



PRODUCT DATA SHEET

Sikafloor® Quartzite Broadcast System

DECORATIVE EPOXY MULTICOLOURED QUARTZ BROADCAST FINISH



PRODUCT DESCRIPTION

Sikafloor® Quartzite Broadcast System is a seamless, aesthetic, 3 mm (1/8 in) thick, broadcast, and sealed epoxy floor, composed of multicoloured quartz aggregates finished with transparent topcoats. The system provides a durable, impermeable, lightly textured 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 Broadcast 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

- 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, safer, and 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 topcoats
- 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 (2.6 US gal. and 7.9 US gal.) units
	Sikafloor® Broadcast Quartz Aggregate	22.7 kg (50 lb) bag
	Sikafloor®-2002 or	10 L and 30 L (2.6 US gal. and 7.9 US gal.) units
	Sikafloor®-217	10 L and 30 L (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 Broadcast 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	~51.8 MPa (~7511 psi)	(ASTM C579)
Tensile Strength in Flexure	~15.9 MPa (~2306 psi)	(ASTM C580)
Tensile Strength	~9.2 MPa (~1334 psi)	(ASTM C307)
Modulus of Elasticity in Tension	~4897 MPa (~710 065 psi)	(ASTM C580)
Pull-Off Strength	> 2.7 MPa (> 400 psi) (100% concrete failure)	(ASTM D7234)
Coefficient of Friction	~0.61 Wet	Sikafloor® 2002 topcoat at 15 mils (ANSI A137.1 / ANSI A326.3)
	~0.59 Wet	Sikafloor® 2002 topcoat at 15 mils + optional matte topcoat - Sikafloor® 317 UV at 2 mils DCOF - BOT 3000e
	~0.51 Wet	Sikafloor® 2002 topcoat at 15 mils + optional glossy topcoat - Sikafloor® Duochem 942 at 4 mils
	NOTE: For additional information please refer to DCOF bullet point listed under "Important Considerations".	
Service Temperature	Minimum ~0 °C (~32 °F) Maximum ~50 °C (~122 °F)	

Water Absorption	24 hours immersion	~0.05 %	(ASTM D570)
	7 days immersion	~0.19 %	
	2 hours immersion in boiling water	~-0.02 %	
Chemical Resistance	Consult Sika Canada		
Resistance to Fire	self-extinguish	(ASTM D635)	

APPLICATION INFORMATION

Consumption	Primer:		
	Sikafloor®-156CA		4 m ² /L (160 ft ² /US gal.) at 10 mils w.f.t.
	1st Broadcast:		
	Sikafloor®-156CA		2.6 m ² /L (106 ft ² /US gal.) at 15 mils w.f.t.
	Sikafloor® Broadcast Quartz Aggregate		3 kg/m ² (60 lb/100 ft ²)
	2nd Broadcast:		
	Sikafloor®-156CA		2.0 m ² /L (80 ft ² /US gal.) at 20 mils w.f.t.)
	Sikafloor® Broadcast Quartz Aggregate		4 kg/m ² (80 lb/100 ft ²)
	Topcoat:		
	Sikafloor®-2002 or Sikafloor®-217		2 to 4 m ² /L (80 to 160 ft ² /US gal.) at 10 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	Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
	10 °C (50 °F)	~24 hours	~3 days	~10 days
	20 °C (68 °F)	~8 hours	~2 days	~7 days
	30 °C (86 °F)	~6 hours	~36 hours	~4 days

Final system "ready for use" cure times above are for a double broadcast system using component products detailed under the "Consumption" section of this product data sheet. 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.
- 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 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 prime coat.

MIXING

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. 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. 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. Upon completion of mixing, Sikafloor®-156CA / Sikafloor®-2002 or Sikafloor®-217 should be uniform in colour and consistency.

Do not mix more material than can be applied within the

working time limits (i.e. Pot Life) at the actual field temperature.

APPLICATION

Primer: Apply neat Sikafloor®-156CA over the prepared concrete slab as a primer using a brush, roller, or squeegee at a uniform coverage without ponding. Allow primer to cure sufficiently to be able to resist foot traffic without damaging the surface.

1st Broadcast: When the primer coat has cured sufficiently to allow foot traffic, apply a neat broadcast binder coat of Sikafloor®-156CA by squeegee and backroll immediately with a roller to provide a uniform surface. Broadcast pre-blended Sikafloor® Broadcast Quartz Aggregates into the wet Sikafloor®-156CA binder, to "saturation". Broadcast in a manner so that the aggregate falls vertically into the binder. Allow the 1st broadcast layer to cure sufficiently to be able to resist foot traffic, without damaging the surface, before proceeding with the second broadcast application.

2nd Broadcast: Remove excess aggregates from the 1st broadcast layer by sweeping up, followed by vacuuming until the surface is free of all loose particles and dust. When necessary, lightly abrade the surface to remove imperfections after sweeping up aggregate and before final vacuuming. Apply a neat broadcast binder coat of Sikafloor®-156CA using a squeegee and backroll immediately with a roller to provide a uniform surface. Broadcast preblended Sikafloor® Broadcast Quartz Aggregates into the wet binder to "rejection". Broadcast in a manner so that aggregate falls vertically into the binder. Allow the 2nd broadcast layer to cure sufficiently to be able to resist foot traffic, without damaging the surface, before proceeding with the top coat.

Topcoat: Remove excess aggregates from the 2nd broadcast layer by sweeping up, followed by vacuuming until the surface is free of all loose particles and dust. Note: When necessary, lightly abrade the surface to remove imperfections after sweeping up aggregate and before final vacuuming. 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.

Note: The final surface texture and glossy appearance of the finished floor is highly dependent upon the specific application rate of the Sikafloor®-2002 or Sikafloor®-217 topcoat. Application at 10 mils will produce a medium texture with good gloss; application at 20 mils will produce a fine texture with a high gloss appearance.

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 and Sikafloor® 942 will produce a high-gloss 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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Product Data Sheet

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