



## PRODUCT DATA SHEET

# Sikafloor<sup>®</sup> Morritex<sup>®</sup> Epoxy Cove Mortar

### VERTICAL-GRADE, EPOXY COVING AND DETAILING MORTAR

#### PRODUCT DESCRIPTION

Sikafloor<sup>®</sup> Morritex<sup>®</sup> Epoxy Cove Mortar is a pre-proportioned, three-component, vertical-grade coving and detailing mortar based upon a solvent-free, solid-coloured epoxy resin and specially-graded aggregates. It produces a finely textured surface which provides excellent resistance to abrasion and impact. Sikafloor<sup>®</sup> Morritex<sup>®</sup> Epoxy Cove Mortar is typically installed at 3 to 6 mm (1/8 to 1/4 in) thickness.

#### WHERE TO USE

Sikafloor<sup>®</sup> Morritex<sup>®</sup> Epoxy Cove Mortar may only be used by experienced professionals.

- Sikafloor<sup>®</sup> Morritex<sup>®</sup> Epoxy Cove Mortar is used in conjunction with other Sikafloor<sup>®</sup> epoxy systems to provide a seamless connection between the floor and vertical surfaces such as walls, machinery bases or curbs.
- It is typically employed where maximum sanitation/hygiene is required as it provides a rounded and sealed corner, making the junction at vertical and horizontal interfaces easier to clean.

#### PRODUCT INFORMATION

CSC MasterFormat <sup>®</sup>	09 67 00   FLUID-APPLIED FLOORING
Packaging	18.9 kg (41.6 lb) / 10.4 L (2.7 US gal.) kit, All three components (A+B+C) packaged in a single 20 L (5.3 US gal.) pail that is suitable for use as the mixing vessel.
Shelf Life	2 years in original, unopened package.
Storage Conditions	Store dry between +5 °C and +32 °C (41 °F and 89 °F).

#### CHARACTERISTICS / ADVANTAGES

- Pre-proportioned kit allows quick, accurate mixing, eliminating costly site batching and mixing errors.
- Sag-resistant formulation designed specifically for trowel application to vertical surfaces.
- Low VOC content; neutral odour.
- Bond strength in excess of the tensile strength of concrete; concrete will fail first.
- High mechanical resistance.

#### ENVIRONMENTAL INFORMATION

- Potential contribution for LEED<sup>®</sup> projects.

#### APPROVALS / CERTIFICATES

- Meets the requirements of CFIA and USDA for use in food plants.

Appearance / Colour	Concrete Grey	
Volatile organic compound (VOC) content	~5 g/L	
<b>TECHNICAL INFORMATION</b>		
Shore D Hardness	~83	(ASTM D2240)
Abrasion Resistance	~0.15 g (~0.0053 oz)	(ASTM D4060) CS17 /1000 g (2.2 lb) /1000 cycles
Resistance to Impact	~3.39 Joules (~2.5 ft lb)	(ASTM D2794)
Indentation	~7.14 %	(MIL-PRF-24613)
Compressive Strength	~41 MPa (~5946 psi)	(ASTM D695)
Tensile Strength	~36 MPa (~5221 psi)	(ASTM D638)
Modulus of Elasticity in Tension	~10.3 %	
Pull-Off Strength	> 2.5 MPa (> 363 psi) (substrate failure)	(ASTM D7234)
Service Temperature	Minimum ~0 °C (~32 °F) Maximum ~50 °C (~122 °F)	
Temperature Resistance	~55 mm (~2.17 in) (flammability)	(ASTM D635)
Thermal Compatibility	Passes	(ASTM C884)

## APPLICATION INFORMATION

Mixing Ratio	Components A+B+C = Mix full units only
Consumption	~5.8 linear metres (~19 linear feet) per kit. coverage rate calculation is based on a 100 mm x 100 mm (4 in x 4 in) high cove applied at 4 mm (3/16 in) thickness with a 25 mm (1 in) radius cove trowel. <b>Note:</b> Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Test sections are recommended to establish correct coverage.
Product Temperature	Condition product at temperatures between +18 °C and +30 °C (65 °F and 86 °F) before using.
Ambient Air Temperature	Minimum: +10 °C (50 °F) / Maximum: +30 °C (85 °F) Mixing and application attempted at material, ambient and/or substrate temperature conditions less than +18 °C (65 °F) will result in a decrease in product workability and slower cure rates.
Relative Air Humidity	Maximum 85 % (during application and curing).
Dew Point	Substrate must be at least 3 °C (5 °F) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or “blushing” on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.
Substrate Temperature	Minimum: +10 °C (50 °F) / Maximum: +30 °C (85 °F) Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapour drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapour drive.

## Substrate Moisture Content

Moisture content of concrete substrate must be  $\leq 4\%$  by mass (pbw – part by weight) as measured with a Tramex® CME / CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 4). If moisture content of concrete substrate exceeds 4 % by mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA.

ASTM F2170 internal probe testing is not a substitute for measuring substrate moisture content with a Tramex® CME / CMExpert type concrete moisture meter as described above. When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be  $\leq 85\%$ . If values exceed 85 %, according to ASTM F2170, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA.

<b>Pot Life</b>	~35 minutes	+23 °C (73 °F) (material temperature)
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<b>Curing Time</b>	<b>+10 °C (50 °F)</b>	<b>+20 °C (68 °F)</b>	<b>+30 °C (86 °F)</b>
<b>Open time on Substrate</b>	~70 minutes	~45 minutes	~40 minutes
<b>Normal traffic / Chemical Exposure</b>	~10 days	~7 days	~5 days

Curing times will vary according to ambient air and substrate temperatures and relative humidity.

Freshly applied material should be protected from dampness, condensation and water for at least 24 hours.

Mechanical, chemical and physical properties will be fully achieved at full cure.

<b>Waiting Time / Overcoating</b>	<b>Ambient &amp; Substrate Temperature</b>	<b>Minimum</b>	<b>Maximum</b>
	+10 °C (50 °F)	~24 hours	~96 hours
	+23 °C (73 °F)	~8 hours	~48 hours
	+30 °C (86 °F)	~5 hours	~24 hours

**Note:** If the Waiting/ Recoat time has passed the previous coat must be lightly sanded, to remove all gloss; vacuum cleaning and solvent wiping will be necessary to remove all traces of dust. The surface should be a uniform dullness, with no gloss present after clean-up and before applying the next coat.

## 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) and 50 % R.H. unless stated otherwise.

## LIMITATIONS

- Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every three (3) hours, or more frequently

whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.)

- Do not apply Sikafloor® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor® product after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.
- Will discolour over time when exposed to sunlight (UV) and under certain artificial lighting conditions.
- Substrates must be primed with Sikafloor® Verticle Epoxy Primer.
- Any aggregate used with Sikafloor® systems must be non-reactive and oven-dried.

- This product is not designed for negative side waterproofing.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Do not apply to substrates exposed to extreme thermal shock.
- Direct-fired gas or kerosene heaters produce by-products that can have adverse effects on the curing product. To avoid this occurrence, heaters must be exhausted to the exterior of the building to avoid defects such as amine blush, whitening, loss of adhesion or other surface deficiencies.
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.

## 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

### SUBSTRATE PREPARATION

Concrete surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, bleeding, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residue or any other contaminants which may prohibit good bond. Prepare the surface by appropriate mechanical means in order to achieve a profile equivalent to ICRI-CSP 3-6. The compressive strength of the concrete substrate should be at least 25 MPa (3 625 psi) at 28 days with a minimum of 1.5 MPa (218 psi) in tension at the time of application. Repairs to cementitious substrates, filling of blowholes, levelling of irregularities, etc. should be carried out separately using an appropriate Sika® profiling mortar. Contact Sika Canada for recommendations.

**Edge Terminations** - Installation of an integral cove base is normally terminated on vertical surfaces using one of the following application methods, chosen in accordance with the substrate and in-service requirements:

1. Mark a level, straight line at the appropriate height; adhere or mechanically fasten a preformed, "L"-shaped, noncorroding, metal cap divider strip. The outward edge of the strip should produce a 3 mm to 4 mm (1/8 in to 3/16 in) wide gap to accommodate a consistent thickness of trowelled cove mortar. To create an optional, watertight seal between the divider strip and wall assembly, clean both surfaces and apply a fillet bead of Sikaflex® sealant. Contact Sika Canada Technical Sales for a specific recommendation.

2. On concrete substrates, to produce a smooth transition between the wall system and floor, mark a level, straight line at the appropriate height and dry-cut a 3 mm (1/8 in) deep key/chase. Apply masking or duct tape along the outside edge of the key/chase to protect the adjacent surfaces during installation of the cove mortar. Press the mortar into the key/chase and smooth the surface to create a flush transition with the wall.

**Note:** always remove the protective tape before the epoxy primer or epoxy cove mortar begins to harden.

**Transition Detailing** - Typical detailing of vertical surfaces with metal cap transition strip and vertical surfaces with a smooth transition to be executed as illustrated in the document Sikafloor® Morritex® Epoxy Cove Mortar - Typical Details. Available upon request.

**Expansion Joints** - These should be provided in the substrate at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibration movements or around load-bearing columns and at vessel sealing rings.

### MIXING

Mixing will be affected by temperature; condition materials for use to between +18 °C and +30 °C (65 °F and 86 °F).

Do not hand mix Sikafloor® materials. Mechanically mix only. A Kol-type mixer, incorporating a motor spun mixing pail and a shear angle mixing blade, is recommended.

Pre-stir Components A and B separately, making sure all pigment is uniformly distributed and even consistency is achieved. Start mixer; add Component A and Component B and blend for one (1) minute. Add Component C (aggregate) to the mix, incorporating slowly into the liquid over a period of 15 seconds. **DO NOT DUMP!** Allow Component C to blend for a further two (2) minutes to ensure complete mixing. During the mixing operation, scrape down the sides and bottom of the container at least once with a flat or straight-edge trowel to ensure complete mixing of Components A+B+C. Mix full units only.

### APPLICATION

**Primer Coat:** Mix and apply Sikafloor® Vertical Epoxy Primer (see Product Data Sheet for complete instructions) at a rate of approximately 4 m<sup>2</sup>/L (160 ft<sup>2</sup>/US gal.), using a brush or roller to provide a uniform coverage of 10 mil. Primer must be tacky during the application of Sikafloor® Morritex® Epoxy Cove Mortar. Only mix and apply the amount of primer that can be overlaid before it loses its tackiness; approximately one (1) hour at +20 °C (68 °F). If the primer becomes glossy or loses tackiness, remove any surface contaminates and recoat with additional Sikafloor® Vertical Epoxy Primer.

**Mortar:** Apply Sikafloor® Morritex® Epoxy Cove Mortar using steel trowels to spread and compact the mortar on vertical surfaces. Bottle coves and other shaped fillets can be achieved using the appropriate tools. A light brushing while the mortar is still workable will close any surface voids. Allow a minimum eight (8) hour cure period at +23 °C (73 °F) before overcoating.

## CLEAN UP

Clean all tools and equipment with Sika® Epoxy Cleaner. Once hardened, product 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 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](http://www.sika.ca)

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SikafloorMorritexEpoxyCoveMortar-en-CA-(08-2022)-1-1.pdf

### Product Data Sheet

Sikafloor® Morritex® Epoxy Cove Mortar  
August 2022, Version 01.01  
020811020010000015

