



PRODUCT DATA SHEET

Sikagard® Duroplast EE

WATER-BASED EPOXY BLOCKFILLER USED TO FILL SURFACE IRREGULARITIES

PRODUCT DESCRIPTION

Sikagard® Duroplast EE is a two-part, high performance water-based epoxy blockfiller designed to prime and fill small pours and reduce surface irregularities on properly prepared walls and ceilings. It serves to fill voids on porous surfaces and improve both the adhesion and appearance of high quality Sikagard® Duroplast® finishes that will be exposed to high levels of moisture in-service.

WHERE TO USE

Sikagard® Duroplast EE may only be used by experienced professionals.

- Interior applications on wall and ceiling constructed from concrete block, masonry units, poured or precast concrete to obtain a filled surface profile.
- To provide superior bonding properties needed to support two-part epoxy and urethane finish coats in high abuse installation.
- To fill and seal walls and ceilings with variable absorption which might excessively absorb coatings.
- Wet and dry process areas subject to repeated cleaning such as; food and beverage processing plants, health care facilities, pharmaceutical, laboratories, animal care facilities, wash bays, locker and shower rooms.
- Used in new construction and maintenance work.

PRODUCT INFORMATION

CSC MasterFormat®	09 96 00 HIGH-PERFORMANCE COATINGS
Packaging	37.85 L (10 US gal.) units
Appearance / Colour	Off-white

CHARACTERISTICS / ADVANTAGES

- Material is convenient to proportion, 1:1 by volume resin to hardener ratio
- Low odour and low VOC
- Excellent bond and adhesion promotion
- Superior moisture resistance
- Good chemical resistance
- Good bridging and filling properties
- Good hiding capacity
- Provides a more uniform even surface to coat
- Fully compatible with Sikagard® Duroplast® finishes
- Clean-up with water

ENVIRONMENTAL INFORMATION

Potential of contribution towards LEED®v4 credits.
Contact Sika Canada.

APPROVALS / CERTIFICATES

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

Shelf Life	1 year in original unopened container.
Storage Conditions	Store dry at temperatures between 5 °C to 32 °C (41 °F to 89 °F). Protect from freezing. If frozen, discard. Precondition material for at least 24 hours between 18 °C to 30 °C (65 °F to 86 °F) before use.
Solid content by weight	~68 %
Solid content by volume	~50 %
Volatile organic compound (VOC) content	~65 g/L

APPLICATION INFORMATION

Mixing Ratio	A:B =1:1 by volume
Consumption	1.2 m ² /L to 2.0 m ² /L (50 ft ² /US gal to 80 ft ² /US gal.) per coat (33 mil w.f.t. to 20 mil w.f.t. / 16 mil d.f.t. to 10 mil d.f.t.) Typically one (1) coat is required, though on higher absorbency substrates a second coat may be required. Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Test areas are recommended to establish correct coverage rates.
Ambient Air Temperature	Minimum 10 °C (50 °F) Maximum 30 °C (86 °F). Ambient Air Relative Humidity: Maximum 85 % (during application & cure). NOTE: Application attempted at low ambient air or substrate temperatures and/or under high humidity conditions, will result in a decrease in product workability and slower cure rates.
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).
Substrate Moisture Content	Maximum moisture content of all concrete substrates must be ≤ 4 % by mass (pbw - part by weight) when measured with a calibrated moisture meter for concrete (Tramex CME/CMExpert). 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 ≤ 4 % by mass (pbw - parts by weight) when measured with a calibrated moisture meter for concrete (Tramex CME/CMExpert).
Pot Life	23 °C (73 °F) ~3 hours 250 g (8.8 oz)
Curing Time	Touch dry at 23 °C (73 °F) ~2 hours to ~3 hours Recoat time at 23 °C (73 °F) ~7 hours to ~9 hours Overcoat time at 23 °C (73 °F) ~24 hours to ~48 hours Full cure at 23 °C (73 °F) ~7 days Drying times will vary according to air and substrate temperature and relative humidity. Protect from dampness, condensation and water contact during the initial 24 hour cure period.

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 primer. 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 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 required 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 designed to function as an aesthetic treatment or final coating; must be overcoated with a finish.
- 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.

Product Data Sheet
Sikagard® Duroplast EE
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APPLICATION INSTRUCTIONS

SURFACE PREPARATION

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 Sikagard® Duroplast EE.

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.

Concrete Masonry:

Mortar joints shall be allowed to age for a minimum of 28 days prior to application of 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 levelled with SikaTop® or Sika® MonoTop® mortars as appropriate. Consult Sika Canada for recommendations.

Concrete Vertical Surfaces:

New concrete shall be allowed to age for a minimum of 28 days prior to application of the 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 levelled with SikaTop®, SikaRepair® or Sika® MonoTop® mortars as appropriate. Consult Sika Canada for recommendations.

MIXING

Mixing Ratio A:B =1:1 by volume

Do not hand mix Sikagard® Duroplast® resin materials: mechanical mix only.

Pre-stir each component separately to ensure that all soft settling is dispersed, solids are evenly distributed throughout and components are consistent within themselves.

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) to minimize entrapping air. Use an Exomixer® or Jiffy type mixing paddle (recommended model) suited to the volume of the mixing container. 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, Sikagard® Duroplast EE should be uniform in colour and consistency.

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Allow the mixed material to stand (induction time) for one (1) hour, then lightly remix to ensure uniformity before applying. Failure to do so will result in unsatisfactory performance.

Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.

APPLICATION

Sikagard® Duroplast EE can be applied by brush, roller or spray equipment, dependent on limitations and site conditions. If sprayed, the material must be back rolled/brushed to ensure good penetration of the blockfiller into the substrate.

Sikagard® Duroplast EE must be applied in a workmanlike manner using skilled and trade qualified applicators. The film thicknesses stated must be produced and complete coverage achieved (This condition may require a second coat).

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 blockfiller 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 body coats.

CLEAN UP

Clean tools and brushes with warm water and where required, detergent. 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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