



Product Data Sheet

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FLUID-APPLIED FLOORING

Sikafloor® Duochem-942

HIGH-GLOSS, ABRASION AND UV RESISTANT, SMOOTH URETHANE COATING FOR FLOORS AND WALLS

Description	Sikafloor® Duochem-942 is a two-component, clear or coloured, smooth aliphatic urethane coating specifically formulated to provide abrasion- and UV-resistance to floors and walls.
Where to Use	<ul style="list-style-type: none"> ▪ Sikafloor® Duochem-942 is suitable for a wide range of applications requiring outstanding protective properties, including resistance to abrasion and corrosive environments. ▪ Use where a high-gloss finish, exhibiting excellent clarity or colour retention is needed. ▪ Use as an abrasion resistant and high gloss, easy to clean wall coating (consult Sika Canada for guidance). ▪ Sikafloor® Duochem-942 can be used as a decorative, thin-film sealer on concrete, steel, hard wood and existing epoxy floor surfaces to improve gloss and colour retention and long-term wear resistance.
Advantages	<ul style="list-style-type: none"> ▪ Excellent hiding properties in pigmented version. ▪ Gloss retention in clear and coloured versions. ▪ Ultra violet light-resistant, non-yellowing. ▪ High resistance to abrasion and wear. ▪ Good chemical-resistance, especially within corrosive environments. ▪ Forms hard yet flexible film. ▪ Provides improved impact-resistance. ▪ Convenient 2 : 1 mixing ratio. ▪ Enhanced stain-resistance. ▪ Easy to clean and maintain. ▪ Meets the requirements of CFIA and USDA for use in food plants.
Technical Data	<p>Packaging 11.34 L (3 US gal.) units</p> <p>Colour Clear (gloss, matte or satin), Special colours on request (gloss only).</p> <p>Yield</p> <p>Primer Sikafloor® Duochem-9205 4 m²/L (165 ft²/US gal.) at 10 mils d.f.t. per coat.</p> <p>Finish Coat Sikafloor® Duochem-942 9.5 - 10 m²/L (385 - 405 ft²/US gal.) at 4 mils w.f.t. / 2.3 mils d.f.t. per coat. Two (2) coats recommended.</p> <p>Thinning Solvent: Sika Urethane Thinner and Cleaner - maximum 10 % by volume (if required). (100 mL/L - 12.8 oz/US gal.) contact Sika Technical Services for additional information. <i>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 (ie white) or bright colours (i.e. reds and yellows) and dark substrates. Test sections are recommended to establish correct coverage</i></p> <p>Shelf Life 1 year in original, unopened packaging. Store and transport dry at 5 - 32 °C (41 - 89 °F). Condition product between 18 - 30 °C (65 - 86 °F) before using.</p> <p>Mix Ratio A : B = 2 : 1 by volume</p> <p>Pot Life ~ 2 hours at 21 °C (70 °F)</p> <p>Properties at 23 °C (73 °F) and 50 % R.H.</p> <p>Solids Content (by volume)</p> <p>Clear ~ 60 %</p> <p>Coloured ~ 65 % (Dependent upon colour)</p> <p>Waiting / Recoat Times</p> <p>Tack-free ~ 2 hours</p> <p>Recoat time ~ 8 - 24 hours</p> <p>Foot traffic ~ 24 hours</p> <p>Full cure ~ 5 - 7 days</p> <p><i>Drying times will vary according to air and substrate temperature and humidity.</i></p>

Tensile Strength ASTM D638, Type IV	~ 37.2 MPa (5400 psi)
Elongation at Break ASTM D638, Type IV	~ 6.2 %
Abrasion Resistance ASTM D4060 Taber Abraser, CS-17 Wheel/ 1000 g (2.2 lb)/1000 cycles	~ 82 mg loss
Pull-off Strength ASTM D7234 Concrete (Epoxy sealed)	> 5.8 MPa (> 840 psi) (concrete failure)
Water Vapour Transmission ASTM E96 Water procedure B / Film 0.01 cm (0.004")	~ 0.48 g/h/m ²
Permeance ASTM E96 Water procedure B	~1 perm
Fire Rating CAN/ULC S102 (estimated on similar coating)	
Flame spread	~ 5
Smoke developed	~ 94
Dynamic Coefficient of Friction (DCOF) ANSI A137.1 / BOT 3000e	~ 0.23 Wet (smooth high gloss) ~ 0.97 Dry (smooth high gloss)
VOC Content	< 240 g/L
Chemical Resistance	Contact 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 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 - 4 for floors or ICRI/CSP 2 - 3 for walls. 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 the Sikafloor® Duochem-9205 (Primer) or epoxy flooring. Epoxy or polyurethane coatings that have exceeded their overcoating time must be sanded and wiped with a solvent-moistened rag prior to Sikafloor® Duochem-942 application.

Mixing

Pre-stir each component to ensure all solids are evenly distributed and even colours and consistencies are achieved within each component. Where supply format permits, empty Component B into A or, in the ratio of 2 : 1 by volume Component A: Component B, empty material into a suitably sized and clean mixing vessel and thoroughly mix for three (3) minutes using a low-speed drill (300 - 450 rpm) fitted with an *Exomixer*® type mixing-paddle (recommended model). To minimize entrapping air, ensure mixing paddle is kept in the material. 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. Sikafloor® Duochem-942 should be uniform in colour or clarity and consistency before use. Mix only the quantity you can use within its pot life.

Application

Primer: Apply Sikafloor® Duochem-9205 over the slab as a primer using a notched squeegee and/or roller at a uniform coverage rate of approximately 4 m²/L (165 ft²/US gal.) without ponding. Allow the primer to cure for 12 hours at 23 °C (73 °F) before applying Sikafloor® Duochem-942.

Finish Coat: Sikafloor® Duochem-942 may be applied using conventional or airless spray, high quality, short nap rollers (lint-free), natural bristled brush or squeegee and backrolled. Waiting time between coats will be approximately 8 - 24 hours dependent upon temperatures.

Clean Up

Wash soiled hands and skin thoroughly in hot, soapy water or use Sika® Hand Cleaner towels. Uncured material can be removed with Sika® Urethane Thinner and Cleaner. Cured materials (Component A combined with Component B) can only be removed mechanically.

Limitations

- Sikafloor® Duochem-942 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 (1) 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 > 4 % mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter.
- 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}. ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.
- Material Temperature: Precondition material for at least 24 hours between 18 to 24 °C (65 to 75 °F).
- Ambient and substrate temperature: Minimum/Maximum 16/30 °C (61/85 °F).
- Mixing and Application attempted at Material, Ambient and/or Substrate Temperature conditions lower than 18 °C (65 °F) will result in a decrease in product workability and slower cure rates.

- **Maximum ambient humidity** : 75 % (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. Pre-stir each component thoroughly and do not allow mixed material to stand and settle. Failure to pre-stir and keep product agitated will result in variation in gloss levels appearance and performance.
- Apply the coating to the properly prepared substrate which should be pore-free and pinhole-free. If necessary, apply an additional coat of a suitable material to ensure a substrate exempt of pores and pinholes and provides uniform and complete coverage over the entire substrate.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapor drive at the time of application. Refer to ASTM D4263 for a visual indication of vapour drive.
- Freshly applied material should be protected from dampness, condensation and water for at least 72 hours.
- Do not apply Sikafloor® products 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.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.)
- Mechanical, chemical & physical properties will be fully achieved at full cure.
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- Product is sensitive to moisture during storage and application. Once component B is opened, it must be used immediately.
- Not recommended for use on surfaces which will be immersed once in service.
- May be incompatible with certain epoxy coatings, contact Sika Canada for guidance before specifying or application.
- 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.

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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