



PRODUCT DATA SHEET

Sika® Duroplast 150

UV RESISTANT, LOW ODOUR, WATER-BASED, ANTIMICROBIAL, GLOSSY EPOXY WALL COATING

PRODUCT DESCRIPTION

Sika® Duroplast 150 is a two-part, low odour, fine-textured, pigmented, water-based epoxy wall coating. It produces a glossy durable, easy to clean ceramic-like finish on interior surfaces. Sika® Duroplast 150 demonstrates superior UV resistance to colour change compared to traditional epoxy coatings. Can be applied over properly prepared and primed, concrete masonry, common steel, or gypsum board substrates. It is fully compatible as a system component (body coat and or top coat) in all Sikagard® Duroplast epoxy wall coating systems.

WHERE TO USE

Sika® Duroplast 150 may only be used by experienced professionals.

Typical installation areas include:

- Hospitals and medical research facilities
- Pharmaceutical laboratories and production areas
- Veterinarian and animal holding areas
- Educational and recreational premises
- Prisons: holding cells, corridors, and showers
- Commercial kitchens and service corridors
- Food and beverage processing areas
- Packaging and storage areas
- Rest rooms, locker rooms and showers

PRODUCT INFORMATION

CSC MasterFormat®	09 96 00 HIGH-PERFORMANCE COATINGS
Packaging	18.9 L (5 US gal.) units
Shelf Life	1 year in original, unopened packaging under proper storage conditions.

CHARACTERISTICS / ADVANTAGES

- Durable seamless surface that is easily cleaned and maintained.
- Waterproof, suitable for wet in-service areas.
- Aesthetic, fine textured finish with excellent opacity and colour hiding capability.
- Superior resistance to UV colour change compared to other epoxy coatings.
- Good chemical and abrasion resistance.
- Low odour formulation suitable for application in occupied facilities.
- Fast recoat cure properties are ideal for shutdown or fast turnaround projects.
- Superior resistance to blushing during application and cure, even under severe conditions.
- Excellent resistance to Fungi and Microbiological growth.
- Chemical Resistance: Consult Sika Canada.

ENVIRONMENTAL INFORMATION

Potential LEED® Canada Credits

APPROVALS / CERTIFICATES

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

Storage Conditions	Store dry at temperatures between 5 °C to 32 °C (41 °F to 89 °F). Protect from freezing. If frozen, discard.
Colour	RAL 9016 Traffic White (Gloss, Satin or Matte) Custom colours available on request.
Solid content by volume	~50 %
Volatile organic compound (VOC) content	~138 g/L

TECHNICAL INFORMATION

Abrasion Resistance	~97 mg	(ASTM D4060) CS-17 /1000 g (2.2 lbs.)/1000 cycles
Tensile Strength	~15.5 MPa (~2247 psi)	(ASTM D638)
Pull-Off Strength	> 2.5 MPa (>363 psi) (substrate failure)	(ASTM D7234)
Water Vapour Transmission	~3.8 perm	(ASTM E96) Procedure B - water at ~3.8 mils d.f.t.
Chemical Resistance	Consult Sika® Canada	
Behaviour after Artificial Weathering	slight yellowing chaulking after 1 week	(ASTM G53) 12 weeks (UVB condensation)
Resistance to Fire	6 (FSR) Flame Spread Rating 52 (SDC) Smoke Developed Classification	(CAN/ULC S102)

APPLICATION INFORMATION

Mixing Ratio	A:B = 4:1 by volume
Thinner	cold water - maximum 5% by volume Always add the same quantity of water in order to minimize variations in colour and final finish.
Consumption	6.5 m ² /L to 9.8 m ² /L (265 ft ² /US gal to 400 ft ² /US gal) per coat (4 to 6 mil w.f.t.) (2 to 3 mil d.f.t.) Typically two coats are required, though on higher absorbency substrates additional coats may be required. Actual coverage rates and material consumption will depend upon porosity and profile of the substrate. Test areas are recommended to establish correct coverage rates.
Product Temperature	Condition product 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 75 % (during application and curing). Sika® Duroplast 150 should not be applied when the ambient air relative humidity is > 75% as curing times will be longer and water will be retained in the film reducing ultimate coating performance. Provide adequate fresh air ventilation to remove the excess moisture from the curing product.
Dew Point	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 finish. Be aware that the substrate temperature may be lower than the ambient air temperature.

Substrate Temperature

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

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 vapor drive.

Substrate Moisture Content

Maximum moisture content of all concrete substrates must be $\leq 4\%$ by mass (pbw - part by weight) when measured with a calibrated moisture meter for concrete (Tramex CME/CMEExpert). Masonry surfaces, gypsum board and plaster must be below 85 (green zone on the reference scale) when measured with a calibrated electronic moisture meter (Delmhorst Model BD-10).

Minimum age of concrete and masonry surfaces prior to application: 28 days (depending on curing and drying conditions).

Minimum age of SikaTop® or Sika MonoTop® mortar prior to application: three (3) days, depending on curing and drying conditions. Moisture content must be $\leq 4\%$ by mass (pbw - parts by weight) when measured with a calibrated moisture meter for concrete (Tramex CME/CMEExpert).

Pot Life

Material Temperature

23 °C (73 °F)

Time

~6 hours (250 g (8.8 oz))

NOTE: Do not apply after six (6) hours even if still liquid, as this will result in lower gloss, loss of chemical resistance and physical properties.

Curing Time

Substrate Temperature

23 °C (73 °F)

Touch dry

~4.5 hours

Full Cure

~7 days

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 24 hours.

Mechanical, chemical and physical properties will be fully achieved at full cure.

Waiting Time / Overcoating

Substrate Temperature

23 °C (73 °F)

Minimum

~6 hours

Maximum

~48 hours

Note: If the Waiting/ Recoat time has passed the previous coat must be lightly sanded, to remove all gloss; vacuum cleaning and solvent wiping will be necessary to remove all traces of dust. The surface should be a uniform dullness, with no gloss present after clean-up and before applying the next coat.

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 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.).

- Do not apply onto porous surfaces where moisture vapour transmission will occur during application.
- Direct-fired gas or kerosene heaters produce byproducts 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.
- Apply product to dry, clean, properly cured and prepared surfaces in areas where dust is no longer generated by construction activities such that airborne

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particles will not reduce bond of coating or adhere to the surface, affecting the quality of subsequently applied finishes.

- When over-coating existing coatings, compatibility and adhesion testing is recommended and existing coating must be acknowledged as determining the adhesion and performance of all subsequently applied materials.
- This product is not designed nor intended for negative side waterproofing.
- Improper mixing procedure or incorrect mixing ratio may result in moisture sensitivity, whitening, slow cure, soft spots, and other defects.
- Not recommended for use on surfaces which are exposed to highly corrosive chemicals or heavy wear.
- Surface may discolour in areas exposed to constant ultra violet light.
- Not suitable for use as a traffic bearing surface or as a roofing material.

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

General Substrate Requirements:

Substrates must be sound, clean and dry. Remove sand, dust, dirt, oil, grease, wax, silicone, glue and all other contaminants that may affect the bond of the applicable Sika® Duroplast 150. All substrates must be properly prepared, primed, sealed or filled using the applicable Sikagard® Duroplast product before application of Sika® Duroplast 150.

Recommended Primers:

Concrete masonry: Sikagard® Duroplast EE
Gypsum board: Sikagard® Duroplast PS
Common steel: Sikagard® Cor-Pro 470

IMPORTANT: Existing coatings must be removed unless extensive testing confirms compatibility of materials and it is accepted that the existing paint or high performance coating will determine the overall performance of the newly applied coating.

Gypsum Board:

To obtain a uniform finish the joint filler compound must be properly installed, finished and fully cured. Small defect, such as pinholes, ridges and fibre-lift, can become very apparent after finishing coats are applied. Some porous joint filler compounds may require an additional application of Sikagard® Duroplast PS to seal and prime the overall surface to a uniform appearance.

Gypsum board manufactured with recycled paper facings, may require additional preparation such as careful sanding and an additional coat of Sikagard® Duroplast PS primer/sealer to eliminate high suction spots.

Concrete Masonry:

Mortar joints shall be allowed to age for a minimum of 28 days prior to application of Sikagard® Duroplast EE blockfiller. Remove all traces of efflorescence, loose mortar, mortar spatters, residues, oxidation powder and any other foreign matter by scraping and wire brushing. Bug holes, cracks or irregularities should be filled and leveled with SikaTop® or Sika® MonoTop® mortars as appropriate. Consult Sika Canada Technical Services for recommendations.

Concrete Vertical Surfaces:

New concrete shall be allowed to age for a minimum of 28 days prior to application of Sikagard® Duroplast EE blockfiller. Formed concrete surfaces must have all traces of form release agent, bond breaker, curing compounds, laitance, oxidation powder and all other foreign matter removed from the surface. Prepare the concrete to produce an open textured, sandpaper-like finish and uniform surface (ICRI - CSP 1-2). Bug holes, cracks or irregularities should be filled and leveled with SikaTop® or Sika® MonoTop® mortars as appropriate. Consult Sika Canada Technical Services for recommendations.

Common Steel:

All steel to be coated must be dry, clean and stable before applying the coating. Remove all existing treatments such as coatings, sealers, wax, and contaminants i.e. dirt, dust, grease, oils, and foreign matter, which will interfere with the adhesion of Sikagard® Cor-Pro 470. Prepare steel substrates by appropriate mechanical means, such as abrasive blast-cleaning in order to achieve clean white metal profile equivalent to SSPC-SP10, Near White Metal, 2 to 4 mils anchor profile and apply primer immediately, before oxidation of the steel occurs.

MIXING

Mixing Ratio (A:B) = 4:1 by volume.

Do not hand mix Sikagard® Duroplast® resin materials; mechanically mix only. Pre-stir each component separately to ensure that all soft settling is dispersed, solids are evenly distributed and even colours and consistencies are achieved within each component. Empty Component B in the correct mix ratio to Component A into a suitably sized, clean mixing vessel. Mix the combined components for at least three (3) minutes, using a low-speed drill (200 - 300 rpm) fitted with an Exomixer® or Jiffy type mixing paddle suited to the volume of the mixing container, to minimize entrapped air. Be careful 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. When completely mixed, Sika® Duroplast 150 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

Sika® Duroplast 150 can be applied by brush, roller or spray equipment, whichever is the most suitable to the surfaces to be coated or site conditions and limitations. For spray applications, contact spray equipment specialists to determine suitable equipment and for application advise (thinning maybe required) contact Sika Canada.

Sika® Duroplast 150 must be applied in a workman-like manner using skilled and trade qualified applicators. The film thicknesses stated must be produced and complete coverage achieved. After application and prior to drying, remove masking tape in between each coat to avoid 'ripping' in the finished coating and let surfaces dry completely. Following cure of body coats, sand off any rough spots and visible defects with a fine sandpaper (120 -220 grit), then vacuum and wipe surface to remove all residual traces of sanding dust before the application of the final top coat.

CLEAN UP

Once hardened, product can only be removed mechanically. Clean tools and brushes with Sika® Epoxy Cleaner.

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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