



PRODUCT DATA SHEET

Edition 07.2018/v1
CSC Master Format™ 03 01 00
MAINTENANCE OF CONCRETE

Sika MonoTop®-622 F

ONE-COMPONENT, POLYMER-MODIFIED, FIBRE-REINFORCED HORIZONTAL AND VERTICAL REPAIR AND RESURFACING MORTAR WITH INTEGRAL CORROSION INHIBITOR

Description	Sika MonoTop®-622 F is a one-component, microfibre-reinforced, polymer-modified and early strength-gaining, cementitious mortar for horizontal and vertical concrete repair and resurfacing. It is based upon Sika proven and established MonoTop® technology, designed for effective repairs, with the environment in mind.
Where to Use	<ul style="list-style-type: none"> ▪ On, above, and below grade. ▪ Horizontal and vertical defects. ▪ Cast-in-place, precast and tilt-up structures. ▪ Exterior and interior applications.
Advantages	<ul style="list-style-type: none"> ▪ Fibre-reinforced improving overall resistance and performance. ▪ Easy to prepare; just add potable water. ▪ Does not require additional polymer when used for exterior applications. ▪ Contains integral corrosion inhibitor based on proven technology. ▪ Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR). ▪ Heat of hydration minimized to extend working time, especially in warm conditions. ▪ Excellent bond, tensile and flexural strengths. ▪ High early strength. ▪ Shrinkage-controlled to reduce length change. ▪ Very easy to apply; can be shaved or sculpted and easily finished. ▪ Product produces light grey repairs, similar to precast concrete. ▪ Approved by the Ministère des Transports du Québec (MTQ).

Technical Data

Packaging	22.7 kg (50 lb) multi-wall bag
Colour	Light Grey
Yield	Approx. 11.6 L (0.39 ft³) per 22.7 kg (50 lb) bag
Shelf Life	12 months in original, unopened bag. Store dry, ensuring that product is not exposed to rain, condensation or high humidity. For optimal results, condition product at temperatures between 18 and 29 °C (65 and 84 °F) before using.
Mix Ratio	Up to maximum 2.7 L (0.71 US gal.) of water per 22.7 kg (50 lb).
Application Time	20 - 40 min
Finishing Time	40 - 60 min
Properties at 23 °C (73 °F) and 50 % R.H.	
Density ASTM C185	2183 kg/m³ (136 lb/ft³)
Compressive Strength	1 day > 24 MPa (> 3480 psi)
ASTM C109	7 days > 40 MPa (> 5800 psi)
	28 days > 52 MPa (> 8060 psi)
Bond Strength CAN A23.2-6B	> 3 Mpa (> 435 psi) substrate failure
Length Change ASTM C157	28 days < -0.15 %
Splitting Tensile Strength	
ASTM C496/C496M	28 days > 3.5 MPa (> 500 psi)
Bond Strength ASTM C882-05 MOD	
(Slant Shear)	28 days > 10 MPa (> 1450 psi)
Modulus of Elasticity ASTM C469-02	28 days > 24 GPa (> 3,4 x 10 ⁶ psi)
Rapid Chloride Permeability ASTM C1202	
28 days	1100 Coulombs approx.
Freeze/Thaw Durability Test ASTM C666	> 95 % after 300 cycles
VOC Content	0 g/L
Chemical Resistance	Contact Sika Canada

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 ± 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 For 22.7 kg (50 lb) of bagged material, pour approx. 2.7 L (0.71 US gal.) of potable water into a suitably sized and clean mixing container. Add Sika MonoTop®-622 F slowly while mechanically-mixing, using a heavy-duty, low-speed drill (300 - 450 rpm) with a Mud Mixer/Box or Propeller-type paddle. Mix to a uniform consistency for a minimum of three (3) minutes. If a stiffer consistency is desired, hold back some of the water from the initial mix.
Note: The maximum water content of 2.7 L (0.71 US gal.) must not be exceeded.

Application At time of application, repair sites or concrete to be resurfaced should be damp (saturated surface dry) but free from standing water or glistening water films. Apply a 3 mm (1/8 in) thick scrub coat of the mixed mortar into the substrate, filling all pores, voids and edges and completely covering the repair or resurfacing site. Onto the fresh scrub coat, force the mortar against the edge of the repair area or onto the resurfacing site, working towards the centre and observing minimum and maximum layer thicknesses. If the repair or resurfacing requires several lifts (layers), apply the mortar, leaving a rough profile, and then score the surface immediately in a cross-hatch pattern to a depth of approximately 6 mm (1/4 in) to provide a key. Allow the layer to achieve initial set and then apply subsequent layers as soon as the previous lift will support it without being displaced. Allow the completed repair or resurfacing to set to desired stiffness; shave, cut or sculpt and then finish with a steel, wood or sponge float, or texture as required. If using a soft-to-medium density and dampened sponge to finish a repair, work in circular motion to remove trowel marks and merge the mortar with the parent substrate.
Note: Avoid overdampening the sponge or the face of the mortar during finishing and avoid over-finishing the material.

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

- Important: protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product at temperatures between 18 and 29 °C (65 and 84 °F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer cure times.
- Maximum horizontal lift/layer thickness: 50 mm (2 in).
- Minimum ambient and substrate temperature: 5 °C (41 °F) and rising at time of application.
- Use only potable water and do not overwater.
- Mortar should be applied at thinner layer thicknesses, which do not result in slumping, when used vertically.

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

SIKA CANADA INC.

Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

Certified ISO 9001 (CERT-0102780)
Certified ISO 14001 (CERT-0102791)