



PRODUCT DATA SHEET

Sikafloor®-165 FS

HIGH-SOLIDS, ADHESION PROMOTING FAST-SETTING PRIMER

PRODUCT DESCRIPTION

Sikafloor®-165 FS is a two-component, high-solids, low VOC, neutral odour, epoxy resin specifically formulated to perform as a rapid curing, adhesion promoting primer, binder and concrete surface sealer for fast turn around applications.

WHERE TO USE

Sikafloor®-165 FS may only be used by experienced professionals.

- As an adhesion promoting primer/ sealer for absorbent substrates including concrete and cement screeds
- Penetrates substrate to reduce outgassing, minimizing the formulation of bubbles in subsequent body coats when applying Sikafloor® and Sikagard® systems
- As a rapid curing binder for mortar screeds

PRODUCT INFORMATION

CSC MasterFormat®

09 67 23 | RESINOUS FLOORING

Packaging

Component A: 11.35 L (3.0 US gal.)
Component B: 7.57 L (2.0 US gal.)
Components A+B: 18.92 L (5.0 US gal.)
(Ready to mix unit)

Appearance / Colour

Clear Slight Amber

Shelf Life

2 years in original, unopened packaging under proper storage conditions.

Storage Conditions

Store dry at temperatures between 5 and 32 °C (41 and 89 °F) and protect from freezing. If frozen, consult Sika Canada. Condition product at temperatures between 18 and 24 °C (65 and 75 °F) for at least 24 hours before use.

CHARACTERISTICS / ADVANTAGES

- Very rapid overcoating time increases productivity, 2 hours 30 minutes at 23 °C (73 °F)
- Low viscosity ensures excellent penetration and adhesion
- User friendly mix ratio = 3:2 (parts by volume)
- Low tensile modulus
- Higher tensile elongation
- Low VOC content, neutral odour

ENVIRONMENTAL INFORMATION

- Potential contribution for LEED® projects.

APPROVALS / CERTIFICATES

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

Solid content	95 % by weight	
Volatile organic compound (VOC) content	< 50 g/L	
Viscosity	A+B: ~ 375 cps	
Shore D Hardness	~ 85	(ASTM D2240)
Pull-Off Strength	> 3.5 MPa (500 psi) (100 % concrete failure)	(ASTM D7234)
Chemical Resistance	Consult Sika Canada	
Water Absorption	~ 0.29 %	(ASTM C413)
Permeability to Water Vapour	~ 0.14 g/m ² (24 hours / 24 °C [75 °F]) @ 8 mil d.f.t.	(ASTM E96)

APPLICATION INFORMATION

Mixing Ratio	A:B = 3:2 (by volume)			
Consumption	4-5 m ² /L (160-200 ft ² /US gal.) at 8 -10 mil wet film thickness (w.f.t.). Coverage will vary depending on the porosity of the prepared substrate.			
Product Temperature	Condition product at temperatures between 18 and 24 °C (65 and 75 °F) before using.			
Ambient Air Temperature	Minimum / Maximum 10 °C / 30 °C (50 °F / 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.			
Substrate Moisture Content	Moisture content of concrete substrate must be ≤ 4 % (pbw – part by weight) as measured with a Tramex® CME/CMExpert type concrete moisture meter.			
Pot Life	Material Temperature	Time		
	10 °C (50 °F)	~ 15 (min)		
	23 °C (73 °F)	~ 12 (min)		
	30 °C (86 °F)	~ 8 (min)		
	Pot life is visible. Do not apply after indicated pot life is exceeded.			
Curing Time	Ambient & Substrate Temperature	Foot traffic	Light traffic	Full cure
	10 °C (50 °F)	~ 14 (hours)	~ 24 (hours)	~ 36 (hours)
	23 °C (73 °F)	~ 5 (hours)	~ 8 (hours)	~ 12 (hours)
	30 °C (86 °F)	~ 3 (hours)	~ 5 (hours)	~ 8 (hours)
Waiting Time / Overcoating	Before applying Sikafloor®, Sikagard® or Sikalastic® Epoxy and Polyurethane coatings onto Sikafloor®-165 FS allow :			
	Ambient & Substrate Temperature	Minimum	Maximum	
	10 °C (50 °F)	~ 8 (hours)	~ 24 (hours)	
	23 °C (73 °F)	~ 2.5 (hours)	~ 12 (hours)	
	30 °C (86 °F)	~ 1.5 (hours)	~ 5 (hours)	

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

- Sikafloor®-165 FS is best installed by skilled and experienced applicators. Consult Sika Canada for advice and recommendations.
- Prior to application, measure and confirm the following: 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.).
- Moisture content of concrete substrate must be $\leq 4\%$ (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). Do not apply to concrete substrate with moisture levels exceeding 4 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®^{CA} on horizontal surfaces and Sikagard®-75 EpoCem®^{CA} on walls and overhead applications.
- 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}.
- ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.
- 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.
- Freshly applied material should be protected from dampness, condensation and water for at least 72 hours.

- 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.
- Do not apply to polymer-modified cement mortars (PCC) that may expand when sealed with an impervious resin.
- Any aggregate used with Sikafloor® systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing.
- Do not apply to substrates exposed to extreme thermal shock.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Direct-fired gas or kerosene heaters produce by-products that can have adverse effects on the curing primer. 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.
- Mechanical, chemical & physical properties will be fully achieved at full cure.
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- Surface may discolour in areas exposed to constant ultra violet light.

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

SURFACE PREPARATION

Concrete surfaces must be clean, sound and dry. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit good bond. Prepare the surface by any appropriate mechanical means, in order to achieve an open textured profile equivalent to ICRI / CSP 3 - 4. The compressive strength of the concrete substrate should be at least 25 MPa (3625 psi) at 28 days and a minimum of 1.5 MPa (218 psi) in tension at the time of application. Whenever shot-blasting is utilized, be careful to leave concrete with a uniform texture and not create tracking as this will be visible through coatings and in some cases thin section mortars.

Over blasting will also result in reduced coverage rates and increased consumption of the primer. Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the Sikafloor®-165 FS primer and substrate.

All projections, rough spots, etc. should be dressed off to achieve a level surface prior to the application. Repairs to cementitious substrates, filling of blowholes, levelling of irregularities, etc. should be carried out using an appropriate moisture tolerant, structural Sika® profiling mortar. Contact Sika Canada for recommendations.

MIXING

For part unit mixing, i.e. when not mixing full units, each component must be pre-agitated separately to ensure product uniformity. Do not allow mixed material to stand and settle. Failure to pre-stir and keep product agitated will result in variation in gloss levels appearance and performance.

Do not hand mix Sikafloor® materials. Mechanically mix only. Do not thin this product. Addition of thinners (e.g. water, solvent, etc.) will slow cure and reduce ultimate properties of this product. Mix only that quantity which can be used within its pot life.

Pre-stir Components A and B separately, making sure all solids, are evenly distributed and uniform consistencies are achieved within each individual Component. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin) or empty Component A into a suitably sized and clean pail and add Component B in the correct ratio. Blend the combined components thoroughly at low speed (300 - 450 rpm) for at least three (3) minutes using a drill fitted with an Exomixer® or Jiffy type paddle suited to the dimensions of the mixing container and keep the mixing paddle in the mix to minimize entrapped air. Take care not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. When completely mixed, Sikafloor®-165 FS should be uniform in appearance and consistency.

APPLICATION

Apply Sikafloor®-165 FS primer to the prepared surface using a squeegee at the rate of 4-5 m²/L (160-200 ft²/US gal) and back roll to ensure a uniform 8-10 mil wet film thickness. Check primed surface to ensure it is free of pinholes and holidays and provides uniform and complete coverage of the entire concrete substrate. Where a second coat is required, wait until first coat is tack-free, approximately 2.5 hours at 23 °C (73 °F). Then apply a second coat of the Sikafloor®-165 FS primer using the same technique and coverage rate as the first.

CLEAN UP

Clean all tools and equipment immediately with Sika® Epoxy Cleaner. Once cured, 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

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Product Data Sheet

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