAL INFORMATION

Pull-Off Strength	Concrete	2-3 MPa (290-435 psi)	(CSA A23.2-6B)
	Steel	1-2 Mpa (145-290 psi)	
Shear Adhesion Strength	14 days	Wet on Wet	20.7 MPa (3003 psi) (ASTM C882*)
	14 days	12 hours open time	13.8 MPa (2002 psi)
<p><i>*ASTM C881 Specification Minimum Bond Strength 10.3 MPa (1494 psi). Open time (12 hours) between application of SikaTop® Armatec-110 EpoCem® and placement of new concrete or repair mortar. Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.</i></p>			

Chemical Resistance Consult Sika Canada Inc.

APPLICATION INFORMATION

Mixing Ratio	Mix entire unit (A+B+C)		
Yield	Bonding agent: Minimum 8 kg or 4 L/6.6 m ² (17.6 lb or 1.05 US gal./72 ft ²) Anti-corrosion coating: 8 kg or 4 L/2.3 m ² (17.6 lb or 1.05 US gal./25 ft ²)		
Application Time	+7 °C (44 °F)	+30 °C (86 °F)	
	2 h	1 h 30 min	
Waiting Time / Overcoating	+10 °C (50 °F)	+20 °C (68 °F)	+30 °C (86 °F)
	16 h	12 h	8 h

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods. Properties tested at 23 °C (73 °F) / 50 % r.h. unless stated otherwise.

LIMITATIONS

- Do not use as a bonding agent with set accelerated mortars or concrete, e.g. SikaSet®-45, SikaQuick®-1000, SikaQuick®-2500, SikaTop®-123 Plus Winter Grade, RS-S6/RS-S10 and Self-Consolidating concrete. Consult Sika Canada Inc.
- Minimum application temperature (ambient and substrate): +7 °C (44 °F).
- Maximum substrate temperature: +30 °C (86 °F).
- Under no circumstances should water be added to the mix.

Caution

- Component A - Irritant - Contains epoxy resins.
- Component B - Irritant - Contains amines.
- Component C - Irritant - Contains cement and quartz.
- Product is a strong sensitizer. Avoid eye, skin, and respiratory contact. Use of safety goggles, chemical-resistant gloves and a NIOSH/MSHA organic vapour respirator is recommended. Avoid breathing vapours and dust. Use adequate ventilation. Consult product label for additional information.

First Aid

In case of skin contact, wash with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. Contact a physician. For respiratory problems, transport victim to fresh air. Remove contaminated clothing and wash before re-use.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Remove all deteriorated concrete, dirt, oil, grease or any contaminants or conditions that may affect adhesion or overall product performances. Following ICRI Guideline 310.2, the concrete surface must be clean, sound and mechanically prepared by sandblasting, high pressure waterblasting, scarifying or other appropriate mechanical means. Absorbent surfaces must be saturated surface dry (SSD) with no standing water prior to application. Verify the absence of micro cracking

following ICRI Guideline 310.2. To ensure optimum repair results, the effectiveness of cleaning and preparation should be assessed by a pull-off test.

MIXING

Shake components A and B vigorously before opening. Pour both liquids into a suitable mixing pail and mix for 30 seconds. Add component C slowly while continuing to stir the mixture. Mix mechanically for three (3) minutes, using a low-speed drill (300 - 450 rpm) and *Jiffy* mixer in order to entrain as little air as possible.

APPLICATION

Anti-corrosion coating: Apply coating approx. 0.5 - 1 mm (20 - 40 mil) thick on cleaned and de-rusted reinforcement steel using a stiff paint brush, roller or spray gun. Be sure to coat the underside of the totally exposed steel. Let dry for two (2) to three (3) hours [ambient temperature of +20 °C (68 °F)] before applying a second coat of similar thickness. Let dry for a similar period of time before applying patching mortar, or concrete, 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.

Bonding agent for repair mortar or concrete: Ensure that the prepared substrate is saturated surface dry (SSD), then apply a bonding coat no less than 0.5 mm (20 mil) thick, using a paint brush, roller or suitable spray gun. For best results, work the bonding slurry well into the substrate to ensure complete coverage of all surface irregularities. Freshly mixed patching mortar or concrete can be applied immediately on SikaTop® Armatec®-110 EpoCem® within the contact time: 8 hours at +30 °C (86 °F), 12 hours at +20 °C (68 °F), 16 hours at +10 °C (50 °F). After this contact time, the adhesion characteristics will be reduced.

CLEAN UP

Use water to remove uncured material from tools and mixing equipment. Cured, product can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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