BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikafloor®-165 FS

HIGH-SOLIDS, ADHESION PROMOTING FAST-SETTING PRIMER

PRODUCT DESCRIPTION

Sikafloor®-165 FS is a two-component, high-solids, 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 bonding agent for mortar screeds

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
- Neutral odour

ENVIRONMENTAL INFORMATION

- Potential contribution for LEED® projects.

APPROVALS / CERTIFICATES

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

PRODUCT INFORMATION

Packaging	**Components A+B: 18.92 L (5 US gal)** Component A: 11.35 L (3 US gal) Component B: 7.57 L (2 US gal)
Appearance / Colour	Clear - slight amber
Shelf Life	2 years in original, unopened packaging under proper storage conditions.
Storage Conditions	Store in a dry place, protected from freezing at a temperature between 5°C and 32°C (41°F and 90°F). Protect from freezing. If Sikafloor®-165 FS has frozen, contact Sika Canada.
Solid content	95 % by weight

Volatile organic compound (VOC) content < 50 g/L

Viscosity	A+B: ~375 cPs	
CSC MasterFormat®	**09 67 23 | RESINOUS FLOORING**	
Shore D Hardness	~ 85	(ASTM D2240)
Pull-Off Strength	> 3.5 MPa (500 psi) (100 % concrete failure)	(ASTM D7234)
Chemical Resistance	Consult Sika Canada	
Permeability to Water Vapour	~ 0.14 g/m² (24 hours / 24 °C [75 °F]) @ 8 mil d.f.t.	(ASTM E96)
Water Absorption	~ 0.29 %	(ASTM C413)

APPLICATION INFORMATION

Mixing Ratio	A:B = 3:2 (by volume)
Consumption	4-5 m²/L (160-200 ft²/US gal.) at 8 -10 mil w.f.t. **Note:** 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 24 °C (65 °F and 75 °F) before and during application.
Ambient Air Temperature	Minimum: 10 °C (50 °F) / Maximum: 30 °C (86 °F) **Note:** Mixing carried out under conditions where the Sikafloor®-165 FS temperature and ambient temperature are below 18 °C (65 °F) will result in reduced product workability and slower curing rates.
Relative Air Humidity	Maxiumum 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 (86 °F) **Note:** Any attempt to apply Sikafloor®-165 FS at substrate temperature conditions less than 18 °C (65 °F) will result in an increase in viscosity and slower cure rates.
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 minutes 23 °C (73 °F) / ~ 12 minutes 30 °C (86 °F) / ~ 8 minutes **IMPORTANT:** 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

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

IMPORTANT: If the Waiting/ Recoat time has passed the previous coat must be lightly sanded, to remove all gloss; vacuum cleaning using a brush attachment followed promptly with a solvent wipe of the surface as per the following industry approved guideline:

Avoid using solvent that can leave a oily residue: (such as, but not limited to most mineral spirit).
Avoid Paper Towels: Pre-treated shop towels or standard paper towels may contain silicone or manufacturing additives that will ruin your paint job. Stick to lint-free cotton cloths or dedicated microfiber towels.
Change Rags Frequently: As soon as a rag becomes visibly dirty, discard it or fold it to a clean side. Continuing to wipe with a saturated, dirty rag just re-deposits contaminants onto the surface.
Wet Wipe: Pour a solvent (onto the first rag. Do not dip the rag into the solvent container; pour it directly to keep your supply clean).
Lift: Wipe down a small, manageable section (e.g., ~0.5 m^2 [~ 4-6 ft^2]) of the surface. Use enough pressure to break up and lift the oils or sanding dust. Rotate the cloth frequently so you are always using a clean spot.
Dry Wipe: Before the solvent can flash off (evaporate) and dry on the surface, wipe the same section with a second, clean, lint-free rag. When used correctly, this second cloth absorbs residual solvent and removes materials that could reduce or prevent adhesion or the proper performance of 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

Note: The user is solely responsible for the proper use of the product. Any site visit carried out by Sika® personnel, upon the user's request, is intended solely to provide written technical recommendations based on Sika® documentation. They are in no way intended to supervise, approve or control the quality of the work performed on site. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose.

- 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 cracked or unsound substrates.
- Do not apply on porous surfaces where outgassing conditions are present during the application of Sikafloor®-165 FS.
- Do not apply on porous surfaces where a transfer of moisture vapour may occur during application.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur.
- Do not use on exterior, Sikafloor®-165 FS is for interior use only.
- Do not apply to surfaces where water vapour could condense and freeze.

- Do not apply to substrates exposed to extreme thermal shock.
- This product is not designed for negative side waterproofing.
- Do not dilute Sikafloor®-165 FS. Adding diluents (water, solvent, etc.) will slow curing and reduce the final properties of this product. Diluents must never be added to the mixture. Adding diluent will void any applicable Sika® warranty.

As well, Sika® recommends:

- That 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.).
- That the moisture content of concrete substrate must be ≤ 4 % (pbw – part by weight). Do not apply to concrete substrate with moisture levels exceeding 4 % mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter. 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®-1620 or Sikafloor®-81 EpoCem® CA.
- To keep in mind that ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.
- To beware of Dew Point condensation (the substrate temperature may be lower than the ambient temperature).
- That the maximum relative ambient should not exceed 85% during application and curing.
- To maintain and extend existing expansion joints through the Sikafloor® flooring system.
- That applied material will follow undulations, depressions, lines, etc. of the underlying substrate. Visual appearance of the finished surface may vary, including, but not limited to, reflection of “waviness”, wall transitions, etc.
- That any aggregate used with Sikafloor®-165 FS must be non-reactive and oven-dried.
- To take into account that the mechanical and physical properties are achieved when full curing is complete.
- That freshly applied material should be protected from dampness, condensation and water for at least 72 hours. Protect substrate during application from condensation from pipes or any overhead leaks.
- To take into account that direct-fired gas or kerosene heaters produce byproducts that can have adverse effects on the curing resin. To avoid this occurrence, heaters must be exhausted to the exterior of the building to avoid defects such as surface blush, whitening, loss of adhesion or other surface deficiencies.
- To beware of airflow and changes in airflow. 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

SURFACE PREPARATION

Concrete surfaces must be clean and sound. 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 (217 psi) in tensile strength, at the time of the application.

Substrates must be free of contaminants such as dust, dirt, existing paint films, efflorescence, exudates, laitance, form, hydraulic or fuel oils, brake fluid, grease, fungi, mildew, biological residues or any other contaminants which may prohibit good bond or conditions of the substrate that may reduce the overall performances of Sikafloor®-165 FS.

Before work commences, examine the areas to be covered and report any improper condition(s) in writing to the general contractor, architect or engineer (or otherwise, the owner). User shall not proceed with the work until surfaces and conditions comply with the requirements indicated in this document; applicable industry standards; federal, provincial and local regulations, as well as good trade practices. By starting work, the Applicator/User acknowledges that the conditions are acceptable.

Prepare the surface by any appropriate mechanical means, in order to achieve a profile equivalent to a minimum of ICRI CSP 3 (note: ICRI CSP 4 will provide better overall performances where high shear stress from dynamic loads may be present or that can reasonably be expected). Whenever “shot-blasting” is utilized, be careful to leave concrete with a uniform texture. “Over-blasting” will result in reduced coverage rates of the primer and/or subsequent topcoats. The “shot blast” pattern may show through the last coat, known as “tracking”.

Repairs to cementitious substrates, filling of blowholes, levelling of irregularities, etc. should be carried out using an appropriate Sika profiling mortar. Contact Sika Technical Service for recommendations in writing.

Note: Contact Sika’s Technical Service for installation

recommendations in writing concerning substrates or conditions not listed.

MIXING

Mix Ratio A:B = 3:2 (by volume)

IMPORTANT:

- Do not hand mix Sikafloor®-165 FS®; mechanically mix only.
- Sikafloor®-165 FS must be applied as supplied.

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. Do not attempt to attend to unmixed material that may gather on the sides of the mixing container while mechanical or electrical parts are in motion. When completely mixed, Sikafloor®-165 FS should be uniform in appearance and consistency.

Note: Prepare only the amount that can be applied within the open time (i.e., during the pot life) and at the actual job site temperature.

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 with a non-flammable solvent. 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

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