

PRODUCT DATA SHEET

Sikagard[®]-616

VERSATILE EPOXY FOR USE AS A PRIMER, HIGH BUILD PROTECTIVE COATING AND FOR DECORATIVE QUARTZ AND FLAKE APPLICATION

PRODUCT DESCRIPTION

Sikagard[®]-616 is a 2 component, low odor, 100 % solids, epoxy resin coating system primarily designed for high build coatings and decorative quartz applications. Sikagard[®]-616 may be used as a clear primer.

USES

Sikagard[®]-616 is ideal as a broadcast clear, low odor top coat or intermediate coat over decorative quartz or vinyl flake floor broadcast systems. Sikagard[®]-616 can also be top coated with an aliphatic urethane when increased chemical and abrasion resistance are required.

When used as a primer, Sikagard[®]-616 can be considered where $\leq 4\%$ moisture content by mass (pbw – part by weight) is measured on concrete substrate with Tramex[®] CME/CMExpert type concrete moisture meter.

CHARACTERISTICS / ADVANTAGES

- Tough, smooth, non-porous surface is easy to clean
- Durable, impermeable and seamless
- Attractive, high gloss, reflective coating
- Good chemical and mechanical resistance
- 100 % solids as supplied
- Easily applied with brush, roller or squeegee
- Good Abrasion Resistance
- Excellent Impact Resistance

PRODUCT INFORMATION

Packaging	Component A: 3 US gal. (11.3 L); Component B: 1.50 US gal. (5.7 L); Components A+B: 4.5 US gal. (17.0 L). (Ready to mix unit).
Appearance / Color	Clear
Shelf Life	24 months in original unopened container under proper storage conditions
Storage Conditions	Precondition material for at least 24 hours between 65–75 °F (18–24 °C)
Solid content by weight	100 %
Solid content by volume	100 %

TECHNICAL INFORMATION

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Shore D Hardness	80	(ASTM D-2240) 7 days at 73 °F (23 °C) 50 % R.H.
Compressive Strength	7,250 psi (50 MPa) 7,978 psi (55 MPa)* *Resin only	(ASTM C-579 Resin (filled 1:0,9 with Sikadur®-504)) 28 days at 73 °F (23 °C) 50 % R.H.
Flexural Strength	9,284 psi (64 MPa)	(ASTM D-790)
Tensile Strength	5,078 psi (35 MPa)	(ASTM D-638)
Elongation at Break	15%	(ASTM D-638)
Tensile Adhesion Strength	> 350 psi (2.4 MPa) (100 % concrete failure)	(ASTM D-4541) 73 °F (23 °C) 50 % R.H.
Chemical Resistance	Please consult Sika Technical Services.	

APPLICATION INFORMATION

Coverage	<p>Smooth finish coating: Prime Coat: 160–200 ft²/US gal (3.9–4.9 m²/L) at 8–10 mils (0.20–0.25 mm) wet film thickness (w.f.t.) Wear coat: 100 - 133 ft²/US gal (2.5–3.2 m²/L) at 12–15 mils (0.30–0.38 mm) wet film thickness (w.f.t.).</p>
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Pot Life	Material Temperature	Time
	50 °F (10 °C)	~ 50 minutes
	68 °F (20 °C)	~ 25 minutes
	86 °F (30 °C)	~ 15 minutes

Cure Time	Ambient & Substrate Temperature	Foot traffic	Light traffic	Full cure
	50 °F (10 °C)	~ 24 hours	~ 3 days	~ 10 days
	68 °F (20 °C)	~ 8 hours	~ 2 days	~ 7 days
	86 °F (30 °C)	~ 6 hours	~ 36 hours	~ 4 days

Applied Product Ready for Use	Before applying second coat of Sikagard®-616 allow:		
	Ambient & Substrate Temperature	Minimum	Maximum
	50 °F (10 °C)	24 hours	36 hours
	68 °F (20 °C)	8 hours	1 day
	86 °F (30 °C)	6 hours	1 day
	Before applying Sikagard® Epoxy or Polyurethane on Sikagard®-616 allow:		
	Ambient & Substrate Temperature	Minimum	Maximum
	50 °F (10 °C)	24 hours	3 days
	68 °F (20 °C)	8 hours	2 days
	86 °F (30 °C)	6 hours	1 day

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. All projections, rough spots, etc. should be dressed off to

achieve a level surface prior to the application.

Concrete - Should be cleaned and prepared to achieve a laitance-free and contaminant-free, open textured surface by shot blasting or equivalent mechanical means (CSP-3 to CSP-4 as per ICRI guidelines). Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate. Whenever “shot-blasting” is utilized, be careful to leave concrete with a uniform texture. “Overblasting” will result in reduced coverage rates of the primer and/or subsequent topcoats. The “shotblast” pattern may show through the last coat, known as “tracking”. The compressive strength of the concrete substrate should be at least 3,500 psi (24 MPa) at 28 days and at least 215 psi (1.5 MPa) in tension at the time of application. For other substrates, please contact Sika Technical Services.

MIXING

Mixing Ratio - 1.5 : 1 by volume. Premix each component separately. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components for at least 3 minutes using a low speed drill (300–450 rpm) and Exomixer or Jiffy type 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.

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

APPLICATION

As primer: Apply Sikagard®-616 by squeegee at the rate of 160 - 200 ft²/US gal (3.9–4.9 m²/L) at 8–10 mils (0.20–0.25 mm) wet film thickness (w.f.t.) and back roll with pressure after 15 minutes. Coverage will vary depending on the porosity of the prepared floor. Product has a limited Pot Life, see Typical Data. Do not apply by dipping roller into mixing container. Pour a bead of product in the form of a ribbon on the surface to be coated, then spread with squeegee and back roll. Ensure that the coating is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate. If necessary, apply an additional coat to ensure the coating is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate.

As sealer/intermediate: Sikagard®-616 is applied with a 40 mil (1 mm) notched squeegee over a smooth surface and a flat squeegee over a rough or decorative quartz surface. Back rolling is typically done with an 18 inch (455 mm) wide 3/8 inch (10 mm) short nap, solvent-

resistant roller cover. Back roll the Sikagard®-616 only to level the squeegee applied material. Over-rolling and late back rolling may cause bubbling and leave roller marks.

LIMITATIONS

Notes on 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 3 hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.).

Substrate Moisture Content: 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 CSP-3 to CSP-4 as per ICRI guidelines). 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. If moisture content of concrete substrate is > 4 % by mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikalastic® MT Primer or Sikafloor® 81 EpoCem. When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values are > 85 % according to ASTM F2170 use Sikalastic® MT Primer or Sikafloor® 81 EpoCem. 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 65 °F and 75 °F (18–24 °C).

Ambient Temperature: Minimum/Maximum 50/85 °F (10/30 °C).

Substrate Temperature: Minimum/Maximum 50/85 °F (10/30 °C). Substrate temperature must be at least 5 °F (3 °C) above measured Dew Point. Mixing and Application attempted at Material, Ambient and/or Substrate Temperature conditions less than 65 °F (18 °C) will result in a decrease in product workability and slower cure rates.

Relative Ambient Humidity: Maximum ambient humidity 85 % (during application and curing).

Dew Point: Beware of condensation! The substrate must be at least 5 °F (3 °C) 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.

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Mixing: 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.

Application: If used as a primer. Apply the primer/coating to the prepared substrate using a squeegee and back roll to provide uniform coverage. Ensure that the substrate is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate. If necessary, apply an additional coat to ensure the substrate is pore-free and pinhole-free 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, may be used for a visual indication of vapor drive.
- Freshly applied material should be protected from dampness, condensation and water for at least 72 h.
- Will discolor over time when exposed to sunlight (UV) and under certain artificial lighting conditions. Use of clear UV resistant top coat may not prevent discoloration of underlying coatings.
- 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.
- Any aggregate used with Sikagard® systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.).
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual

site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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