



PRODUCT DATA SHEET

Edition 12.2020/v1
CSC Master Format™ 09 67 26
QUARTZ FLOORING

Sikafloor® Quartzite® Trowel System

DECORATIVE EPOXY MULTICOLOURED QUARTZ TROWEL FINISH

Description	Sikafloor® Quartzite Trowel System is a seamless, aesthetic, 3 - 6 mm (1/8 - 1/4 in) thick, trowelled and sealed epoxy floor, composed of multicoloured quartz aggregates finished with transparent top coats. The system provides a durable, impermeable finish with superior mechanical and chemical resistance. Final surface appearance options include: 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	<ul style="list-style-type: none"> ▪ Grocery stores. ▪ Food packing rooms. ▪ Commercial kitchens. ▪ Department stores. ▪ Factories. ▪ Pharmaceutical laboratories and offices. ▪ Hospitals, laboratories and health care facilities. ▪ Museums and galleries. ▪ Banks, office and government buildings. ▪ Recreational facilities, change rooms and showers
Advantages	<ul style="list-style-type: none"> ▪ Rejuvenates existing or protects new concrete. ▪ Superior mechanical and chemical resistance. ▪ Durable, Impermeable and seamless. ▪ Provides a cleaner, safer and more sanitary work environment. ▪ Does not support growth of bacteria or fungus. ▪ Low maintenance, high density prevents dirt penetration, which provides easy cleaning. ▪ Low odour / low VOC. ▪ Variable surface texture to produce a range of slip-resistant improved traction finishes. ▪ Glossy superior aesthetic finish. ▪ Optional satin or matte surface sheen top coats. ▪ Integral cove base and curbs can be prepared without seams or joints. ▪ Optional crack bridging, flexible membrane available. ▪ Available in 12 standard colour patterns. ▪ 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	<p>Sikafloor®-156^{CA} 10 L (2.6 US gal.) and 30 L (7.9 US gal.) units</p> <p>Sikafloor® Trowel Quartz Aggregate 22.7 kg (50 lb.) bag</p> <p>Sikafloor® Duochem-9200 28.35 L (7.48 US gal.) unit</p> <p>Sikafloor®-2002 10 L (2.6 US gal.) and 30 L (7.9 US gal.) units</p>
Colour	12 standard colour patterns, see Sikafloor® Quartzite® Colour Guide (custom colour blends available on request)
Yield	
Primer	Sikafloor®-156^{CA} 4 m ² /L (160 ft ² /US gal.) at 10 mils w.f.t.
Mortar	Sikafloor®-156^{CA} Mix one 10 L (2.6 US gal.) unit of Sikafloor®-156 ^{CA} with 80 kg (176 lb) of Sikafloor® Trowel Quartz Aggregate. This will yield 55 L (1.9 ft ³) of Sikafloor® Trowel Quartz mortar. Applied 3 mm (1/8 in) thick, this will provide coverage of 18 m ² (195 ft ²). Applied 6 mm (1/4 in) thick, this will provide coverage of 9 m ² (97 ft ²).
Grout Coat	Sikafloor® Duochem-9200 5 - 7 m ² /L (203 - 285 ft ² / US gal) at 6 - 8 mils w.f.t.
Top Coat	Sikafloor®-2002 2 - 4 m ² /L (80 - 160 ft ² / US gal.) at 10 - 20 mils w.f.t. NOTE: Yield and coverage figures provided above do not allow for surface profile, porosity or wastage
Shelf Life	2 years for resins in original unopened packaging. Store dry between 5 and 32 °C (41 and 89 °F). Condition product between 18 and 30 °C (65 and 86 °F) before using.

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

Service Temperature	(min. / max.) 0 °C / 50 °C (32 °F / 122 °F)
Drying Times	Refer to Sikafloor®-156 ^{CA} , Sikafloor® Duochem-9200 and Sikafloor®-2002 product data sheets
Cure Time (completed system)	
Foot Traffic	~ 12 hour
Light Traffic	~ 3 days
Normal Traffic	~ 7 days
Chemical Exposure	~ 7 days
<i>Drying times will vary according to air and substrate temperature and humidity.</i>	
Shore D Hardness ASTM D2240	~ 85
Compressive Strength ASTM C579	
5-6 mm/minute	~ 47.8 MPa (6931 psi)
Tensile Strength ASTM C307	
5-6 mm/minute	~ 6.7 MPa (972 psi)
Flexural Strength ASTM C580	
22.9 cm (9 in) at 3.4 mm/min	~ 11.1 MPa (1610 psi)
Modulus of Elasticity in Flexion ASTM C580	
22.9 cm (9 in) at 3.4 mm/min	~ 4296 MPa (622 920 psi)
Pull-off Strength ASTM D7234	> 4.9 MPa (> 609 psi) (100% concrete failure)
Flammability ASTM D635	Self-extinguish
Water Permeability and Absorption ASTM D570	
24 hours permeability	~ 2.1 g/m ²
24 hours immersion	~ 0.18 %
7 days immersion	~ 0.30 %
2 hours immersion in boiling water	~ 1.74 %
VOC Content	< 25 g/L
Chemical Resistance	Consult Sika Canada

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 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®-156^{CA}.

Mixing**Prime Coat - Screed Mortar Resin- Grout Coat and Top Coat**

Pre-stir each component separately. 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.

Screed Mortar

Transfer the mixed Sikafloor®-156^{CA} 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 (Component C) 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.

Application

Prime Coat: Apply the Sikafloor®-156^{CA} primer using a squeegee and backroll to achieve uniform coverage. **Note:** 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®-156^{CA} 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®-9200 resin (A + B) 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.

Top Coat: After grout coat has hardened sufficiently, sand lightly to remove imperfections. Remove all sanding debris using an industrial vacuum. Apply Sikafloor®-2002 top coat 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.

Application continued...	Optional Top Coats: 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®-318 UV will produce a satin 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.
Limitations	<ul style="list-style-type: none"> ▪ Sikafloor® Quartzite® Trowel System is best installed by experienced applicators. Consult Sika Canada Technical Sales 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 - 4). 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. ▪ 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 the 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 surfaceimperfections and other defects.

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.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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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