BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
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CSC Master Format™ 09 67 00
FLUID-APPLIED FLOORING

Sikafloor® Morritex® Trowel System

SCREED MORTAR OF 3 - 6 MM (1/8 - 1/4 IN)

Description

Sikafloor® Morritex® Trowel System is a solid colour, high gloss, resin-rich, aggregate- filled, seamless, epoxy based floor resurfacer with high density and compressive strength for exceptional durability. Typically installed to protect new concrete or re-profile existing worn floors at a thickness range of 3 - 6 mm (1/8 - 1/4 in). This heavy duty, general service epoxy system demonstrates good chemical resistance as well as superior abrasion and impact resistance. Sikafloor® Morritex® Trowel System can be customized to meet aesthetic and slope correction requirements. Final surface appearance options include: unlimited colour selection, integral cove base, gloss, satin or matte surface sheen and variable surface texture to produce a range of slip-resistant improved traction finishes.

Where to Use

- Animal care facilities.
- Beverage processing.
- Commercial kitchens-wet and dry processing areas.
- Factories-light to heavy duty manufacturing areas.
- Health care facilities.
- High traffic aisles.
- Laboratories.
- Locker and shower rooms.
- Production lines.
- Garbage rooms.
- Garage service bays.
- Wash bays.

Screed Mortar

Advantages

- Superior mechanical resistance.
- High abrasion and impact resistance.
- Good chemical resistance.
- Aesthetic finish.
- Durable, impermeable and seamless.
- Easily cleaned, maintained and a more sanitary work environment.
- Does not support growth of bacteria or fungus.
- Low VOC content, neutral odour.
- Unlimited colours, no minimum required.
- Achieves high performance ratings according to ASTM G21 resistance to fungi and ASTM D3273 resistance to mold growth (special order grade).
- Conformity with LEED® v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations.
- Meets the requirements of CFIA and USDA for use in food plants.

Technical Data

Packaging

Sikafloor®-156^{CA}	10 L and 30 L (2.6 and 7.9 US gal.) units
Sikafloor®-261^{CA}	10 L and 30 L (2.6 and 7.9 US gal.) units

Colour

Sikafloor®-156^{CA}	Clear Amber
Sikafloor®-261^{CA}	

Refer to the Industrial Flooring and Coatings colour card.

RAL 7038 Agate Grey	RAL 5007 Brilliant Blue
RAL 7030 Stone Grey	RAL 6028 Pine Green
RAL 1001 Beige	RAL 7012 Basalt Grey
RAL 1018 Zinc Yellow	RAL 9003 Signal White
RAL 3010 Brick	

Custom colours available upon request. Refer to current price list for availability.

Yield			
Prime coat	Sikafloor®-156CA	4 m²/L (160 ft²/US gal.) (10 mils w.f.t.)	
		(Optional: thicken with Extender "T" or silica flour)	
Screed mortar	Sikafloor®-156CA	A+B+ Sika® Aggregate PT	
		(3.0:1.0 = 4.0 L) - 2 x 20 kg Sika® Aggregate PT	
		Yield = 2.8 m² @ 6 mm thick (30 ft² @ 1/4 in)	
Grout coat and top coat	Sikafloor®-261CA	2 - 4 m²/L (80 - 160 ft²/US gal.) (10 - 20 mils w.f.t.)	
	Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Allowance must be also made for variation in film thickness or number of coats required to achieve opacity with light (i.e. white) or bright colours (i.e. reds and yellows) on dark substrates. Test sections are recommended to establish correct coverage.		
Shelf Life	2 years in original unopened packaging. Store dry between 5 and 32°C (41 and 89°F). Condition at 18 to 30 °C (65 to 86 °F) before using.		
Mix Ratio	Sikafloor®-156CA	Sikafloor®-261CA	
A:B =	3:1 by volume	2:1 by volume	
Service Temperature	Min.		0 °C (32 °F)
	Max.		50 °C (122 °F)
	Short term exposure		100 °C (212 °F)

Open Time on Substrate (min)	**10 °C (50 °F)**	**20 °C (68 °F)**	**30 °C (86 °F)**
Sikafloor®-156CA	~ 70	~ 45	~ 40
Sikafloor®-261CA	~ 80	~ 50	~ 35
Waiting Time Between Coats (hrs)			
Prime coat/Screed mortar (max.)	~ 24	~ 8	~ 5
Screed mortar/Grout coat (min.)	~ 24	~ 12	~ 6
Grout coat/Top coat (min./max.)	~ 30/72	~ 8/48	~ 6/24
Curing Time			
Foot traffic (hrs) Sikafloor®-156CA	~ 24	~ 12	~ 6
Sikafloor®-261CA	~ 48	~ 24	~ 18
Light traffic (days) Sikafloor®-156CA	~ 5	~ 3	~ 2
Sikafloor®-261CA	~ 4	~ 2	~ 2
Normal traffic/Chem. exp. (days)	~ 10	~ 7	~ 5

Properties at 23 °C (73 °F) and 50 % R.H.

		Sikafloor®-156CA	Sikafloor®-261CA
Specific Gravity ASTM D1475	A:	~ 1.121 (9.34)	~ 1.52 (12.6)
kg/L (lb/US gal.)	B:	~ 1.017 (8.47)	~ 1.01 (8.39)
	A+B:	~ 1.097 (9.14)	~ 1.40 (11.6)
Viscosity	A+B:	~ 260 cps	~ 550 cps
Pot Life, 250 g (8.8 oz) (min)		~ 35 - 40	~ 40

Compressive Strength ASTM C579	~ 91 MPa (13 198 psi)
Tensile Strength ASTM C307	~ 6 MPa (870 psi)
% Elongation	~ 1.9%
Bond Strength ASTM D4541	> 2 MPa (290 psi) (substrate failure)
Thermal Compatibility ASTM C884	Passes
Flexural Strength ASTM C580	~ 28 MPa (4061 psi)
Modulus of Elasticity	~ 10.3 GPa (1 493 891 psi)
Indentation MIL-PRF-24613	~ 0.35%
Impact Resistance ASTM D2794	~ 2.8 joules (2.0 ft lb_f)
Abrasion Resistance ASTM D4060 CS17/1000 cycles/1000 g (2.2 lb)	~ 0.17 g (0.0059 oz)
Dynamic Coefficient of Friction (DCOF) ANSI A137.1 / ANSI A326.3 /BOT 3000e	~ 0.32 (wet) (Heavy-Duty Smooth)
Flammability ASTM D635	~ 3 mm (1/8 in)
Coefficient of Thermal Expansion ASTM D696	~ 0.39 x 10^{-4} mm/mm/°C (0.21 x 10^{-4} in/in/°F)
Water Absorption ASTM C413	~ 0.3 %
Resistance to Fungi Growth ASTM G21	Rated 1 (traces of growth)
Resistance to Mold Growth ASTM D3273	Rated 10 (highest resistance)
VOC Content	< 50 g/L
Chemical Resistance	Consult Sika Canada

Note: Physical properties test results based on heavy-duty system.

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.

HOW TO USE

Surface Preparation

The concrete surface must be clean and sound. Remove any dust, laitance, grease, oil, dirt, curing agents, impregnations, wax, foreign matters, coatings and detritus from the surface by appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3-9. 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®-156CA primer.

Mixing	**(Prime Coat - Screed Mortar - Grout/Top coat)** Pre-mix each component separately. Empty component B in the correct mix ratio to component A. Mix the combined components for at least three (3) minutes, using a low-speed drill (300 - 450 rpm) to minimize entrapping air. Use an *Exomixer* type mixing paddle (recommended model) suited to the size of the mixing container. **Screed Mortar:** Transfer the mixed binder (A+B) into a suitable Kol type motor driven mixer. Gradually add aggregates (component C) to the binder to avoid excessive air entrapment. Once all ingredients are combined, mix continuously and thoroughly for 3 minutes to ensure complete mixing. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once (A+B and A+B+C) to ensure complete mixing. Mix only that quantity which can be used within its pot life.
Application	**Light to Medium Duty System: 3 - 6 mm (1/8 - 1/4 in)** **Prime Coat:** Apply the primer using a squeegee and backroll to provide uniform coverage. Note: Mortar must be placed on wet primer, if primer becomes tack-free, re-prime substrate. **Screed Mortar:** Maintain all control joints and expansion joints through the screed where movement is expected. Place mortar onto the wet primer surface and spread the mortar to the appropriate thickness using a large wood float, rake or screed box. Allow loose mortar to stand for a few minutes to permit entrapped air to escape. Using a float or stainless steel finishing trowel, uniformly compact and smooth the surface. Areas around drains, elevation changes or terminations must fold into a squared, keyed edge to maintain a minimum 3 mm (1/8 in) thickness. Do not feather edge. **Top Coat: (optional)** when the epoxy mortar screed has sufficiently cured to allow foot traffic, apply a top coat of Sikafloor®-261CA thickened with 1-2% by weight of Sikafloor® Extender T. Uniformly apply the top coat using a squeegee and backroll to the desired finish. A slip-resistant improved traction sand texture finish can be achieved by lightly seeding the wet top coat with selected mineral aggregates. Immediately backroll the seeded Sikafloor®-261CA surface to encapsulate the aggregate. Note: This system is not fully sealed throughout the entire screed matrix. Sika does not recommend this method of application for areas subject to high impact or chemical attack; use the heavy-duty, fully sealed system detailed below. **Heavy-Duty System: 6 mm (1/4 in)** **Prime Coat:** Apply the primer using a squeegee and backroll to provide uniform coverage. Note: Mortar must be placed on wet primer, if primer becomes tack-free, re-prime substrate. **Screed Mortar:** Maintain all control joints and expansion joints through the screed where movement is expected. Place mortar onto the wet primer surface and spread the mortar to the appropriate thickness using a large wood float, rake or screed box. Allow loose mortar to stand for a few minutes to permit entrapped air to escape. Using a float or stainless steel finishing trowel, uniformly compact and smooth the surface. Areas around drains, elevation changes or terminations must fold into a squared, keyed edge to maintain a minimum 6 mm (1/4 in) thickness. Do not feather edge. **Grout Coat: (mandatory)** when the epoxy mortar screed has sufficiently cured to allow foot traffic, apply a neat grout coat of Sikafloor®-261CA. Apply using a squeegee or trowel to force the epoxy into surface pores and backroll immediately to remove ridges. **Top Coat: (mandatory)** when the epoxy grout coat has sufficiently cured to allow foot traffic, apply a top coat of Sikafloor®-261CA. Uniformly apply the top coat using a squeegee and backroll to the desired finish. A slip-resistant improved traction sand texture finish can be achieved by lightly seeding the wet top coat with selected mineral aggregates. Immediately backroll the seeded Sikafloor®-261CA surface to encapsulate the aggregate.
Clean Up	Clean all tools and equipment with Sika® Epoxy Cleaner. Once hardened, product can only be removed mechanically.
Limitations	▪ Sikafloor® Morritex® Trowel is best installed by skilled and experienced applicators. Consult Sika Canada for advice and recommendations. ▪ 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.) ▪ 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 ICRI / CSP 3 - 9). 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®-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. ▪ 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®CA.

Limitations continued...

- Material temperature: Precondition material for at least 24 hours between 18 to 24 °C (65 to 75 °F)
- Ambient and substrate temperature - Minimum / Maximum: 10 / 30 °C (50 / 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.
- Maximum ambient relative humidity: 85 % (during application and curing).
- Beware of condensation! The 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.
- Do not hand mix Sikafloor® materials. Mechanically mix only.
- 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 24 hours.
- Will discolour over time when exposed to sunlight (UV) and under certain artificial lighting conditions.
- 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.
- 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 curing. 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
- The influence of colour selection should be allowed for in material consumption/coverage. Light or bright colours may require higher wet film thicknesses or additional coats to achieve desired opacity. Consult Sika Canada for guidance at time of colour selection.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

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FOR INDUSTRIAL USE ONLY

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