

PRODUCT DATA SHEET

SikaEmaco®-1061 EX

(formerly MEmaco T 1061EX)

Low Dust, Rapid Setting, Cement Based, Pre-extended, Concrete Repair Mortar with Increased Working Time

PRODUCT DESCRIPTION

SikaEmaco®-1061 EX is a one component, shrinkage compensated, very rapid setting, cement based, pre-extended mortar with increased working time. SikaEmaco®-1061 EX is designed for the repair of horizontal, flat concrete surfaces in applications from 1.5 inches (38 mm) thick to full depth.

USES

SikaEmaco®-1061 EX may only be used by experienced professionals

- Interior and exterior applications
- On grade, above and below grade concrete repairs
- Horizontal, flat surfaces
- Applications requiring high early strength gain
- Structural concrete repairs for concrete roadways, parking facilities, industrial plant floors, walkways, bridge decks, balconies, etc.
- Partial and full depth concrete repairs
- Filler for voids and cavities

CHARACTERISTICS / ADVANTAGES

- Pre-extension with coarse aggregate at the factory ensures quality and saves contractor labor
- Low dusting for added worker comfort and safety
- Extended Application Time (i.e. increased working time after mixing)
- Extra low permeability helps minimize chloride intrusion
- Rapid setting for quick turnaround repairs
- Low residual moisture; can be prepared and coated in

as little as 6 hours at 73 °F (23 °C)

- Excellent Freeze / Thaw resistance
- Shrinkage compensated to minimize cracking from drying shrinkage; reduces stress at the bond line
- Proprietary Portland cement based blend that bonds to carbonated and non-carbonated concrete substrates

APPROVALS / STANDARDS

Rapid Hardening as defined by ASTM C928 (Type R2)

PRODUCT INFORMATION

Chemical Base	SikaEmaco®-1061 EX is a blend of Portland cement, graded aggregates, shrinkage compensating agents and set control additives
Packaging	50 lb. (22.7 kg) polyethylene lined bags
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged packaging
Storage Conditions	Store in unopened packaging in cool, clean, dry conditions at 40 - 95 °F (4 - 35 °C). Protect from moisture. If damp, discard material.

SUSTAINABILITY INFORMATION

Health and safety	Dust Reduction	SikaEmaco®-1061 EX vs control: 70%	(DIN 55992-2)
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TECHNICAL INFORMATION

Compressive Strength	3 hrs	3,000 psi (20.7 MPa)	(ASTM C109)
	1 day	4,000 psi (27.6 MPa)	73 °F (23 °C),
	28 days	8,000 psi (55.2 MPa)	50% R.H.
	28 days	7,400 psi (51.0 MPa)	(ASTM C39) 3" x 6" cylinders
Modulus of Elasticity in Compression	28 days	6.07 x 10 ⁶ psi (41.8 GPa)	(ASTM C469) 73 °F (23 °C), 50% R.H.
Flexural Strength	1 day	755 psi (5.2 MPa)	(ASTM C348)
	28 days	1,070 psi (7.4 MPa)	73 °F (23 °C), 50% R.H.
Shrinkage	28 days (air cured)	- 0.03%	(ASTM C157 modified per ASTM C928) 73 °F (23 °C), 50% R.H.
Expansion	28 days (wet cured)	+ 0.01%	(ASTM C157 modified per ASTM C928) 73 °F (23 °C), 50% R.H.
Coefficient of Thermal Expansion	7.2 x 10 ⁻⁶ in/in/°F (13.0 x 10 ⁻⁶ mm/mm/°C)		(CRD-C 39)
Freeze Thaw De-Icing Salt Resistance	28 days	No Scaling	(ASTM C672) 25 cycles
Resistance to Weathering	28 days	95.6%	(ASTM C666) Procedure A
Relative Dynamic Modulus (RDM) at 300 cycles			

Slant Shear Strength

Bond Strength by Slant Shear

1 day	2,300 psi (15.8 MPa)
28 days	2,600 psi (17.9 MPa)

(ASTM C882
modified per
ASTM C928)
73 °F (23 °C),
50% R.H.

Mortar scrubbed into mechanically prepared, SSD substrate

Splitting tensile strength

1 day	425 psi (2.9 MPa)
28 days	525 psi (3.6 MPa)

(ASTM C496)
73 °F (23 °C),
50% R.H.

Rapid Chloride Permeability

28 days	< 1000 Coulombs (Very Low)
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(ASTM C1202 /
AASHTO T 277)
73 °F (23 °C),
50% R.H.

APPLICATION INFORMATION

Mixing Ratio

3.25 pints (1.54 liters) of clean, potable water per 50 lb. (22.7 kg) bag

Coverage

0.38 ft³ (0.011 m³)

Layer Thickness

Minimum	Maximum per Lift
1.5 inches (38 mm)	8 inches (203 mm)

Thicker applications may be possible. Please contact Sika® Technical Services at 800 933 7452 for more information.

Product Temperature

65 - 75 °F (18 - 24 °C) recommended.

Ambient Air Temperature

Minimum 40 °F (4 °C) / Maximum 95 °F (35 °C)

Substrate Temperature

Minimum 40 °F (4 °C) / Maximum 95 °F (35 °C)

Application Time

Place SikaEmaco®-1061 EX within 25 minutes after mixing

Set Time

Initial Set Time	Approximately 50 minutes
Final Set Time	Approximately 80 minutes

(ASTM C191)
73 °F (23 °C),
50% R.H.

Consistency

Initial Slump	Approx. 3 to 5 inches (76 to 127 mm)
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(ASTM C143)
73 °F (23 °C),
50% R.H.

Fresh mortar density

148 lbs/ft³ (2.37 g/cm³)

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- Recommended minimum ambient and substrate temperature is 40 °F (4 °C) and rising.
- Do not mix partial bags. Do not add plasticizers,

accelerators, retarders or other additives.

- Consult paint or coating system manufacturer directly for substrate requirements prior to overcoating SikaEmaco®-1061 EX.
- Do not use Sika® Armatec products as a bonding primer with this rapid hardening product. Bonding adhesives typically are not required on well prepared, saturated surface dry (SSD) substrates when a scrub coat of SikaEmaco®-1061 EX is used.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts, parts, etc. with an appropriate epoxy such as Sikadur®-32 Hi-Mod.
- Proper application is the responsibility of the product's end user. Field visits by Sika® personnel are for the

purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the current, actual Safety Data Sheets (SDS) containing physical, environmental, toxicological and other safety related data. User must read the current, actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Concrete: Must be clean, structurally sound and sufficiently cured.

- Remove all deteriorated concrete, dirt, oil, grease, contaminants and other bond inhibiting materials from the area to be repaired. Preparation work should be done by high pressure water jetting, sand blasting or other appropriate mechanical means to obtain an exposed aggregate surface profile of a minimum CSP - 7. Refer to current ICRI Guideline no. 310.2R for surface preparation requirements to permit proper bond.
- Saw cutting of edges with a minimum depth of 1.5 inches (38 mm) is recommended, and a dovetail cut is preferred.
- Substrate should be saturated surface dry (SSD) with clean water prior to application. No standing water or frost should remain during scrub coat and installation of product.

Steel: Remove all rust and scale from exposed reinforcing steel in accordance with ICRI Technical Guideline No. 310.1R.

- Thoroughly prepare by mechanical means to a bright, clean and dry condition.
- For additional protection from future corrosion, treat the prepared reinforcing steel with Sikagard® P 8100 AP, Sika® Armatec®-110 EpoCem® or Sika® Armatec® 1C. Consult the current product data sheets for additional information.

MIXING

- Precondition SikaEmaco®-1061 EX to 65 - 75 °F (18 - 24 °C) before mixing.
- Add 3.25 pints (1.85 liters) of potable water for each bag of SikaEmaco®-1061 EX to a clean, appropriate mixing container. Do not overwater.
- Slowly add the entire contents of the bag to the water while continuously mixing with a low-speed rotary drill (400 - 600 rpm) and mortar paddle, or appropriate mortar mixer.
- Mix for a minimum of 3 minutes until uniformly

blended and fully homogeneous. Do not mix for longer than 5 minutes. Do not overmix.

APPLICATION

- After removing all standing water and frost from the mechanically prepared surfaces, thoroughly scrub a thin layer of SikaEmaco®-1061 EX into the SSD surface with a stiff bristled broom or brush. Do not dilute the scrub coat with water. Do not apply more scrub coat than can be covered with mortar before it dries. Do not retemper scrub coat.
- Immediately place the thickness of SikaEmaco®-1061 EX needed to complete the repair onto the wet scrub coat from one side of the prepared area to the other. Work the material firmly into the bottom and sides of the repair area to ensure a good bond. Be sure to work into all pores and voids. Level SikaEmaco®-1061 EX and screed to the elevation of the existing concrete.
- Finish the completed repair, as required, taking care not to overwork the surface. To assist in the finishing process, use Sika® Film finishing aid. Consult the current product data sheet for additional information.
- The recommended application temperature range of SikaEmaco®-1061 EX is from 40 to 95 °F (4 to 35 °C). Refer to ACI 305, the 'Guide to Hot Weather Concreting' and ACI 306, the 'Guide for Cold Weather Concreting' when extreme ambient and substrate temperatures prevail. Thinner placements will be more sensitive to temperature conditions.

CURING TREATMENT

- Per ACI recommendations for Portland cement based concrete, moist curing of exposed surfaces is required.
- Protect freshly applied SikaEmaco®-1061 EX from direct sunlight, wind, rain and frost. To prevent from freezing, cover with insulating material (e.g. curing blanket).
- Moist cure surfaces after finishing with wet burlap and polyethylene, a fine mist of water, or with a water based, compatible* curing compound compliant with ASTM C309 and/or preferably ASTM C1315 (e.g. Sikagard®-1315 KNS).

* Pretesting of non-Sika, water based curing compound is recommended.

CLEANING OF TOOLS

Uncured SikaEmaco®-1061 EX can be cleaned and removed from tools, equipment and surfaces with clean water immediately after placement. Cured material must be removed mechanically.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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Product Data Sheet

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