



PRODUCT DATA SHEET

SikaEmaco[®]-1060 EX

(formerly MEmaco T 1060EX)

Low dust, very rapid-setting cement-based pre-extended concrete repair mortar

PRODUCT DESCRIPTION

SikaEmaco[®]-1060 EX is a one-component, shrinkage-compensated, very rapid-setting, cement-based pre-extended mortar. It is designed for repairing horizontal concrete surfaces where high early strength gain is required in applications from 38 mm (1.5 in) to full depth.

WHERE TO USE

- Interior and exterior
- Horizontal surfaces
- Applications requiring high early strength gain
- Structural concrete repairs
- Partial and full-depth repairs

Substrates

- Concrete

CHARACTERISTICS / ADVANTAGES

- Pre-extension with coarse aggregate at the factory ensures quality and saves contractor labor
- Low-dusting for added worker comfort and safety
- Extra low permeability helps minimize chloride intrusion
- Very rapid setting so that structures can be opened to vehicular traffic in 1 hour
- Low residual moisture, can be coated in as little as 4 hours
- Excellent freeze/thaw cycling
- Shrinkage-compensated, to minimize cracking from drying shrinkage, which reduces stress at the bond line
- Proprietary cement blend bonds to carbonated and non-carbonated concrete substrates

APPROVALS / CERTIFICATES

Approved by the Ministère des Transports et Mobilité Durable (MTMD) of Quebec

PRODUCT INFORMATION

Composition / Manufacturing	SikaEmaco [®] -1060 EX is a blend of cement, graded aggregate, shrinkage-compensating agents, and set-control additives.
Packaging	22.6 kg (50 lb) polyethylene-lined bags
Shelf Life	1 year when properly stored
Storage Conditions	Store in unopened containers in cool, clean, dry conditions.

TECHNICAL INFORMATION

Compressive Strength	51 mm (2 in) cubes		
	1 hour: 14 MPa (2,000 psi)		(ASTM C 109)
	1 day: 28 MPa (4,000 psi)		
	28 days: 55 MPa (8,000 psi)		
	75 X 150 mm cylinders		
	28 days: 51 MPa (7,400 psi)		(ASTM C 39)
Modulus of Elasticity in Compression	41.8 GPa (6.07 x 10 ⁶ psi)		(ASTM C 469)
Tensile Strength in Flexure	1 day: 5 MPa (715 psi)		(ASTM C 348)
	28 days: 7 MPa (1,060 psi)		
Shear Strength	Slant shear bond strength		
	1 day: 17 MPa (2,500 psi)		(ASTM C 882, modified)
	28 days: 20 MPa (2,900 psi)		No bonding agent was used; mortar scrubbed into the substrate
Shrinkage	Dry Shrinkage	-0.04 % (-400 µstrain)	(ASTM C 928)
Expansion	Wet expansion	+0.02 % (+200 µstrain)	(ASTM C 928)
Coefficient of Thermal Expansion	13.4 x 10 ⁻⁶ cm/cm/°C (7.3 x 10 ⁻⁶ in/in/°F)		(CRD C 39)
Freeze Thaw De-icing Salt Resistance	Scaling resistance		
	0 rating (no scaling) at 25 cycles		(ASTM C 672)
Design Considerations	Dust reduction		
	SikaEmaco®-1060 EX vs control: 70%		(DIN 55992-2)
Freeze thaw resistance	92.6% RDM at 300 cycles		(ASTM A 666,(Procedure A))
Splitting Tensile Strength	1 day: 3 MPa (485 psi)		(ASTM C 496)
	28 days: 4 MPa (555 psi)		
Chloride Ion Diffusion Resistance	362 coulombs		(ASTM C 1202)

APPLICATION INFORMATION

Yield	0.010 m ³ (0.38 ft ³) per 22.6 kg (50 lb) bag	
Ambient Air Temperature	Application temperature range	4-29 °C (40-85 °F)
Flowability	Slump	80-130 mm (3-5 in)
Setting Time	Working time	8 min
Initial Set Time	16 min at 22 °C (72 °F)	(ASTM C 191)
Final Set Time	28 min at 22 °C (72 °F)	(ASTM C 191)

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.

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

NOTES ON INSTALLATION

- Minimum ambient, surface, and material temperature is 4 °C (40 °F) and rising.
- Do not mix for longer than 5 minutes.
- Minimum application thickness is 38 mm (1.5 in).
- Consult coating supplier for overcoating requirements.
- Do not mix partial bags.
- Do not add plasticizers, accelerators, retarders, or other additives.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of the product data sheet and SDS are being used.
- Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

SURFACE PREPARATION

Concrete

1. Concrete must be structurally sound and fully cured (28 days).
2. Saw cut the perimeter of the area being repaired into a square with a minimum depth of 13 mm (1/2 in).
3. Refer to current ICRI Guideline no. 310.2R for surface prep requirements to permit proper bond.

Reinforcing steel

1. Remove all oxidation and scale from the exposed reinforcing steel in accordance with ICRI Technical Guideline No. 310.1R.
2. For additional protection from future corrosion, coat the prepared reinforcing steel with SikaTop® Armatech® 100 EpoCem® or Sikagard® P 8100 AP.

MIXING

1. Precondition material to 21 ± 3 °C (70 ± 5 °F) before mixing.
2. Add 1.5 L (0.4 US gal) of potable water to the mixing container for each bag of SikaEmaco®-1060 EX. Add the powder to the water while continuously mixing with a slow-speed drill and paddle, mortar mixer, or other forced action mixer.
3. Mix for a minimum of 3 minutes until fully homogeneous.

APPLICATION

1. After removing all standing water, thoroughly scrub a thin layer of bond coat into the saturated surface with a stiff-bristled broom or brush. Do not dilute the bond coat with water. Do not apply more of this bond coat than can be covered with mortar before the bond coat dries. Do not retemper the bond coat.
2. Immediately place the repair mortar from one side of the prepared area to the other. Work the material firmly into the bottom and sides of the patch to ensure a good bond. Level the SikaEmaco®-1060 EX and screed it to the elevation of the existing concrete. Apply the appropriate finish.
3. Finish the completed repair, as required, taking care not to overwork the surface.
4. The recommended application range of SikaEmaco®-1060 EX is from 4 to 29 °C (40 to 85 °F). Follow ACI 305 and ACI 306 for hot or cold weather.

CURING TREATMENT

Cure with an approved curing compound compliant with ASTM C 309 or preferably ASTM C 1315. Alternative curing options include the application of a fine mist of water, wet burlap, or polyethylene sheeting for a minimum of 2 days.

CLEAN UP

Clean tools and equipment with clean water immediately after use. Cured material must be removed 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

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