BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
Edition 10.2019/v2
CSC Master Format™ 09 66 23,16
EPOXY-RESIN TERRAZZO FLOORING

Sikafloor® Terrazzo

LOW VOC, LOW ODOUR, PIGMENTED EPOXY RESIN BINDER FOR THIN-SET TERRAZZO FLOOR SYSTEMS 6 - 9 MM (1/4 - 3/8 IN)

Description

Sikafloor® Terrazzo is a two-component, solid colour, low VOC, low odour, self-priming, thin-set epoxy resin binder available in an unlimited colour selection. Vibrant epoxy matrix colours can be combined in varying percentages with fine and or coarse mineral aggregates (marble or granite), coloured or recycled glass, mirror particles, plastic chips and non-corrosive metal fragments to produce limitless custom design options. Sikafloor® Terrazzo is an extremely durable seamless finish that has excellent resistance to abrasion and common chemicals. The finished surface can be top-coated with Sikafloor® Duochem-305, a one-part visually enhancing acrylic glaze coat/sealer, or Sikafloor® Duochem-942 or Sikafloor®-315 N two-part polyurethane coatings for improved chemical resistance.

Where to Use

Sikafloor® Terrazzo is the ideal choice to provide extreme durability and easy of maintenance in heavy traffic commercial and institutional areas such as hospitals, pharmaceutical research centres, schools, banks, building lobbies, shopping centres, grocery stores, airport terminals, train stations, convention centres and casinos.

Advantages

- Meets the Terrazzo, Tile and Marble Association of Canada (TTMAC) and the National Terrazzo and Mosaic Association (NTMA) standards for epoxy terrazzo
- Unmatched design versatility with custom capabilities
- Thin set for easy jointing with adjacent floor finishes
- Lightweight to reduce loading on floors
- Seamless, waterproof and easy to clean and maintain
- Exceptional abrasion resistance and durability
- Unlimited colours, no minimum required
- Potential of contribution towards LEED®v4 credits. Contact Sika Canada.
- Very low life cycle costs compared to other floor finishes
- Meets CFIA and USDA requirements for use in food plants

Technical Data

Packaging	20.15 L (5.3 US gal.) unit
Colour	White. Custom colours available on request. Refer to current price list for availability.
Yield (Approximate)	0.3 m^2/L (12 ft^2/US gal.) at 6 mm (1/4 in), 0.2 m^2/L (8 ft^2/US gal.) at 9 mm (3/8 in) thick, when filled as recommended.
Shelf Life	1 year in original, unopened containers. Store and transport dry at temperatures between 5 and 32 °C (41 and 89 °F). Condition product between 18 and 26 °C (65 and 80°F) before using.

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

Pot Life, 250 g (8.8 oz)	~ 50 minutes (unfilled)
Drying Times	
Cure Time	18 - 24 hours prior to grinding
Complete Cure	7 days at 21 °C (70 °F)
Drying times will vary according to air and substrate temperature and humidity.	
Tensile Strength ASTM-D638 (A+B)	~ 31.2 Mpa (4530 psi)
Flexural Modulus of Elasticity ASTM C580	~ 10,375 Mpa (1,504,767 psi)
Water Absorption ASTM C413	~ 0.037 %
Coefficient of Thermal Expansion ASTM D696	~ 2 x $10e^{-5}$ mm/mm/°C (11.1 X $10e^{-6}$ in/in/°F)
Indentation Mil D31134	< 1 %
Abrasion ASTM DS4060 (CS-17 1000 g/1000 rot)	~ 0.19 g loss
Hardness Shore D ASTM D2240	83 - 85
Thermal Compatibility ASTM C884	Pass
Compressive Strength ASTM C579	> 68.94 MPa (10 000 psi)
Pull-Off Strength ASTM D7234	
On concrete	> 2 MPa (290 psi) substrate failure
VOC Content	< 50 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

General Requirements: Surfaces must be dry, clean, sound and frost-free, with contaminants detrimental to bond removed.

Concrete: The concrete surface must be dry, clean and sound. Remove any dust, laitance, oil, dirt, curing agent, impregnations, wax, foreign matter, coatings and disintegrated material from the surface by any appropriate mechanical means, in order to achieve a profile equivalent to ICRI / CSP 3 - 6. The compressive strength of the 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® Terrazzo.

Metal: Prepare steel substrates by appropriate mechanical means, such as abrasive blast-cleaning or mechanical wire brushing, in order to achieve clean, dry white metal profile equivalent to SSPC-SP10, Near White Metal, 2 to 4 mil anchor profile and apply materials immediately, before oxidation of the steel occurs.

Plywood: The plywood surface must be clean and sound. Remove any dust, friable wood, grease, oil, dirt, impregnations, wax, foreign matter, coatings and deleterious material from the surface by appropriate means. Plywood sub-floors should consists of at least two (2) layers of well secured or bonded, exterior grade plywood, a minimum of 32 mm (1.25 in) in thickness and meet, as a minimum, the deflection parameters of L/360 (live and dead loads taken into consideration).

Mix Design

Sikafloor® Terrazzo epoxy matrix can be combined with a wide range of fine and coarse mineral aggregate chips (marble or granite), coloured or recycled glass, mirror particles, plastic and non-corrosive metal fragments. The inherent characteristics of the selected aggregate chips; weight / density, resin absorption, size, shape, colour and amount of uncontrolled dust in these aggregates can all significantly affect the application properties, coverage rate achieved and final appearance.

The applicator's preferred installation technique (slurry and broadcast or traditional screed and trowel) methodology will determine an individual contractor's preference for thixotropy. The addition rate of marble dust is variable as it absorbs resin, thickening the matrix, allowing the applicator to make adjustments to meet their specific application technique or site environmental conditions. Due to the wide variety of aggregate chips used to create an unlimited design pallet, it is impractical to produce a single specific mix design that will meet the needs of all parties involved.

The Sikafloor® Terrazzo mix design provided below is a starting point that requires further refinement. It is the responsibility of the terrazzo applicator to conduct additional project specific mix design mock-ups, to finalize adjustments to the mix to achieve an acceptable final appearance, establish production rates, predict pinhole frequency and finalize aggregate and epoxy consumption.

Sikafloor® Terrazzo Matrix	20.15 L (5.3 US gal.)
Marble Dust	2.5 - 12 kg (5.5- 26.4 lb)
Marble Chips blended (#0 & #1)	60 - 72 kg (132 -159 lb)

Alternative aggregate chips types, i.e. glass, plastic and non-corrosive metal can be incorporated into the mix design, consult Sika Canada for advice.

Mixing

Precondition material for at least 24 hours to temperatures between 18 and 26 °C (65 and 80 °F) before use to assist application and achieve the best results.

Pre-stir thoroughly each component to ensure that any soft settled material is mixed back into suspension and all solids and pigments are evenly distributed. Uniform colour and consistency must be achieved within each component.

Where supply format permits, empty Component B into Component A. Alternatively and in the correct ratio of 3:1 by volume Component A: Component B, empty material into a suitably sized and clean mixing vessel and thoroughly mix using a low-speed drill (300 - 450 rpm) and *Exomixer*®-type mixing-paddle (recommended model). To minimize entrapping air, ensure mixing paddle is kept immersed in the material during mixing.

To the 20.15 L (5.3 US gal.) mixed unit, slowly add marble dust filler and selected aggregate chips. During the mixing operation, scrape down the sides and bottom of the pail with a flat or straight-edge trowel at least once to ensure thorough mixing. When completely mixed Sikafloor® Terrazzo should be uniform in colour, aggregate chips should be thoroughly wetted out and the consistency should be homogeneous before use.

Mix only the quantity you can use within its pot life.

Application

As Sikafloor® Terrazzo are formulated to be resin rich, priming of substrates is not usually necessary under typical circumstances. However, due to variations in concrete quality, surface conditions, surface preparation and ambient conditions, reference test areas are recommended to determine whether priming is required.

Pour Sikafloor® Terrazzo onto the floor, immediately spread and compact the mortar to the desired thickness using a 75 mm (3 in) wide steel trowel. Take care to spread newly mixed materials across the transition of previous applied mixes before the surface begins to set.

Allow the applied terrazzo to cure for 18 hours at 23 °C (73 °F) before initiating the grinding operation.

Once sufficiently set and grinding operations are complete, Sikafloor® Terrazzo can be sealed with Sikafloor® Duochem-305 for aesthetic improvement or Sikafloor® Duochem-942 for increased chemical resistance (refer to separate Product Data Sheet).

Clean Up

Clean all tools and equipment with Sika® Epoxy Cleaner. One cured, product can only be removed mechanically. Wash hands and skin thoroughly with hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Sikafloor® Terrazzo is best installed by skilled and experienced applicators. Consult Sika Canada for advice and recommendations.
- Minimum/Maximum substrate temperature: 15 °C / 30 °C (60 °F / 85 °F).
- High temperature and high humidity will reduce pot life and accelerate curing.
- Maximum ambient relative humidity: 85 %.
- Do not apply to concrete if measured air or substrate temperature is within 3 °C (5 °F) of surface temperature calculated dew point (substrate temperature can be lower that the ambient temperature). This will reduce the risk of condensation, which can lead to adhesion failure or blushing of the floor finish.
- Substrate Moisture Content: Moisture content of concrete substrate must not exceed 4 % by mass (pbw – part by weight) as measured with Tramex® moisture meter (as per ASTM F2659) on mechanically-prepared concrete surface according to this datasheet (see preparation section).
- If moisture content of concrete substrate is 4 - 6 % by mass (pbw – part by weight) as measured with Tramex® moisture meter (ASTM F2659), use appropriate moisture tolerant primer such as Sikafloor®-1610. Where it exceeds 6 %, use Sikafloor®-81 or -82 EpoCem®CA as a temporary moisture barrier during application.
- Just prior to application, confirm substrate moisture content, ambient relative humidity, and dew point. During installation, confirm above values at least twice every six (6) hours.
- Do not apply to porous surfaces where significant moisture vapour transmission (out-gassing) will occur during application.
- Do not apply to polymer modified cement mortars (PCC) that may expand when sealed with an impervious resin.
- Do not apply to cracked or unsound substrates.
- 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.
- Do not use on exterior, on-grade substrates; for interior use only.
- Do not apply to surfaces where moisture vapour can condense and freeze.
- Precondition material for at least 24 hours to between 18 to 26 °C (65 to 80 °F) before use to assist application and achieve the best results.
- On no account should this product be thinned. Addition of thinners (eg solvent or water) will retard the cure, reduce the ultimate properties of this product and void any applicable Sika warranty.
- Do not mix Sikafloor® materials by hand: mechanical mix only.
- It is recommended, when installing over concrete substrates, to install Sikafloor® Terrazzo during steady or declining ambient temperatures to minimize the risk of concrete outgassing. Concrete outgassing may result in pinholing of the Sikafloor® Terrazzo.
- 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 vapor drive.

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

SIKA CANADA INC.
Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

Certified ISO 9001 (CERT-0102780)
Certified ISO 14001 (CERT-0102791)