



PRODUCT DATA SHEET

SikaTop[®]-111 Plus

POLYMER-MODIFIED, CEMENTITIOUS SCREED MORTAR, PLUS MIGRATING CORROSION INHIBITOR

PRODUCT DESCRIPTION

SikaTop[®]-111 Plus is a polymer-modified, with migrating corrosion inhibitor added, cementitious, 2-component, fast-setting, free-flowing mortar. It self-levels on flat slabs, moves easily into “hard to get” places under equipment and supports, between piping pillars and block-outs.

WHERE TO USE

- Use on, above and below grade on concrete and mortar
- High performance repair mortar for horizontal or form and pour vertical applications
- Structural repair material for parking structures, industrial plants, walkways, bridges, tunnels ramps, and dams
- Free flowing repair mortar for hard to reach areas
- Grout for large and small voids and cavities

CHARACTERISTICS / ADVANTAGES

- Superior abrasion resistance over conventional cement mortar
- High bond strength ensures superior adhesion
- Compatible with thermal coefficient of expansion of concrete
- Increased resistance to de-icing salts
- High early strength
- Easily applied to clean, sound substrates
- High compressive and flexural strengths
- Good freeze/thaw resistance
- Will not corrode stressed steel
- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR)
- Not a vapour barrier
- Not flammable

APPROVALS / CERTIFICATES

- Meets MTO MI-67 specification for concrete patching materials
- Meets AT B391 specification for concrete patching materials
- NSF-ANSI 61 potable water contact-approved formula 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

PRODUCT INFORMATION

Packaging	28.5 kg (62.7 lb) unit		
Shelf Life	Component A: 24 months in original, unopened packaging Component B: 12 months in original, unopened bag		
Storage Conditions	Stored (unopened) in a dry place at temperatures between +5 and +32 °C (41 – 89 °F). For best results, condition product between +15 and +24 °C (59 – 75 °F) before using. Protect Component A from freezing. If frozen, discard.		
Appearance / Colour	Concrete Grey when mixed		
Density	2,200 kg/m ³ (137 lb/ft ³)		(ASTM C185)
Volatile organic compound (VOC) content	<0.5 g/L		

TECHNICAL INFORMATION

Compressive Strength	24 hours	~ 18 MPa (2610 psi)	(ASTM C109)
	7 days	~ 40 MPa (5800 psi)	
	28 days	~ 55 MPa (7977 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)	~10 MPa (1450 psi)	~18 MPa (2610 psi)	~27 MPa (3916 psi)	~58 MPa (8412 psi)
0 °C (32 °F)	2 bottles (300 mL)	~15 MPa (2175 psi)	~23 MPa (3336 psi)	~32 MPa (4641 psi)	~60 MPa (8702 psi)
10 °C (50 °F)	1 bottle (150 mL)	~17 MPa (2465 psi)	~25 MPa (3625 psi)	~33 MPa (4786 psi)	~60 MPa (8702 psi)
10 °C (50 °F)	2 bottles (300 mL)	~18 MPa (2610 psi)	~30 MPa (4351 psi)	~38 MPa (5511 psi)	~61 MPa (8847 psi)
23 °C (73 °F)	1 bottle (150 mL)	~26 MPa (3770 psi)	~35 MPa (5076 psi)	~42 MPa (6091 psi)	~60 MPa (8702 psi)
23 °C (73 °F)	2 bottles (300 mL)	~29 MPa (4206 psi)	~40 MPa (5800 psi)	~45 MPa (6526 psi)	~63 MPa (9137 psi)

**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 in Compression	28 days	~30 GPa (4.3 x 10 ⁶ psi)	(ASTM C469)
Shear Strength	24 hours	~11 MPa (1595 psi)	(ASTM C882)
	28 days	~20 MPa (2900 psi)	
Pull-Off Strength	28 days	Greater than concrete	(CSA A23.2-6B)
Chloride Ion Diffusion Resistance	28 days	Very low - between 100 and 1000 Coulombs	(ASTM C1202)
Chemical Resistance	Contact Sika Canada Inc.		
Freeze thaw resistance	300 cycles	>90 %	(ASTM C-666)

APPLICATION INFORMATION

Mixing Ratio	Component A:B = 1:7 by weight depending on consistency required.
Yield	Approx. 13 L (0.459 ft ³)
Finishing Time	Approx. 50 min to 1 h 15 min after placing the mortar
Application Time	Approx. 30 min after mixing 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	13 mm (1/2 in)	25 mm (1 in)
Extended	25 mm (1 in)	150 mm (6 in)

- Minimum ambient and substrate temperature: +7 °C (45 °F) and rising at time of application, unless using Sikacem® Accelerator (refer to Technical Information 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.

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 reduce performances or proper bonding. 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. 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 approximately 80 % of its content in a clean pail. 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 needed, be sure that components are dosed in correct ratio and thoroughly premix component B before dosing. Ratio is A:B = 1:7 by weight approx. For application greater than 25 mm (1 in) in depth, add up to 17 kg (37.5 lb) of clean 10 mm (3/8 in) coarse aggregate. The aggregate must be nonreactive (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. This will increase the yield to approx. 19.5 L (0.69 ft³). This mix will not self level. Note: Do not use limestone aggregate.

APPLICATION

At time of application, surfaces should be damp (saturated surface dry) with no glistening water. Some of the mixed mortar must be thoroughly scrubbed into the prepared surface to ensure satisfactory bond. Alternatively SikaTop® Armatec-110 EpoCem® can be used as a bonding agent. Apply mortar before bond coat dries, then screed. Allow mortar to reach initial set [50 to 75 minutes after placing at +23 °C (73 °F)], then finish with metal trowel for smooth surface or sponge float for rough texture. For extra smooth finish, wipe steel trowel with A component during finishing.

CURING TREATMENT

As per ACI 308 recommendations for cement concrete, curing is required. To achieve performance consistent with Technical Information, 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 begin immediately after placing and finishing. Moist-curing must be maintained for the first

24 hours only then apply Sika® Florseal WB curing compound. 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

Sika Canada Inc.

Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9
1-800-933-SIKA
www.sika.ca

Other locations

Boisbriand (Quebec)
Brantford; Cambridge;
Sudbury; Toronto (Ontario)
Edmonton (Alberta)
Surrey (British Columbia)

Product Data Sheet

SikaTop®-111 Plus
April 2023, Version 01.02
020302040070000025

