



## PRODUCT DATA SHEET

# SikaTop<sup>®</sup>-122 Plus

POLYMER-MODIFIED, CEMENTITIOUS, TROWEL-GRADE MORTAR, PLUS MIGRATING CORROSION INHIBITOR



### PRODUCT DESCRIPTION

SikaTop<sup>®</sup>-122 Plus is a polymer-modified, with migrating corrosion inhibitor added, cementitious, 2-component, fast-setting, trowel-grade, easy-to-use patching mortar. Excellent for vertical and horizontal surfaces.

### WHERE TO USE

- Use on grade, above, and below grade on concrete and mortar
- Use as a topping for concrete surfaces
- Structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, ramps, and dams
- Use to level concrete surfaces

### CHARACTERISTICS / ADVANTAGES

- Superior abrasion resistance over conventional cement mortar
- High bond strength ensures superior adhesion
- Compatible with thermal coefficient of expansion of concrete
- High early strength
- Good freeze/thaw resistance
- Increased resistance to de-icing salts
- Not a vapour barrier
- High compressive and flexural strengths
- Will not corrode stressed steel

### PRODUCT INFORMATION

<b>Packaging</b>	28.5 kg (62.7 lb) unit
<b>Appearance / Colour</b>	Concrete Grey when mixed

- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR)
- Not flammable
- Meets MTO MI-67 specification for concrete patching materials
- Meets Alberta Transportation (AT B391) specification for patching materials
- Complies with NSF-ANSI Standard 61 for potable water contact (available by special order only)
- Product recognized by the British Columbia Ministry of Transportation (BC MoT)
- Approved by the Ontario Ministry of Transportation (MTO)
- Approved by the Ministère des Transports du Québec (MTQ)
- Product qualified by The Road Authority (TRA)
- Meets the requirements of CFIA and USDA for use in food plants

### ENVIRONMENTAL INFORMATION

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

<b>Shelf Life</b>	Component A : 24 months in original, unopened packaging Component B : 12 months in original, unopened bag	
<b>Storage Conditions</b>	Stored (unopened) in a dry place at temperatures between +5 °C and +32 °C (41°F and 89 °F). For best results, condition product between +15 °C and +24 °C (59 °F and 75 °F) before using. Protect Component A from freezing. If frozen, discard.	
<b>Density</b>	2 200 kg/m <sup>3</sup> (137 lb/ft <sup>3</sup> )	(ASTM C185)
<b>CSC MasterFormat®</b>	<b>03 01 00   MAINTENANCE OF CONCRETE</b>	

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	24 hours	~ 18 MPa (2 610 psi)	(ASTM C109)
	7 days	~ 37 MPa (5 366 psi)	
	28 days	~ 50 MPa (7 250 psi)	

\* Compressive Strength (tested with SikaCem® Accelerator)

Temperature	Dosage	24 hours	2 days	3 days	28 days
0 °C (32 °F)	1 bottle (150 mL)	~1 MPa (145 psi)	~10 MPa (1450 psi)	~17 MPa (2465 psi)	~42 MPa (6091 psi)
0 °C (32 °F)	2 bottles (300 mL)	~3 MPa (435 psi)	~12 MPa (1740 psi)	~21 MPa (3045 psi)	~45 MPa (6526 psi)
10 °C (50 °F)	1 bottle (150 mL)	~20 MPa (2900 psi)	~27 MPa (3916 psi)	~30 MPa (4351 psi)	~47 MPa (6817 psi)
10 °C (50 °F)	2 bottles (300 mL)	~22 MPa (3190 psi)	~30 MPa (4351 psi)	~33 MPa (4786 psi)	~50 MPa (7252 psi)
23 °C (73 °F)	1 bottle (150 mL)	~27 MPa (3916 psi)	~34 MPa (4931 psi)	~40 MPa (5801 psi)	~55 MPa (7977 psi)
23 °C (73 °F)	2 bottles (300 mL)	~30 MPa (4351 psi)	~37 MPa (5366 psi)	~42 MPa (6091 psi)	~57 MPa (8467 psi)

<b>Modulus of Elasticity in Compression</b>	7 days	23 GPa (3.3 X 10 <sup>6</sup> psi)	(ASTM C469)
	28 days	26 GPa (3.8 X 10 <sup>6</sup> psi)	

<b>Tensile Strength</b>	21 days	~5.5 MPa (797 psi)	(ASTM C496)
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<b>Pull-Out Resistance</b>	28 days	Greater than concrete	(CSA A23.2 - 6B)
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<b>Chloride Ion Diffusion Resistance</b>	28 days	Very low - between 100 and 1000 Coulombs	(ASTM C1202)
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<b>Freeze thaw resistance</b>	Modulus of elasticity greater than 90% after 300 cycles		(ASTM C666)
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<b>Splitting Tensile Strength</b>	~ 5.5 MPa (797 psi)	(ASTM C496) 21 days
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## APPLICATION INFORMATION

<b>Mixing Ratio</b>	A:B = 1:7 by weight depending on consistency required	
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<b>Consumption</b>	Neat	~ 0.013 m <sup>3</sup> (0.459 ft <sup>3</sup> ) per unit
	Extended with 17 kg (37.5 lb) of 10 mm (3/8 in) gravel	~ 0.02 m <sup>3</sup> (0.697 ft <sup>3</sup> ) per unit

Note: Coverage figures do not include allowance for surface profile and porosity or material waste.

<b>Yield</b>	Approx. 13 L (0.459 ft <sup>3</sup> )
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Layer Thickness	Min.	Max. in one lift
	Neat	3 mm (1/8 in)
Extended	25 mm (1 in)	100 mm (4 in)

  

Product Temperature	+18 °C to +24 °C (65 °F to 75 °F)
Ambient Air Temperature	> +7 °C (> 45 °F)
Substrate Temperature	> +7 °C (> 45 °F)
Application Time	Approx. 30 min after mixing the mortar
Finishing Time	Approx. 50 min to 75 min after placing the mortar

## 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

Application Thickness:	Minimum:	Maximum:
Neat:	3 mm (1/8 in)	38 mm (1½ in)
Extended:	38 mm (1½ in)	100 mm (4 in)

- Mortar should be applied at thinner layer thicknesses, which do not result in slumping, when used vertically.
- Minimum application thickness for surfaces subject to abrasion: 6 mm (1/4 in).
- Minimum ambient and substrate temperature: +7 °C (45 °F) and rising at time of application, unless using Sikacem® Accelerator (refer to Technical Data section for dosage recommendations and strength values at various temperatures).
- Extending with aggregates will reduce compressive and flexural strengths. Dimensions and grading of aggregates will influence effect on physical properties; pre-testing is recommended where required.

## 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 to obtain a surface profile of CSP 6 – 10 (ex : hydrodemolition, scarification, scabbling + sandblasting, etc.). Follow ICRI Guideline 310.1 for the preparation of the repair perimeter, the repair area geometry and for the cleaning of the concrete and reinforcing steel surfaces. 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

Mix mechanically using a heavy-duty, low-speed drill (300 - 450 rpm) with a Mud Mixer/Box or Propeller-type paddle. Shake Component A before using, then pour approximately 85 % of Component A into mixing container. Add Component B while continuing to mix. Mix to a uniform consistency for a maximum of three (3) minutes. Add additional Component A to mix if a wetter consistency is desired. Should smaller quantities be required, be sure that components are dosed in correct ratio and thoroughly premix component B before dosing. Ratio is A:B = 1:7 by weight approximately. For application greater than 38 mm (1½ in) in depth, add up to 17 kg (37.5 lb) of 10 mm (3/8 in) coarse aggregate. The aggregate must be non-reactive (reference ASTM C1260, C227, and C289), clean, well graded, saturated surface dry, have low absorption, high density and comply with ASTM C33, size number 8 per table 2.

### APPLICATION

At time of application, surfaces should be damp (saturated surface dry) with no glistening water films. A scrub coat should be applied prior to the placement of the mortar. Apply a 3 mm (1/8 in) thick scrub coat of SikaTop®-122 Plus into the substrate, filling all pores, voids and edges. Alternatively, SikaTop® Armatec-110 EpoCem® can be used as a bonding agent. Apply mortar before bond coat dries, then screed. Force product against edge of repair, working toward center. Allow mortar to reach initial set [50 to 75 minutes after placing at +23 °C (73 °F)], then finish with wood or sponge float. For extra smooth finish, wipe steel trowel with Component A during finishing. If repair requires several lifts, each lift must be applied as soon as the previous lift

will support it and all surfaces but the last must be left rough. Unfinished work from previous day must be roughened and any polymer film removed to ensure bond.

## CURING TREATMENT

As per ACI 308 recommendations for cement concrete, curing is required. To achieve performance consistent with Technical Data, curing must be provided by recognized curing methods, such as wet burlap covered with white polyethylene film or approved water-based curing compound, such as Sika® Florseal WB-18 & -25. Alternatively, the use of Sika® Ultracure DOT™ or NCF™ wet curing blankets is strongly recommended. Curing must commence immediately after placing and finishing. Moist-curing must be maintained for the first 24 hours only. Protect freshly applied mortar from direct sunlight, wind, rain and frost.

## CLEAN UP

Clean all tools and equipment after use with water. Once hardened, the product can only be removed manually or 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](http://www.sika.ca)

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### Other locations

Boisbriand (Quebec)  
Brantford; Cambridge;  
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### Product Data Sheet

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