



PRODUCT DATA SHEET

Sikafloor® Quartzite Trowel System

DECORATIVE EPOXY MULTICOLOURED QUARTZ TROWEL FINISH



PRODUCT DESCRIPTION

Sikafloor® Quartzite Trowel System is a seamless, aesthetic, 3 mm to 6 mm (1/8 in - 1/4 in) thick, trowelled and sealed epoxy floor, composed of multicoloured quartz aggregates finished with transparent topcoats. The system provides a durable, impermeable finish with superior mechanical and stain resistance.

Optional (specified separately) advanced technology Sikafloor® water-clear epoxy, polyaspartic or polyurethane topcoats are available to alter surface sheen (high-gloss, satin, or matte), or improve long term UV stability, and create a wide range of custom slip-resistant improved traction finishes.

WHERE TO USE

Sikafloor® Quartzite Trowel System may only be used by experienced professionals.

Typical installation areas include:

- Retail spaces: department stores, grocery stores, and showrooms
- Commercial kitchens and cafeterias
- Pharmaceutical: laboratories, corridors, and offices
- Health care facilities: hospitals, and clinics
- Educational: schools, colleges, and universities
- Prisons: holding cells, corridors, and showers
- Museums, art galleries and theaters
- Banks, offices, and government buildings
- Recreational facilities, change rooms and showers

CHARACTERISTICS / ADVANTAGES

- Rejuvenates existing or protects new concrete
- Durable, Impermeable, and seamless
- Glossy superior aesthetic finish
- Superior mechanical and chemical resistance
- Does not support growth of bacteria or fungus
- High density prevents dirt penetration, which provides a cleaner, more sanitary work environment
- Variable surface texture to produce a range of slip-resistant improved traction finishes
- Low odour / low VOC content allows application in occupied buildings
- Optional Integral cove base without seams or joints
- Optional high-gloss, satin, or matte finish top coats
- Optional crack bridging, flexible membrane available
- Twelve (12) standard multicoloured quartz patterns
- Virtually endless variety of custom multicoloured quartz color combinations

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations
- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization - Sourcing of Raw Materials
- Additional LEED®v4 Credits are available depending upon individual component binder and top coat resin selection. Consult the most recent local individual component product data sheet for additional LEED®v4 Credit information.

APPROVALS / CERTIFICATES

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

PRODUCT INFORMATION

CSC MasterFormat®	09 67 26 QUARTZ FLOORING	
Packaging	Sikafloor®-156CA	10 L and 30 L units (2.6 US gal and 7.9 US gal units) 22.7 kg (50 lb) bag
	Sikafloor® Trowel Quartz Aggregate Sikafloor®-2002 or Sikafloor®-217	10 L and 30 L units (2.6 US gal and 7.9 US gal units) 10 L and 30 L units (2.6 US gal and 7.9 US gal units)
Shelf Life	2 years for resins in original unopened packaging.	
Storage Conditions	Store dry between 5 °C to 32 °C (41 °F to 89 °F)	
Appearance / Colour	12 standard multicolour patterns, refer to Sikafloor® Quartzite Trowel System Colour Chart, (custom multicolour blends available on request)	
Volatile organic compound (VOC) content	Refer to the individual technical data sheets of the products to obtain their VOC content.	

TECHNICAL INFORMATION

Shore D Hardness	~85	(ASTM D2240)						
Compressive Strength	~47.8 MPa (~6931 psi)	(ASTM C579)						
Tensile Strength in Flexure	~11.1 MPa (~1610 psi)	(ASTM C580)						
Tensile Strength	~6.7 MPa (~972 psi)	(ASTM C307)						
Modulus of Elasticity in Tension	~4296 MPa (~622 920 psi)	(ASTM C580)						
Pull-Off Strength	> 4.9 MPa (> 609 psi) (100% concrete failure)	(ASTM D7234)						
Service Temperature	Minimum ~0 °C (~32 °F) Maximum ~50 °C (~122 °F)							
Water Absorption	<table border="1"> <tr> <td>24 hours immersion</td> <td>~0.18 %</td> </tr> <tr> <td>7 days immersion</td> <td>~0.30 %</td> </tr> <tr> <td>2 hours immersion in boiling water</td> <td>~1.74 %</td> </tr> </table>	24 hours immersion	~0.18 %	7 days immersion	~0.30 %	2 hours immersion in boiling water	~1.74 %	(ASTM D570)
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7 days immersion	~0.30 %							
2 hours immersion in boiling water	~1.74 %							
Chemical Resistance	Consult Sika Canada							
Resistance to Fire	Self-extinguish	(ASTM D635)						

APPLICATION INFORMATION

Consumption

Primer:

Sikafloor® 156CA

4 m²/L (160 ft²/US gal)
at 10 mils w.f.t.

Mortar:

Sikafloor® 156CA

Mix Design: 10 L (2.6 US gal) of Sikafloor®-156CA combined with 80 kg (176 lb) of Sikafloor® Trowel Quartz Aggregate will yield ~55 L (~1.9 ft³) of mortar.

- ~18 m² (~195 ft²) applied at 3 mm (1/8 in) thick
- ~9 m² (~97 ft²) applied at 6 mm (1/4 in) thick

Grout Coat:

Sikafloor®-2002
or Sikafloor®-217

5 m²/L to 7 m²/L (203 ft² / US gal
to 285 ft² / US gal)
at 6 mils to 8 mils w.f.t.

Topcoat:

Sikafloor®-2002
or Sikafloor®-217

2 m²/L to 4 m²/L (80 ft² / US gal to 160
ft²/ US gal)
at 10 mils to 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 complete coverage of surfaces. Test sections are recommended to establish correct coverage.

Product Temperature

Condition products between 18 °C to 24 °C (65 °F to 75 °F)

Ambient Air Temperature

Minimum 10 °C (50 °F) Maximum 30 °C (86 °F)

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).
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.

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 on mechanically-prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 4). If moisture content of concrete substrate exceeds 4 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA or Sikafloor® 22NA or 24 NA PurCem®. 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 or Sikafloor® 22NA or 24 NA PurCem®. ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above. 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.

Pot Life	Users should refer to the most recent individual resin component product data sheet for specific "Pot Life" information by product.		
Curing Time	Users should refer to the most recent individual resin component product data sheet for specific "Cure Time" and "Waiting Time to Overcoating" information by product.		
Applied Product Ready for Use	<u>Foot Traffic</u>	<u>~12 hours</u>	at 23 °C (73 °F)
	<u>Light Traffic</u>	<u>~3 days</u>	
	<u>Full Cure /</u>	<u>~7 days</u>	
	<u>Chemical Exposure</u>		
Curing times will vary according to air and substrate temperatures and relative humidity. Freshly applied material should be protected from dampness, condensation and water for at least 72 hours. Mechanical, chemical and physical properties will be fully achieved at full cure.			

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 (1) 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.
- Not suitable for exterior direct sunlight exposure; use for interior walls and floors only.
- 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.

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 matters, coatings and deleterious material from the surface by any appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3-4. The compressive strength of the concrete 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 coat.

MIXING

Primer /Screed Mortar Resin /Grout Coat /Topcoat

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

Pre-stir Components A and B separately, making sure all solids, are evenly distributed and uniform consistencies are achieved within each individual Component. Into a clean and suitably sized mixing vessel, measure and empty Component B in the correct mix ratio to Component A (see individual Product Data Sheets for specific product mix ratio information). 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. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. The combined Sikafloor® liquids should be uniform in colour and consistency. Mix only that quantity which can be used within its pot life at actual job site temperature.

Screed Mortar

Transfer the mixed Sikafloor®-156CA binder (Components A+B) into a suitable Kol type mixer; incorporating a motor spun mixing pail and a shear angle mixing blade. Gradually add Sikafloor® Trowel Quartz Aggregate to the binder to avoid excessive air entrapment. Once all ingredients are combined, mix continuously and thoroughly for three (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 to ensure complete blending of all components. Mix only that quantity which can be used within its pot life at actual job site temperature.

APPLICATION

Prime Coat: Apply the Sikafloor®-156CA primer using a squeegee and backroll to achieve uniform coverage.

Important: Mortar must be placed onto wet primer, if the primer becomes tack-free, re-prime the substrate.

Screed Mortar: Maintain all control joints and expansion joints through the screed where movement is expected. Place Sikafloor® Trowel Quartz Mortar onto the wet Sikafloor®-156CA primer and uniformly spread to desired thickness. Allow loose mortar to stand for a few minutes to permit entrapped air to escape. Using a non-marking stainless steel finishing trowel, uniformly compact and smooth the surface. Screed around drains, at elevation changes or terminations must be folded into squared and keyed recesses to maintain a minimum 3 - 6 mm (1/8 - 1/4 in) thickness. **Note: Do not feather edge.**

Grout Coat: Allow mortar to cure sufficiently, to support foot traffic without damaging the surface; then apply one or two grout coats, using Sikafloor®-2002 or Sikafloor®-217 to fill and seal the pores, without ponding. Allow grout coat to cure properly, sanding lightly to remove imperfections between coats when

necessary. Remove all sanding debris using an industrial vacuum. Second grout coat may not be necessary if aggregate mix is more resinous and/or has been well compacted by trowel. The grout coat should fill and seal the screed mortar and leave a thin film on the surface.

Topcoat: After grout coat has hardened sufficiently, sand lightly to remove imperfections. Remove all sanding debris using an industrial vacuum. Apply Sikafloor®-2002 or Sikafloor®-217 topcoat using a non-marking squeegee or flexible steel trowel, followed by backrolling to provide a uniform texture and gloss finish. Refer to specific product data sheet for further details.

Optional Topcoats: can be applied to change the surface sheen and improve long term UV resistance to colour change; Sikafloor®-317 UV will produce a matte appearance, Sikafloor®-315 plus optional Part C Wear Aggregate will produce a semi-gloss fine aggregate-textured finish. Sika Canada strongly recommends that a test area be applied to confirm specific top coat selection and application rates required to produce the desired final appearance.

CLEAN UP

Clean all tools and equipment with Sika® Epoxy 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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