

PRODUCT DATA SHEET

SikaEmaco® T 1100 TIX

(formerly MEmaco T 1100TIX)

Rapid-setting and hardening, extra-high-strength, shrinkage-compensated, thixotropic traffic repair mortar

DESCRIPTION

SikaEmaco® T 1100 TIX is a one-part, fast-setting and fast-hardening thixotropic repair and bedding mortar. It meets the requirements of class R4 in accordance with EN 1504-3. It is ready-to-use, has rapid strength gain even at sub-zero temperatures, with very good durability, and very low drying shrinkage. When mixed with water, SikaEmaco® T 1100 TIX forms a plastic or thixotropic mortar which can be easily applied in a layer thickness of 10 mm to 100 mm.

USES

SikaEmaco® T 1100 TIX is used for:

- Bedding small to medium manhole frames
- Bedding curb stones and pavement stones
- Horizontal patch repair areas
- Inclined patching areas
- Cold conditions, including cold store rooms
- Situations where minimal traffic disruption is required

The Product may only be used by experienced professionals.

FEATURES

- Ultra-rapid strength build-up, can be opened to all traffic after just 2 hours at +20 °C
- Easy to mix and apply
- Suitable for use in internal and external applications
- Possibility to increase layer thickness by adding aggregate
- Can be applied in sub-zero temperatures
- Excellent early and final strength
- Strong adhesion to concrete and steel
- High durability
- Low shrinkage
- Minimised cracking due to constrained shrinkage by PAN fibres
- Very good freeze-thaw de-icing salt resistance
- Protects reinforcement due to low water absorption and good carbonation resistance
- Rough surface finish provides very good skid resistance, even in wet conditions
- Resistant to intermittent spillages of hydrocarbon oils

PRODUCT INFORMATION

Composition	Portland cement, hydraulic binders, well-graded sands, selected polyacrylonitril (PAN) fibres, and special additives
Packaging	25 kg bag
Appearance and colour	Grey powder
Shelf life	9 months if stored at mentioned storage conditions.
Storage conditions	Store in original, unopened, undamaged packaging at +5 °C to +35 °C in cool, dry, shaded conditions, away from direct sunlight, off the ground on pallets, and protected from rain.
Maximum grain size	2.0 mm

Soluble chloride ion content ≤ 0.05 % (EN 1015-17)

TECHNICAL INFORMATION

Compressive strength	2 hours	≥ 20 N/mm ²	(ASTM C 109)
	4 hours	≥ 30 N/mm ²	
	1 day	≥ 50 N/mm ²	
	7 days	≥ 65 N/mm ²	
	28 days	≥ 75 N/mm ²	
Modulus of elasticity in compression	~ 35,000 N/mm ²	(EN 13412 ; ASTM C469-94)	
Flexural-strength	1 day	≥ 6 N/mm ²	(EN 196-1; BS 6319-7)
	7 days	≥ 7 N/mm ²	
	28 days	≥ 8 N/mm ²	
Tensile adhesion strength	28 days	≥ 3.0 N/mm ²	(EN 1542; ASTM D4541)
Capillary absorption	≤ 0.5 kg·m ⁻² ·h ^{-0.5}	(EN 13057)	

APPLICATION INFORMATION

Mixing ratio	3.1 – 3.6 L water per 25 kg bag	
Yield	25 kg bag will yield ~ 12.9 L of mortar	
Layer thickness	Minimum	10 mm
	Maximum	100 mm
Material temperature	+5 °C to +30 °C	
Ambient air temperature	0 °C to +35 °C	
Substrate temperature	0 °C to +30 °C	
Pot Life	At +20 °C	~ 20 minutes
	Pot life depends on temperature Note: Pot life will be shorter at higher temperatures. Pot life will be longer at lower temperatures.	
Applied product ready for use	Open to light traffic (at +20 °C)	60 minutes
	Open to heavy traffic (at +20 °C)	120 minutes
Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.		
Fresh mortar density	Approx. 2.2 kg/L	

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.

ECOLOGY, HEALTH AND 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

SUBSTRATE PREPARATION

CONCRETE

1. Clean the substrate thoroughly so it is free from dust, loose material, surface contamination and material which reduces adhesion, prevents suction or wetting by the repair materials.
2. Remove delaminated, weak, damaged and deteriorated concrete, and where necessary, sound concrete. Remove using mechanical hand-held tools, high or ultra-high-pressure water blasting equipment.
3. Remove sufficient concrete from around corroded

reinforcement to allow cleaning, application of a corrosion protection coating (where required), and compaction of the concrete repair mortar.

4. Feather edging is not permitted. All repair boundaries must be cut vertically to provide a defined minimum edge depth of 10 mm.
5. Prepare repair surface areas in simple square or rectangular layouts to avoid shrinkage stress concentrations and cracking while the repair material cures. This can also avoid structural stress concentrations from thermal movement and loading during the service life.

SURFACE ROUGHENING

1. Roughen the surface using mechanical tools such as a chisel or scarifier, or using grit blasting or high-pressure water blasting equipment.
2. Ensure that aggregate is clearly visible on the surface of the concrete structure after surface preparation.

STEEL REINFORCEMENT

1. Remove rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion.
2. Prepare surfaces to bright steel, Sa 2 (ISO 8501-1), using abrasive blast cleaning or high-pressure water blasting equipment.

REPLACEMENT OF STEEL REINFORCEMENT

1. Replace heavily damaged rebar that no longer fulfils safety or structural requirements.
2. Ensure the distance between the rebar and the surface is at least 2 cm.

PRE-WETTING

Proper pre-wetting prevents the substrate from absorbing water from the mortar.

Preconditions

The water absorbency of the substrate is known and the pre-wetting has been scheduled accordingly.

1. Saturate the substrate with clean, low-pressure water or a wet sponge up to 24 hours before application.
2. Constantly pre-wet the substrate for at least 2 hours before application.
3. Ensure that all pores and pits are thoroughly wet.
4. Just before application, remove excess surface water using a clean sponge or oil-free pressurised air.

The substrate is saturated-surface-dry (SSD): it has a dark matt appearance without standing water or glistening, and surface pores and pits do not contain water.

DEFROSTING

Although the Product can be applied when the ambient air temperature is below 0 °C, the substrate temperature must be above 0 °C. Refer to the Application information section for the precise temperature ranges.

1. Defrost frozen substrates, including metal parts such as steel reinforcement and manhole frames.
2. Keep the temperature uniform during application and hardening.

MIXING

TEMPERATURE CONSIDERATIONS

Cold Weather: Risk of reduced strength gain and impaired physical properties

Take the following measures in cold weather:

1. Store bags in a warm environment.
2. Use warm mixing water.

Hot Weather: Risk of cracking and impaired physical properties

Take the following measures in hot weather:

1. Store bags in a cool environment.
2. Use cold mixing water to assist with controlling the exothermic reaction.

MIXING EQUIPMENT

Use an electric single or double-paddle mixer for small to medium volumes. For larger volumes, use a forced-action mixer.

Preconditions

The bags of SikaEmaco® T 1100 TIX are full, unopened and undamaged.

1. Mix only as much material as can be used within its pot life.
2. Pour the recommended quantity of clean water for the consistency required into a suitable mixing container.
3. Stir the water slowly (max. 400 rpm).
4. Slowly and continuously add two-thirds of the bag of SikaEmaco® T 1100 TIX.
5. Mix for 1 minute.
6. Add the rest of the bag of SikaEmaco® T 1100 TIX and mix for a total time of 3–4 minutes.
7. Add more water as required, up to the specified maximum, and mix.
8. Ensure the mixture is lump-free and homogenous.

ADDITION OF AGGREGATE

For applications over 100 mm, add up to 30 % pre-washed aggregate. Select aggregates with the following features:

- Non-reactive
 - Rounded, clean, well-graded
 - 4–8 mm or 8–16 mm depending on the layer thickness
1. Use up to 7.5 kg aggregate for a 25 kg bag of SikaEmaco® T 1100 TIX.
 2. Add the aggregate to the mixing container after adding the water and powder.
 3. Do not exceed or reduce the recommended water dosage when adding aggregate.
- Do not add cement or any other materials which may affect the properties of the Product.

APPLICATION

APPLICATION AS REPAIR MORTAR

Preconditions

The ambient air temperature is not expected to fall below -5 °C within 24 hours of application.

1. Mix a bonding slurry of diluted SikaEmaco® T 1100 TIX. Apply it with a brush, working it into the concrete substrate.
2. Apply the mixed SikaEmaco® T 1100 TIX wet-on-wet on to the bonding slurry.

3. Spread evenly to the required layer thickness.
4. Compact using a trowel. Do not use vibrating equipment.
5. Level the surface using a straightedge.
6. Rub down the surface with a wooden float.
7. Smooth the surface with a finishing trowel.
8. Do not add water or fresh mortar to a mortar mix which has already begun to set.

APPLICATION AS BEDDING MORTAR

Preconditions

The ambient air temperature is not expected to fall below -5 °C within 24 hours of application.

1. Mix a bonding slurry of diluted SikaEmaco® T 1100 TIX. Apply it with a brush, working it into the concrete substrate.
2. Place the mixed SikaEmaco® T 1100 TIX wet-on-wet, overfilling to allow for compaction.
3. Gently lower the manhole frame, curb or pavement stone into the fresh mortar and set to the required level.
4. Ensure full adhesion (no spot-application or partial filling).
5. Smooth the surface with a finishing trowel.
6. Do not add water or fresh mortar to a mortar mix which has already begun to set.

CURING TREATMENT

The Product is self-curing. Do not wet-cure. Protect from wind, rain, frost, and direct sunlight during curing. When working at sub-zero temperatures, cover the Product with insulation materials or dry cloths until sufficiently hardened, preferably for 24 hours or until the area is to be opened for traffic.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only 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 written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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.

Sika Gulf B.S.C. (c)
Tel: +973 177 38188
Email: info@bh.sika.com
Sika Kuwait Cons. Mat. & Paints Co WLL
Tel: +965 22 282 296
Email: sika.kuwait@kw.sika.com
Web: gcc.sika.com

Sika UAE LLC
Sika UAE LLC (Branch)
Email: info@ae.sika.com
Tel: +971 4 439 8200
Email: info@ae.sika.com
Web: gcc.sika.com

Sika Saudi Arabia Limited
Riyadh / Jeddah / Dammam / Rabigh
Tel: +966 9200 22167
Email: info@sa.sika.com
Web: gcc.sika.com

Sika MB LLC
Oman
Tel: +968 22 826 500
Email: info@om.sika.com
Web: gcc.sika.com



ISO 9001, 14001, 45001 – SGS:
- Sika UAE LLC
- Sika International Chemicals LLC
- Sika Gulf B.S.C. (c)
ISO 9001, 14001 – SGS:
- Sika Saudi Arabia Limited
ISO 9001, 14001 – TÜV:
- Sika UAE LLC (Branch)
ISO 9001 – SGS:
- Sika MB LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



SikaEmacoT1100TIX-en-AE-(05-2026)-3-1.pdf

Product Data Sheet
SikaEmaco® T 1100 TIX
May 2026, Version 03.01
02030200000002147

