



PRODUCT DATA SHEET

Sikafloor®-219 UTE

UNIVERSAL TINTABLE EPOXY FLOOR COATING (WATER CLEAR OR COLOUR PAK PIGMENTED)

PRODUCT DESCRIPTION

Sikafloor®-219 UTE is a multi-functional, two component, high solids, low VOC, low odour, water clear epoxy resin that can be applied with or without pre-packaged colour paks or metallic pigments to create a variety of durable, decorative coating finishes.

WHERE TO USE

Sikafloor®-219 UTE may only be used by experienced professionals.

Sikafloor®-219 UTE is a universal epoxy resin system applied water-clear or pigmented, typically installed as a concrete primer, broadcast surfacing or trowel mortar binder and high-build coating.

CHARACTERISTICS / ADVANTAGES

- Excellent protection for new or old concrete and properly prepared steel surfaces
- Good mechanical resistance
- Glossy aesthetic finish
- Durable, impermeable and seamless
- Easily cleaned and maintained
- Low-VOC content and low odour

APPROVALS / CERTIFICATES

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

PRODUCT INFORMATION

CSC MasterFormat®	09 67 00 FLUID- APPLIED FLOORING
Packaging	Component A: 7.57 L (2 US gal.) Component B: 3.78 L (1 US gal.) Component A+B: 11.35 L (3 US gal.)
Shelf Life	2 years in original unopened packaging. Condition product at temperatures between 18 °C and 30 °C (65 °F and 86 °F) before using.
Storage Conditions	Store dry between 5 °C and 32 °C (41 °F and 89 °F)
Appearance / Colour	Water-clear / Pigmented, refer to Sikafloor®UTE Colour Pak Colour Chart.
Viscosity	~500 cps (A+B Mixed /Clear)
Volatile organic compound (VOC) content	~28 g/L

TECHNICAL INFORMATION

Shore D Hardness	~80	(ASTM D2240)
Abrasion Resistance	~0.034 g (Smooth Coating)	(ASTM D4060) CS-17 /1000 g (2.2 lbs.)/1000 cycles
Resistance to Impact	~20.34 joules (~15.75 ft*lb)	(ASTM D2794)
Tensile Strength	~44 MPa (~6381 psi)	(ASTM D638)
Elongation at Break	~7.3%	(ASTM D638)
Pull-Off Strength	> 2.5 MPa (363 psi) (substrate failure)	(ASTM D7234)
Coefficient of Friction	~0.43 Wet (smooth clear) ~0.44 Wet (smooth pigmented)	(ANSI A326.3) DCOF - BOT 3000e
Service Temperature	Minimum ~0 °C (~32 °F) Maximum ~50 °C (~122 °F)	
Water Absorption	~0.58% (24 hours)	(ASTM D570)

APPLICATION INFORMATION

Mixing Ratio	Clear	A:B = 2:1 by volume
	Pigmented	add 1 x 500 ml (16.9 oz) Sikafloor® UTE Colour Pak for every 3.78 L (1 US gal.) of Part A resin
Consumption	<p>Smooth Coating: (23 mil total thickness) Prime coat: (8 mil) 5 m²/L (203 ft²/US gal.) Wear coat: (15 mil) 2.6 m²/L (106 ft²/US gal)</p> <p>Note: Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Test sections are recommended to establish correct coverage.</p>	
Product Temperature	Condition product at temperatures between 18 °C and 30 °C (65 °F and 86 °F) before using.	
Ambient Air Temperature	<p>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.</p>	
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	<p>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.</p>	

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.

Pot Life	Material Temperature	Time
	23 °C (73 °F)	~26 minutes

Curing Time	Ambient & Substrate Temperature	Foot Traffic	Light Traffic	Normal Traffic
	10 °C (50 °F)	~48 hours	~4 days	~7 days
	23 °C (73 °F)	~24 hours	~2 days	~5 days
	30 °C (86 °F)	~16 hours	~36 hours	~4 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.

Waiting Time / Overcoating	Ambient & Substrate Temperature	Minimum	Maximum
	10 °C (50 °F)	~48 hours	~96 hours
	23 °C (73 °F)	~24 hours	~48 hours
	30 °C (86 °F)	~16 hours	~36 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.

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.
- 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.

- Will discolour over time when exposed to sunlight (UV) and under certain artificial lighting conditions
- 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.
- 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

SUBSTRATE PREPARATION

The concrete surface must be clean and sound. Remove any dust, laitance, grease, oil, dirt, curing agents, impregnations, wax, foreign matter, coatings and detritus from the surface by appropriate mechanical means, in order to achieve a profile equivalent to ICRI / CSP 3 - 4 for floors and ICRI / CSP 1 - 3 for walls. The compressive strength of the concrete substrate should be at least 25 MPa (3625 psi) at 28 days and at least 1.5 MPa (218 psi) in tension at the time of application of Sikafloor®-219 UTE

MIXING

Mixing Ratio - A:B = 2:1 by volume

For bulk packaging, when not mixing full units, each component must be pre-mixed separately to ensure product uniformity. Do not hand mix Sikafloor® materials. Mechanically mix only.

Mix only that quantity which can be used within its pot life at actual field temperature.

Clear Resin: Premix each Component separately. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components 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 volume of the mixing container to minimize air entrapment. 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.

Sikafloor® UTE Colour Pak Pigmented: Premix each component separately, including the Sikafloor® UTE Colour Pak to ensure product uniformity. For all colours, add one (1) 500 ml (16.9 oz) Sikafloor® UTE Colour Pak for every 3.78 L (1 US gal.) of Component A resin and mix at low speed (300 - 450 rpm) for three (3) minutes until a uniform colour is achieved using a drill fitted with an Exomixer® or Jiffy type paddle. Be careful not to introduce any air bubbles during the mixing process. Empty Component B (Hardener) in the correct mix ratio to Component A (Resin) and mix for additional 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.

NOTE: When using brighter colours, additional coats may be required. Using more color additive than recommended will result in extended cure times and reduced chemical and abrasion resistance.

APPLICATION

Prime Coat: Apply Sikafloor®-219 UTE as a prime coat onto the substrate using a brush, roller or squeegee, at a uniform coverage without puddling.

Wear Coat: Once the prime coat is tack-free, apply the wear coat using a squeegee or roller and backroll to achieve even coverage.

Note: If the Waiting/ Recoat time has passed (refer to Technical Data section) 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.

CLEAN UP

Clean all tools and equipment with Sika® Epoxy Cleaner. Once hardened, product can only be removed mechanically.

MAINTENANCE

Please refer to Sikafloor® Systems - Protection, Cleaning and Maintenance Guidelines product data sheet.

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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