



PRODUCT DATA SHEET

Sikafloor®-315 N

ALIPHATIC POLYURETHANE FLOOR COATING CONTAINING UV BLOCKER TECHNOLOGY, LOW VOC, LOW ODOUR, HIGH GLOSS SMOOTH FINISH OR OPTIONAL SEMI-GLOSS FINE AGGREGATE TEXTURE FINISH

PRODUCT DESCRIPTION

Sikafloor®-315 N is a high solids, low VOC, low odour, highly abrasion resistant aliphatic polyurethane coating. This high performance resin contains a unique UV blocker technology that provides superior ultra violet light screening properties that significantly improves colour retention values of underlying resin floor systems. It has excellent clarity when applied as a two-part clear high gloss smooth coating or as a three-part semi-gloss fine aggregate-textured finish with the addition of prepackaged optional wear aggregate that increases traction and scratch resistance.

WHERE TO USE

Sikafloor®-315 N may only be used by experienced professionals.

Sikafloor®-315 N is typically used in light to heavy traffic areas such as:

- Laboratories, life sciences, pharmaceutical industries
- Hospitals, health care facilities
- Education (e.g. schools and universities).
- Leisure & culture (e.g. museums, stadiums).
- Retail spaces (e.g. shopping malls).
- Manufacturing facilities and warehouses.

PRODUCT INFORMATION

CSC MasterFormat®

09 67 00 | FLUID-APPLIED FLOORING

CHARACTERISTICS / ADVANTAGES

- Low maintenance
- Low VOC-content, low odour
- Smooth high gloss aesthetic finish (without optional wear aggregate)
- Semi-gloss fine aggregate texture provides improved traction (with optional wear aggregate)
- Durable, impermeable and seamless
- Superior mechanical and chemical resistance
- Enhanced stain-resistance
- Easily cleaned and maintained

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 IEQ Credit: Low-Emitting Materials
- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization - Sourcing of Raw Materials

APPROVALS / CERTIFICATES

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

Packaging	Component A: 3.78 L (1 US gal.) Resin Component B: 7.57 L (2 US gal.) Hardener Component C: 4.1 kg (9 lb) Wear Aggregate (Optional) Components A+B: 11.35 L (3 US gal.)
Appearance / Colour	Clear
Shelf Life	2 years in unopened packaging.
Storage Conditions	Store and transport dry between 4 °C to 32 °C (40 °F to 90 °F). Product is sensitive to moisture during storage and application. Once component B is opened, it must be used immediately.
Solid content	> 95 % by volume
Volatile organic compound (VOC) content	< 100 g/L

TECHNICAL INFORMATION

Shore D Hardness	~73 to ~78	(ASTM D2240)
Abrasion Resistance	~18 mg loss (smooth high gloss)	(ASTM D4060) Taber Abraser, Wheel CS 17/1000g (2.2 lb) / 1000 cycles
Tensile Strength	~32 MPa (~4641 psi)	(ASTM D638)
Elongation at Break	~85%	(ASTM D638)
Pull-Off Strength	> 2.5 MPa (> 363 psi) concrete failure	(ASTM D7234)
Chemical Resistance	Consult Sika Canada	
Water Absorption	~0.68% (2 hours boiling)	(ASTM C413)
Gloss Level	~90 (smooth high gloss) ~65 (textured semi gloss)	(ASTM D523) 60 degrees
Coefficient of Friction	~0.32 Wet (smooth high gloss) ~0.48 Dry (smooth high gloss) ~0.53 Wet (textured semi gloss) ~0.62 Dry (textured semi gloss)	ANSI A326.3 BOT 3000e

APPLICATION INFORMATION

Mixing Ratio	A:B =1:2 by volume
Consumption	<p>Smooth Glossy Finish: Sikafloor®-315 N applied at 4.0 m²/L to 9.8 m²/L (160 ft² / US gal. to 401 ft² US gal.) at 4-10 mil w.f.t. NOTE: Product will not cure properly if applied at excessive thickness. Do not exceed 10 mil w.f.t.</p> <p>Textured Semi-Gloss Finish: (Requires addition of optional Part C wear aggregates) Sikafloor®-315 N applied at 13.1 m²/L to 19.7 m²/L (534 ft² / US gal. to 801 ft² / US gal.) 2-3 mil w.f.t. NOTE: If material is applied too heavy, the aggregate texture may be encapsulated resulting in a smooth glossy surface. Do not exceed 3 mil w.f.t.</p> <p>IMPORTANT: Multi-coat applications requires additional surface preparation between coats; see Surface Preparation section for complete details.</p>

Thinning Solvent - Sika® Urethane Thinner and Cleaner - maximum 5 % by volume (50 mL/L / 6.4 oz/US gal.) (if required). Contact Sika Canada for additional information.

Product Temperature	Condition product between 18 °C to 24 °C (65 °F to 75°F) before using.			
Ambient Air Temperature	Minimum 10 °C (50 °F) Maximum 30°C (85 °F)			
Relative Air Humidity	Minimum 30 % / Maximum 75 % (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) Mixing and Application attempted at Material, Ambient and/or Substrate Temperature conditions lower than 18 °C (65 °F) will result in a decrease in product workability and slower cure rates.			
Substrate Moisture Content	<p>Moisture content of concrete substrate must be ≤ 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 CSP-3 to CSP-4 as per ICRI guidelines). Do not apply to concrete substrate with moisture levels > 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® 1610, or Sikafloor® 81 EpoCem®, or Sikafloor®-22NA or -24NA PurCem®.</p> <p>When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values exceed 85 %, according to ASTM F2170, use Sikafloor®-1610, or Sikafloor®-81 EpoCem®, or Sikafloor®-22NA or -24NA PurCem®.</p> <p>ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.</p>			
Pot Life	Material Temperature	Time		
	10 °C (50 °F)	~50 minutes		
	20 °C (68 °F)	~25 minutes		
	30 °C (86 °F)	~15 minutes		
Note: Care must be taken not to use product beyond its recommended pot life. Material will appear liquid, but is unusable and will result in poor adhesion.				
Curing Time	Ambient & Substrate Temperature	Foot traffic	Light traffic	Full cure
	10 °C (50 °F)	~48 hours	~72 hours	~10 days
	20 °C (68 °F)	~24 hours	~48 hours	~7 days
	30 °C (86 °F)	~18 hours	~36 hours	~5 days
Freshly applied material should be protected from dampness, condensation and water for at least 72 hours. Curing times will vary according to ambient air, substrate temperature and relative air humidity.				

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 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.).
- Apply the coating to the prepared substrate which should be pore- and pinhole-free. If necessary, apply an additional coat of a suitable material to ensure the substrate is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapor drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapour drive.
- Sikafloor®-315 N UV blocking aliphatic polyurethane coating may not completely prevent discoloration of underlying coatings in some applications.
- 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.
- 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.
- 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 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.
- Published Dynamic Coefficient of Friction (DCOF) wet and dry test results are approximate values based on laboratory test samples produced in a controlled

environment following the application instructions published on the product data sheet. Resin flooring products are hand applied finishes subject to minor variations in surface texture due to influences partly beyond Sika Canada's control. Substrate profile, environmental conditions, variable regional aggregate size, shape and gradation, aggregate distribution, uniformity of applied resin mil thickness, and application technique can all affect the final DCOF test results achieved. Adequate provision should be made by the client throughout the selection and installation process to ensure the finished surface texture meets the end user's traction requirements.

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

Surface Preparation

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. All projections, rough spots, etc. should be dressed off to achieve a level surface prior to the application.

Concrete - Should be cleaned and prepared to achieve a laitance- and contaminant-free, open textured surface by shot blasting or equivalent mechanical means (ICRI/CSP 3-4). Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate. Whenever "shotblasting" 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 "shotblast" pattern may show through the last coat, known as "tracking". The compressive strength of the concrete substrate should be at least 24 MPa (3500 psi) at 28 days and at least 1.5 MPa (215 psi) in tension at the time of application. For other substrates, contact Sika Canada.

Multi-coat Application: Sikafloor®-315 N is typically applied as a single finish coat. When a multi-coat application is required, the surface of the first coat of Sikafloor®-315 N must be lightly sanded, to remove all gloss; vacuum cleaning and solvent wiping will be necessary to remove all traces for dust. The surface should be a uniform dullness, with no gloss present after clean-up and before applying the next coat.

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Priming

Priming for concrete substrate is required. Prime with either Sikafloor®-156^{CA}, Sikafloor®-1610 or Sikafloor®-2002. Allow the primer to cure (varies with temperature and humidity) until tack-free before applying subsequent coats. Ensure that the primer is pore- and pinhole-free and provides uniform and complete coverage over the entire substrate. Please refer to the individual most current and respective Product Data Sheet for specific and detailed information.

MIXING

Mix Ratio: A:B = 1:2 by volume.

Do not hand mix Sikafloor® materials. Mechanically mix only.

Where part-mixing of a unit is necessary, ensure that Mix Ratio is accurately achieved. **Preferably, do not part-mix units.** Pre-stir each component thoroughly and 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.

Glossy Finish

Empty the entire contents of the Component A (Resin) into the Component B (Hardener). Using a Exomixer® or Jiffy type mixing paddle and drill, mix at low speed (300-450 rpm) for three (3) minutes. Be careful 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.

Semi-gloss Finish - Requires use of the optional Wear Aggregate

Empty the entire contents of the Component A (Resin) into the Component B (Hardener). Using a Exomixer® or Jiffy type mixing paddle and drill, mix at low speed (300-450 rpm) for one (1) minute. Slowly add the optional Component C (Wear Aggregate) to the mix material under agitation. Mix for two (2) minutes. **Note: Do not dump wear aggregate into mix!** Be careful 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 mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.

APPLICATION

General Requirements: It is extremely important to thoroughly clean the substrate before application of Sikafloor®-315 N. Dust particles, dirt, steel shot and other contaminants will be permanently sealed into the cured film appearing as surface defects on high gloss, thin mil coatings. Roller sleeves should be low nap, lint-free and of high quality to minimize the appearance and frequency of entrapped roller fibres.

IMPORTANT: It is important to keep mixed product fully and mechanically agitated. Any breaks in application should be followed by re-mixing of the material to again produce a uniform consistency, before proceeding with the application.

Application of Sikafloor®-315 N for glossy finish using a roller:

Sikafloor®-315 N is applied with a solvent-resistant short nap roller, 6 mm (1/4 in), at 4-10 mil w.f.t. The floor area to be coated should be divided into sections that can be done completely in one application sequence. Sections should be divided at expansion joints or doorways when possible. The end of a section should be taped off to form a straight clean edge for an adjacent section. Pour the material in a roller tray and saturate the roller, remove the excess material by lightly rolling it in the tray. It is important to apply the coating uniformly at a rate of 4 to 10 mil to achieve proper appearance. If material is applied too heavy, the coating may create micro blisters. If material is applied too thin, the coating gloss level may vary. Product will not cure properly if applied at excessive thickness. **Do not exceed 10 mil w.f.t.**

Application of Sikafloor®-315 N for glossy finish using a flat squeegee (without use of Wear Aggregate):

Pour a thin ribbon of Sikafloor®-315 N onto the floor surface. Using a flat squeegee spread the material at the recommended rate. Avoid leaving puddles on the floor surface. Using a 6 mm (1/4 in) short nap roller, back roll the material in the opposite direction that it was applied with the squeegee. Continue to back roll the material to achieve uniform coverage across the floor. It is extremely important to apply this material at a rate of 4-10 mil w.f.t. To finish, Sikafloor®-315 N should be cross rolled; uninterrupted across the entire width of the

floor. This will help reduce roller marks. If material is applied too heavy, the coating may create micro blisters. If material is applied too thin, the coating gloss level may vary. Product will not cure properly if applied at excessive thickness. **Do not exceed 10 mil w.f.t.**

Application of Sikafloor®-315 N for semi-gloss finish using a roller (Wear Aggregate required):

Sikafloor®-315 N is applied with a solvent-resistant short nap roller, 6 mm (1/4 in), at a thickness of 2-3 mil. The floor area to be coated should be divided into sections that can be done completely in one application sequence. Sections should be divided at expansion joints or doorways when possible. The end of a section should be taped off to form a straight clean edge for an adjacent section. Pour the material in a roller tray and saturate the roller, remove the excess material by lightly rolling it in the tray. It is important to apply the coating uniformly at a rate of 2-3 mil to achieve proper appearance. If material is applied too heavy, the coating may create micro blisters or result in loss of aggregate texture. If material is applied too thin, the coating gloss level may vary. **Do not exceed 3 mil w.f.t.**

IMPORTANT: It is very important to remix the material often with the roller in the tray to keep the aggregate from settling at the bottom of the mixing container. It is important to remix the remaining material in the mixing container before the material is poured into the tray. This will ensure that the wear aggregate is evenly dispersed in the Sikafloor®-315 N. Cross roll the entire area with straight uninterrupted passes across the entire width of the floor. This will reduce roller marks. If appearance is still not uniform after a few of these passes, repeat this procedure.

CLEAN UP

Clean tools and brushes with Sika® Urethane Thinner & 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

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