



PRODUCT DATA SHEET

Sikagard® WDE Primer

MOISTURE INTENSIVE EPOXY RESIN

PRODUCT DESCRIPTION

Sikagard® WDE Primer is a two-component, high-solids and fast-curing epoxy resin, tolerant to substrate moisture < 6 % (p.b.w. – part by weight), as determined with Tramex® CM/E meter and capable of curing at temperatures down to 0 °C (32 °F).

WHERE TO USE

Sikagard® WDE Primer may only be used by experienced professionals.

- Sikagard® WDE Primer is used to prime and isolate concrete substrates prior to the application of Sikagard® CRV-20 and Sikagard® Duochem 7500 for chemical containment works.
- Sikagard® WDE Primer is also used as low temperature curing binder to produce high strength resurfacing mortars for use in such facilities as cold rooms.

CHARACTERISTICS / ADVANTAGES

- Moisture tolerant primer designed for application on new or refurbished interior concrete substrates with elevated levels of moisture.
- Versatile low viscosity, highly penetrative resin used as neat primer beneath smooth coatings, or as a broadcast primer for build-up systems.
- Cures down to 0°C (32°F), reducing need for hoarding and heating in some application.
- Fast-curing properties are ideal for shutdown or fast turnaround projects.
- Good resistance to a wide variety of chemicals, providing a secondary line of protection.
- Low VOC content and low odour.

APPROVALS / CERTIFICATES

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

PRODUCT INFORMATION

CSC MasterFormat®	09 67 23 (09 96 35) RESINOUS FLOORING
Packaging	Component A: 6 L (1.6 US gal.) Component B: 2 L (0.5 US gal.) Components A+B: 8 L (2.1 US gal.)
Shelf Life	2 years when stored in original, unopened packaging.
Storage Conditions	Store dry at temperatures between 5 °C to 32 °C (41 °F to 89 °F)
Appearance / Colour	Amber-Clear

Density	Specific Gravity:		
	Component A Resin ~1.12 kg/L (~9.34 lb/US gal.)	Component B Hardener ~1.05 kg/L (8.73 lb/US gal.)	Mixed Components A+B ~ 1.1 kg/L (9.19 lb/US gal.)
Viscosity	~900 cps (A+B mixed)		
Volatile organic compound (VOC) content	~0 g/L		

TECHNICAL INFORMATION

Shore D Hardness	~80	(ASTM D2240)
Pull-Off Strength	> 2.7 MPa (> 392 psi) (concrete failure)	
Service Temperature	Minimum 0 °C (32 °F) Maximum 50 °C (122 °F)	

APPLICATION INFORMATION

Mixing Ratio	A:B = 3:1 by volume
Consumption	4 m ² /L (160 ft ² /US gal.) per coat at 10 mils wft. Note: 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. Test sections are recommended to establish correct coverage.
Product Temperature	Condition product between 18 °C to 24 °C (65 °F to 75 °F) before use.
Ambient Air Temperature	Minimum 0 °C (32 °F) Maximum 30°C (86 °F)
Relative Air Humidity	Maximum 85 % (during application and curing)
Dew Point	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.
Substrate Temperature	Minimum 0 °C (32 °F) Maximum 30°C (86 °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.
Substrate Moisture Content	Moisture content of a concrete substrate must be < 6 % (pbw -part by weight) as measured with a Tramex® CME/CM Expert 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 6 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 6 % (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-81 EpoCem®CA or Sikafloor®-22 NA or -24 NA PurCem® on horizontal surfaces and Sikagard®-75 EpoCem®CA on walls and overhead applications. When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 90 %. If values exceed 90 % according to ASTM F2170, use Sikafloor®-81 EpoCem®CA or Sikafloor®-22 NA or -24 NA PurCem®. ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.

Pot Life**Material Temperature**

23 °C (73 °F)

Time

~8 minutes

Waiting Time / Overcoating**Products**

Sikagard® WDE Primer on Sikagard® WDE Primer

Application Type

Neat Sikagard® WDE Primer at 20 °C (68 °F)

Minimum

~6 hours

Maximum

~24 hours

Full Broadcast Sikagard® WDE Primer at 20 °C (68 °F)

~4 hours

indefinite

Full Broadcast Sikagard® WDE Primer at 10 °C (50 °F)

~10 hours

indefinite

Sikagard® CRV 20 on Sikagard® WDE Primer

Neat Sikagard® WDE Primer at 20 °C (68 °F)

~6 hours

~24 hours

Full Broadcast Sikagard® WDE Primer at 20 °C (68 °F)

~4 hours

indefinite

Sika® Epoxy Systems on Sikagard® WDE Primer

Neat Sikagard® WDE Primer at 0 °C (32 °F)

~24 hours

~48 hours

Note: If Neat Sikagard® WDE Primer Waiting / Overcoating 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.

Curing 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.

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

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 the following: 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 Sikagard® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikagard® 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 apply to polymer modified cement mortars (PCC) that may expand when sealed with an impervious resin.
- Any aggregate used with Sikagard® 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 onto porous surfaces where moisture vapour transmission will occur during application.
- Do not apply to surfaces where moisture vapour can condense and freeze.
- Direct-fired gas or kerosene heaters produce by-products 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.

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

The concrete surface must be dry, clean and sound. Remove all existing coatings, impregnations, wax films, curing grease, oil, dirt, curing agents, laitance, foreign matter or loose and disintegrated material from surface by appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3- 4. The strength of the substrate should be at least 25 MPa (3625 psi) at 28 days in compression and 1.5 MPa (218 psi) in tension at the time of Sikagard® WDE Primer application.

MIXING

Mix Ratio: A:B 3:1 by volume.

Do not hand mix Sikagard® materials. Mechanically mix only.

Do not thin this product. Addition of thinners (e.g. water, solvent, etc.) will slow cure and reduce ultimate properties of this product. Use of thinners will void any applicable Sika® warranty.

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. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin) or empty Component A into a suitably sized and clean pail and add Component B in the correct ratio. Blend the combined components thoroughly at low speed (300 - 450 rpm) for at least three (3) minutes using a drill fitted with an Exomixer® or Jiffy type paddle suited to the dimensions of the mixing container and keep the mixing paddle in the mix to minimize entrapped air. Take care 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, Sikagard® WDE Primer should be uniform in appearance and consistency. Mix only that quantity that can be applied within the working time limits (i.e. Pot Life) at actual field temperature.

APPLICATION

Sikagard® WDE Primer: The mixed resin should be applied at 4 m²/L (163 ft²/US gal.) using a brush or roller when used as a primer for other Sika products. When it is used as a first coat of a build up system it is normal to broadcast Bell and MacKenzie Flint Silica # 32 or # 505 Silica sand to saturation at a rate of 1 - 1.5 kg/m² (20 - 30 lb/100 ft²), allow cure and then vacuum off excess sand before proceeding.

Sikagard® WDE Primer Mortar: Prime the concrete with the Sikagard® WDE resin and apply mortar while still tacky. Mix 3.75 L (1 US gal.) Sikagard® WDE Primer with 2 x 20 kg (44 lb) Sika® Aggregate PT to provide a hand trowel mortar. Apply mortar in accordance with good epoxy mortar practice, placing mortar wet on wet onto the primer and spread the mortar to the appropriate thickness using a large wood float, rake or screed box. Using a float or stainless steel finishing trowel, uniformly compact and smooth the surface. At all times take into consideration the fast-cure nature of the binder.

CLEAN UP

Clean all tools and equipment immediately after use with Sika® Epoxy Cleaner. Once hardened, material 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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Product Data Sheet

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