



PRODUCT DATA SHEET

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SikaTop®-123 PLUS Winter Grade

COLD WEATHER, POLYMER-MODIFIED, CEMENTITIOUS, NON-SAG MORTAR, PLUS MIGRATING CORROSION INHIBITOR

Description	SikaTop®-123 PLUS Winter Grade is a polymer-modified, with migrating corrosion inhibitor added, cementitious, fast-setting, trowel-grade, easy-to-use patching mortar. It is excellent for the repair of overhead and vertical surfaces at temperatures between -5 and 10 °C (23 and 50 °F). SikaTop®-123 PLUS Winter Grade consists of three components; a specially blended powder, a fluid polymer and an antifreeze and hardening accelerator liquid admixture (SikaCem® Accelerator), all of which must be used to achieve sub-zero and low temperature performance.
Where to Use	<ul style="list-style-type: none"> Use on grade, above, and below grade on concrete and mortar. Structural repair material for overhead parking structures, industrial plants, walkways, bridges, tunnels, ramps, and dams. Use to repair concrete surfaces.
Advantages	<ul style="list-style-type: none"> Superior abrasion resistance over conventional cement mortar. High 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. Applicable down to 0 °C (32 °F) with 1 bottle (150 mL) of Sikacem® Accelerator. Applicable down to -5 °C (23 °F) when used with 2 bottles (300 mL) of Sikacem® Accelerator.

Technical Data

Packaging	20.7 kg unit (45.6 lb) Component A (Liquid Polymer): 3.5 L jug Component B (Cementitious Powder): 17 kg bag Component C (Sikacem® Accelerator): 150 mL bottle				
Colour	Concrete Grey when mixed				
Yield	Approx. 10 L (0.353 ft³)				
Shelf Life	Component A : 24 months in original, unopened packaging. Component B : 12 months in original, unopened bag. Store dry between 5 and 32 °C (41 and 89 °F). Condition product between 5 and 15 °C (41 and 59 °F) before using. Protect Component A and Component C from freezing. If frozen, discard.				
Mix Ratio	A:B = 1:4.8 by weight depending on consistency required.				
Application Time [0 °C (32 °F)]	Approx. 15 min after mixing the mortar.				
Finishing Time [0 °C (32 °F)]	Approx. 30 - 60 min after placing the mortar.				
Properties at 0 °C (32 °F) and 50 % R.H.					
Density ASTM C185	1950 kg/m³ (122 lb/ft³)				
*Compressive Strength ASTM C109, MPa (psi) (tested with Sikacem® Accelerator)					
Temperature	Dosage	24 hours	2 days	3 days	28 days
-5 °C (23 °F)	2 bottles (300 mL)	~ 7 (1015)	~ 14 (2030)	~ 18 (2610)	~ 40 (5800)
0 °C (32 °F)	1 bottle (150 mL)	~ 7 (1015)	~ 16 (2320)	~ 20 (2900)	~ 43 (6236)
0 °C (32 °F)	2 bottles (300 mL)	~ 11 (1595)	~ 20 (2900)	~ 25 (3625)	~ 45 (6526)
10 °C (50 °F)	1 bottle (150 mL)	~ 12 (1740)	~ 18 (2610)	~ 23 (3335)	~ 45 (6526)
10 °C (50 °F)	2 bottles (300 mL)	~ 15 (2175)	~ 22 (3190)	~ 28 (4061)	~ 47 (6817)
*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.					
Bond Strength CAN A23.2-6B					
28 days	Greater than concrete				
VOC Content	SikaTop®-123 PLUS: < 0.5 g/L Sikacem® Accelerator: 0 g/L Contact Sika Canada				
Chemical Resistance	Contact Sika Canada				
<i>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>					

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 ± 3 mm (1/8 in) (CSP 6 - 10 as per ICRI). 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, slow-speed drill (300 - 450 rpm) with a mixing paddle (e.g.: *Mud Mixer* Type). Add Sikacem® Accelerator to Component A container and shake vigorously for 30 seconds before using, then pour approx. 4/5 Component A solution 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 solution to mix if a looser 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 approx.

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. Apply mortar before bond coat dries, then screed. Force product against edge of repair, working toward centre. Allow mortar to reach initial set, 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. 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. 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).
- Not compatible with normal-setting bonding agents (e.g. SikaTop® Armatec-110 EpoCem® and Sikadur®-32 Hi-Mod). Use a scrub-coat of the mixed mortar.
- Minimum ambient and substrate temperature: 0 °C (32 °F) and rising at time of application when used with 1 bottle (150 mL) of Sikacem® Accelerator (refer to Technical Data section for dosage recommendations and strength values at various temperatures).
- Minimum ambient and substrate temperature: -5 °C (23 °F) and rising at time of application when used with 2 bottles (300 mL) of Sikacem® Accelerator (refer to Technical Data section for dosage recommendations and strength values at various temperatures).
- Surface should be damp but free from frost and excess water (saturated surface dry).

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 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 shelflife. 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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