BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikafloor®-1620

LOW PERMEABILITY MOISTURE VAPOUR CONTROL EPOXY PRIMER

PRODUCT DESCRIPTION

Sikafloor®-1620 is a state of the art, multi-component, high solids, low viscosity, moisture tolerant, epoxy primer that forms a dense, low permeability film on concrete substrates to significantly reduce moisture vapour transmission in compliance with ASTM F3010. Sikafloor®-1620 contains a blue trace dye that acts as a visual aid to ensure complete coverage.

WHERE TO USE

Sikafloor®-1620 may only be used by experienced professionals.

Sikafloor®-1620 is designed to treat high moisture concrete substrates where Sikafloor®, Sikagard® and Sikalastic® resin systems are due to be installed where a measured moisture content up to 6 % (p.b.w. – part by weight), as determined with a Tramex® CME / CMEXpert concrete moisture meter.

CHARACTERISTICS / ADVANTAGES

- Economical single coat application
- Low permeability ~0.06 perms (15 mils d.f.t) ASTM E96
- Exceeds the requirements of ASTM F3010 *Standard Practice For Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems For Use Under Resilient Floor Coverings*
- Cured resin resists high moisture vapour emission rates (MVER) up to 25 lbs as per ASTM F1869, 100 % R.H. as per ASTM F2170 and resist high alkalinity to pH 14
- Low viscosity provides superior penetration and stabilization of cementitious substrates.
- Resistant to substrate out-gas bubbling
- High bond strength
- Low odour and low VOC

APPROVALS / CERTIFICATES

- Meets the requirements of CFIA for use in food plants

PRODUCT INFORMATION

Packaging	**Components A+B: 15.12 L (4 US gal)** Component A: 11.34 L (3 US gal) Component B: 3.78 L (1 US gal)	
Appearance / Colour	Translucent blue (after mixing)	
Shelf Life	2 years in original unopened container 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®-1620 has frozen, contact Sika Canada.	
Viscosity	~370 cps	(ASTM D2196)

Solid content by volume	~99%
CSC MasterFormat®	**09 67 23 | RESINOUS FLOORING**

TECHNICAL INFORMATION

Shore D Hardness	~83	(ASTM D2240)
Compressive Strength	~99 MPa (~14,385 psi)	(ASTM D695)
Tensile Strength in Flexure	~83.8 MPa (~12,154 psi)	(ASTM D790)
Tensile Strength	~34 MPa (~4,931 psi)	(ASTM D638)
Pull-Off Strength	~3 MPa (~435 psi) (100% concrete failure)	(ASTM D7234)
Permeability to Water Vapour	~0.06 perm (at 15 mil d.f.t)	(ASTM E 96)
Water Absorption	~0.0029% (24 hrs) ~0.007% (7 days)	(ASTM D570)

APPLICATION INFORMATION

Mixing Ratio	A:B = 3:1 (by volume)
Consumption	2.6 m^2/L (106 ft^2/US gal) at 15 mils w.f.t. per coat **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 30 °C (65 °F and 86 °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®-1620 temperature and ambient temperature are below 18 °C (65 °F) will result in reduced product workability and slower curing 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 (86 °F) **Note:** Any attempt to apply Sikafloor®-1620 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 not exceed 6 % by mass (p.b.w. – part by weight) as measured with a Tramex® CM/E concrete moisture meter on a mechanically-prepared surface (mechanical preparation to ICRI / CSP 3-4).
Pot Life	**Material Temperature** / **Time** 20 °C (68 °F) / ~35 minutes

Curing Time

Ambient & Substrate Temperature	Foot Traffic	Full cure
10 °C (50 °F)	~36 hours	~10 days
20 °C (68 °F)	~18 hours	~07 days
30 °C (86 °F)	~08 hours	~04 days

Note:

- 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 72 hours following the end of the application.

Waiting Time / Overcoating

Before applying Sikafloor® Epoxy or Sikafloor® Polyurethane on Sikafloor®-1620 allow:

Ambient & Substrate Temperature	Minimum	Maximum
10 °C (50 °F)	~24 hours	72 hours
20 °C (68 °F)	~8 hours	48 hours
30 °C (86 °F)	~5 hours	24 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 m2 [~ 4-6 ft2]) 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®-1620.
- 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®-1620 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®-1620. 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:

- To note that Sikafloor®-1620 is a water vapour reduction system only. It does not prevent floor failure caused by osmotic blistering. Use Sikafloor®-1620 in combination with Sikafloor®-81 EpoCem® CA to prevent osmotic blistering of resin-based coatings on damp concrete.
- 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.).
- 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).
- To take into account of the maximum ambient relative humidity of 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® systems must be non-reactive and oven-dried.
- To take into account that mechanical, chemical and physical properties will be fully achieved at full cure.
- To take into consideration that freshly applied material should be protected from dampness, condensation and water for at least 72 hours. Protect the flooring 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

SUBSTRATE QUALITY

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®-1620.

SURFACE PREPARATION

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 5 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: Components A:B = 3:1 (by volume)

IMPORTANT:
- Do not hand mix Sikafloor® materials; mechanically mix only.
- Sikafloor®-1620 must be applied as supplied.

Pre-stir Components A and B separately, making sure all solids, including trace dye, 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®-1620 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

Concrete with Measured Moisture Content ≤ 6 %
Apply one (1) coat of Sikafloor®-1620 with a squeegee at the rate of 2.6 m²/L (106 ft²/US gal) at 15 mils w.f.t. thickness and back roll with pressure after 20 minutes. Coverage will vary depending on the porosity and profile of the prepared substrate. Do not apply by dipping roller into mixing container or a paint tray; instead pour a bead of the mixed material, in the form of a ribbon, onto the surface to be coated and then spread with a squeegee and back roll. Ensure that the Sikafloor®-1620 prime coat is pore- and pinhole-free and provides uniform and complete coverage over the entire concrete substrate.

Concrete with a Measured Moisture Content > 6 %
Apply a minimum 3 mm thick layer of Sikafloor®-81 EpoCem® CA following the application instructions published on the product data sheet. Once cured, apply one (1) coat of Sikafloor®-1620 with a squeegee at the rate of 2.6 m²/L (106 ft²/US gal) at 15 mils wet film thickness and back roll with pressure after 20 minutes. Do not apply by dipping roller into mixing container or a paint tray; instead pour a bead of the mixed material, in the form of a ribbon, onto the surface to be coated and then spread with a squeegee and back roll. Ensure that the Sikafloor®-1620 prime coat is pore- and pinhole-free and provides uniform and complete coverage over the entire Sikafloor®-81 EpoCem® CA substrate.

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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