

**Product Data Sheet**

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 CSC Master Format™ 03 01 30  
 SikaTop® 123 PLUS

# SikaTop® 123 PLUS

## Polymer-Modified, Cementitious, Non-Sag Mortar, PLUS Migrating Corrosion Inhibitor

**Description** SikaTop® 123 PLUS is a polymer-modified, with migrating corrosion inhibitor added, cementitious, two-component, fast-setting mortar. Formulated for trowel application, it is designed especially for repair of overhead and vertical surfaces.

**Where to Use**

- Use on grade, above, and below grade on concrete and mortar.
- Structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, ramps, and dams.

**Advantages**

- Superior abrasion resistance over conventional cement mortar.
- Bond strength ensures superior adhesion.
- Not a vapour barrier.
- Compatible with coefficient of thermal expansion of concrete.
- Increased resistance to de-icing salts.
- Good freeze/thaw resistance.
- High early strength.
- Easy-to-use, fast-setting, labour-saving system.
- High compressive and flexural strengths.
- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR).
- Not flammable.
- Meets MTO MI-67 specification for patching materials.
- Meets AT B391 specification for patching materials.
- Complies with NSF-ANSI standard 61 for potable water contact (available by special order only).
- Canadian Food Inspection Agency acceptance.
- Approved by the Ontario Ministry of Transportation.
- Approved by the Ministère des Transports du Québec.
- Product qualified by The Road Authority (TRA).

**Technical Data**

**Packaging** 20.5 kg (45 lb) unit  
**Colour** Concrete Grey when mixed  
**Yield** Approx. 10 L (0.353 ft³)  
**Shelf Life** 12 months in original, unopened packaging. Store dry between 5 and 32°C (41 and 89°F). For best results, condition product between 15°C and 24°C (59 and 75°F) before using. Protect Component A from freezing. If frozen, discard.

**Mix Ratio** A:B = 1:4.8 by weight depending on consistency required

**Application Time [23°C (73°F)]** Approx. 15 min after mixing the mortar

**Finishing Time [23°C (73°F)]** Approx. 30 - 60 min after placing the mortar

**Properties at 23°C (73°F) and 50% R.H.**

**Density ASTM C185** 2000 kg/m³ (125 lb/ft³)

**Compressive Strength ASTM C109, MPa (psi)**

24 hrs 20 (2900)

7 days 37 (5366)

28 days 50 (7250)

**\*Compressive Strength ASTM C109, MPa (psi)**

**(tested with Sikacem® Accelerator)**

Temperature	Dosage	24 hours	2 days	3 days	28 days
0°C (32°F)	1 bottle (150 mL)	1 (145)	17 (2465)	24 (3480)	42 (6091)
0°C (32°F)	2 bottles (300 mL)	2 (290)	22 (3190)	30 (4351)	47 (6816)
10°C (50°F)	1 bottle (150 mL)	20 (2900)	34 (4931)	40 (5800)	54 (7832)
10°C (50°F)	2 bottles (300 mL)	28 (4061)	38 (5511)	42 (6091)	56 (8122)
23°C (73°F)	1 bottle (150 mL)	27 (3916)	34 (4931)	40 (5800)	56 (8122)
23°C (73°F)	2 bottles (300 mL)	31 (4496)	37 (5366)	42 (6091)	58 (8412)

\*All moulds, mixing tools and powder components were pre-conditioned to the test temperatures. Prepared test specimens were cast and then cured at the indicated test temperatures until the time of testing.

Sikacem® Accelerator added to SikaTop® "A" component jug and shaken vigorously to incorporate prior to mixing with SikaTop® "B" component.

**Modulus of Elasticity ASTM C469**

7 days 17 GPa (2.4 x 10<sup>6</sup> psi)

28 days 26 GPa (3.7 x 10<sup>6</sup> psi)

**Tensile Splitting Strength ASTM C496**

21 days 5 MPa (725 psi)

**Bond Strength ASTM C882**

24 hrs 7 MPa (1015 psi)

28 days 17 MPa (2465 psi)



## Bond Strength CAN A23.2-6B

28 days

Greater than concrete

## Rapid Chloride Permeability AASHTO T277

14 days

270 Coulombs

*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.*

## How to Use

### Surface

#### Preparation

Remove all deteriorated concrete, dirt, oil, grease, other bond inhibiting materials from surface. Preparation work should be done by chipping, high-pressure waterblasting or other appropriate mechanical means. Obtain substrate aggregate fracture with a minimum surface profile of  $\pm 3$  mm (1/8 in) (CSP 6-9). Dampen surface to be repaired with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.

### Mixing

Mix mechanically using a heavy duty, low-speed drill (300 - 450 rpm) with a mixing paddle (ex.: Mud Mixer Type). Shake Component A before using, then pour approx. 4/5 Component A into mixing container. Add Component B while continuing to mix. Mix to a uniform consistency for a maximum of 3 minutes. Add additional Component A to mix if a wetter consistency is required. Should you need smaller quantities, be sure that components are dosed in correct ratio and thoroughly premix component B before dosing. Ratio is A:B = 1:4.8 by weight.

### Application

At time of application, surfaces should be damp (saturated surface dry) with no glistening water. Mortar must be scrubbed into substrate filling all pores and voids. 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 [30-60 min after placing at 23°C (73°F)], then finish with wood or sponge float for a smooth surface. 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

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. 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. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

### Limitations

- Minimum application thickness: 3 mm (1/8 in).
- Maximum layer thickness: 38 mm (1½ 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).

### Health and Safety Information

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.

KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY

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, within their shelf life. 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under [www.sika.ca](http://www.sika.ca).



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