

PRODUCT DATA SHEET

Sikagard® CRV-20

Chemical-Resistant, Novolac Vinyl Ester Resin Coating, Topping and Lining

PRODUCT DESCRIPTION

Sikagard® CRV-20 is a coating/topping/lining designed for use where chemical resistance is required on concrete or steel substrates. As the protective component of a system, it is used in conjunction with Sikagard WDE Primer, a two-component epoxy primer providing excellent adhesion to dry or damp concrete substrates and good chemical resistance. The Sikagard® CRV 20 is based upon a modified Novolac Vinyl Ester polymer resin that provides a hard and durable surface. It offers high resistance to a variety of solvents, acids and oxidizing substances and excellent dry heat resistance up to 284°F

USES

- As a smooth, chemical resistant lining on concrete or steel substrates.
- As a broadcast textured floor system to provide a slip resistant, durable wearing surface in pedestrian areas where aggressive chemicals are present.
- Protection of containment tanks, machine bases, plant floors and walls exposed to aggressive chemicals.
- Protection against ground water contamination resulting from uncontained chemical spills.

CHARACTERISTICS / ADVANTAGES

- The material may be applied as a smooth coating or build-up system incorporating aggregate.
- Suitable for vertical and horizontal surfaces.
- Provides a hard wearing and slip resistant floor finish.
- Will cure down to 14°F.
- Exhibits excellent impact, abrasion and fatigue resistance.
- The systems provide excellent protection for steel and concrete against a wide range of chemicals.

PRODUCT INFORMATION

Packaging	Resin: 1 gallon in a 1 gallon metal can Catalyst (BPO): 120 g (200 mL) plastic container.		
Appearance / Color	RAL 7038 Agate Grey		
Shelf Life	6 months in original, undamaged and unopened packaging.		
Storage Conditions	Store dry in heated area and off ground on pallets or similar. Protect Sikagard CRV 10 from freezing. If frozen, discard.		
Volatile organic compound (VOC) content	≤ 100 g/l		
Viscosity	"A" Resin	"B" Hardener	"A+B" Mixed
	Vinyl Ester Resin	Benzoyl Peroxide Powder	
	500 cps	Powder	500 cps

TECHNICAL INFORMATION

Shore Hardness	Barcol: 40
Flexural Strength	17,985 psi Flexural Modulus: 551,150 psi
Tensile Strength	10,150 psi Tensile Modulus: 510,500 psi
Elongation at Break	3%
Chemical Resistance	Before applying for protection against specific chemical environments, consult Sikagard CRV 20 Chemical Resistance Guide or contact Sika Technical Services at 800-933-SIKA (7452).
Thermal Resistance	284°F

APPLICATION INFORMATION

Coverage	Yield		
	Smoothing Coating		
	Primer Coat	Sikadur WDE Primer	(163 ft ² /gal) 10 mils wft
	1st Coat	Sikagard CRV 20	(105 ft ² /gal) 15 mils wft
	2nd Coat	Sikagard CRV 20	(105 ft ² /gal) 15 mils wft
Maximum build per coat for Sikagard CRV 20 on vertical surfaces: 10 mils wft. Three coats may be required for the smooth coating to be produced vertically.			
Broadcast Build-Up System			

Primer Coat	Sikadur WDE Primer	(160 ft ² /gal) 10 mils wft
Aggregate Broadcast Coat	#32 mesh (spherical) Sikagard CRV 20	(50 lbs/100ft ²) (105 ft ² /gal) 15 mils wft
Aggregate Top Coat	#32 mesh (spherical) Sikagard CRV 20	(50 lbs/100ft ²) (105 ft ² /gal) 15 mils wft

Pot Life	200 g (7.05 oz)	
	"A+B" Mixed: 12 mins (Vinyl Ester Resin + Benzoyl Peroxide Powder)	
Cure Time	Tack-free Time: 30 -40 mins	
	Traffic exposure: 4 hrs Chemical exposure: 24 hrs	
Waiting / Recoat Times	"A" resin	"B" Hardener
	Vinyl Ester Resin	Benzoyl Peroxide Powder
	Minimum 1.5 hrs	Maximum 24 hrs

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 and contaminant free, open textured surface by shot blasting or equivalent mechanical means (CSP-3 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. Over "blasting" will result in reduced coverage rates of the primer and/or subsequent topcoats. It is also possible that the texture of the "shotblast" pattern may show through the last coat. This is known as "tracking". The compressive strength of the concrete substrate should be at least 3500 psi (24 MPa) at 28 days and at least 250 psi (1.7 MPa) in tension at the time of application of Sikagard WDE Primer and Sikagard CRV 20.

MIXING

The material is supplied as two-components, Part R and catalyst powder. Thoroughly stir Component R to ensure all solids, including pigments, are evenly dispersed. While stirring, periodically check interior of can with stir spatula or similar to again ensure dispersal and distribution of solids throughout resin. Add catalyst powder to pre-mixed Component R and thoroughly mix for 1 minute with a low-speed drill (200-300 rpm) to minimize air entrapment. Use an Exomixer type mixing paddle (recommended model) of suitable size for the mixing vessel. During the mixing operations 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 CRV 20 should be uniform in color and consistency. Mix full units only.

APPLICATION

Concrete Substrates: Smooth coating: This provides a smooth, easy maintenance system. **Primer coat:** Apply Sikagard WDE Primer onto concrete substrates using a brush, roller or squeegee to a uniform coverage without ponding. Allow primer to cure for a minimum of 6 hours at 20°C (68°F) or 10 hours at 10°C (50°F) before over coating with Sikagard CRV 20. **1st coat:** Once the Sikagard WDE Primer has cured apply Sikagard CRV 20 using a brush, roller or squeegee to a uniform coverage without ponding. **2nd coat:** Once 1st Coat is tack free apply a second coat of Sikagard CRV 20 using a brush, roller or squeegee to a uniform coverage without ponding.

NOTE : If over coating of Sikagard WDE Primer with Sikagard CRV 20 is attempted before the necessary curing time has elapsed, the reactive components in the Sikagard CRV 20 will act as a solvent, softening the Sikagard WDE Primer, causing retardation or stopping the cure of the Sikagard CRV 20. For additional information see Sika Technical Bulletin Sikagard CRV 20 and CRV 20 - Properties and Application Guidelines. **Broadcast build- up system:** This provides a durable and slip resistant textured finish. **Primer coat:** Apply Sikagard WDE Primer onto concrete substrates using a brush, roller or squeegee to a uniform coverage without ponding. Broadcast the selected aggregate (selected for texture) into the wet primer to rejection. **Broadcast coat:** Once the primer coat has sufficiently cured to allow foot traffic, sweep-up and vacuum the loose unbonded aggregate. Apply the broadcast coat of Sikagard CRV 20 using a notched squeegee or trowel and backroll to a uniform coverage. Broadcast the selected aggregate (selected for texture) into the wet resin to rejection. **Top coat:** Once the broadcast coat has sufficiently cured to allow foot traffic, sweep-up and vacuum the loose unbonded aggregate. Apply the top coat of Sikagard CRV 20 using a squeegee, followed by back rolling to provide a uniform texture and finish.

Caution:

COMPONENT A: DANGER: FLAMMABLE, IRRITANT. Contains Styrene (CAS:100-42-5). Keep away from heat, sparks, sunlight, electrical equipment, flame or other sources of ignition. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Use only in well ventilated areas. Open doors and windows during use. Eye/skin/respiratory irritant. Inhalation can result in headaches and dizziness. Harmful if swallowed. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. COMPONENT B: DANGER: OXIDIZER, IRRITANT. Contains Peroxide, dibenzoyl (CAS: 94-36-0). CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. Keep from contact with clothing and other combustible materials. Causes eye/skin irritation. May cause respiratory irritation. May cause skin sensitization by skin contact. Harmful if swallowed.

First-Aid: Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. Skin – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. Inhalation – Remove to fresh air. Ingestion – Do not induce vomiting. Dilute with water. Contact physician. In all cases contact a physician immediately if symptoms persist.

Handling and Storage:

COMPONENT A: Keep away from heat, sparks, sunlight, electrical equipment or flame. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Open doors and windows during Open doors and windows during use. Use adequate local and mechanical ventilation. Wear protective equipment (chemically resistant gloves/goggles/clothing) to prevent direct contact with skin and eyes. Use properly fitted NIOSH vapor cartridge respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing after use. Store product in tightly sealed containers in a cool, dry well ventilated area at temperatures between 55° F and 75°F away from ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

COMPONENT B: Keep products in original container. Store in cool, dry well ventilated area. Keep away from material or conditions listed in conditions to avoid. Do not grind or subject peroxide to frictional heat or shock. Do not add peroxide to hot reaction mixtures. Do not transfer to rigid containers with tight or screw-on closures. Do not allow peroxide to dry out, as the material will become friction sensitive. Wear protective equipment and/or garments list for personal protective equipment. Avoid inhalation and skin and eye contact. Dispense and transfer in an area separate from storage area. The addition of accelerators from polymerization may result in vigorous decomposition. Store below 100°F. Do not return to original container.

Clean Up:

COMPONENT A: In case of spill, eliminate all ignition and heat sources. Ventilate area. Open doors and windows. Wear chemical resistant gloves/goggles/clothing. In absence of proper ventilation use properly fitted NIOSH respirator. Confine spill, collect using noncombustible absorbent material and place in properly sealed container. Dispose of excess product in accordance with applicable local, state and federal regulations.

COMPONENT B: Evacuate area of all unnecessary personnel. Wear protective equipment and/or garments described in PPE if exposure conditions warrant. Keep out of reach of water sources and sewers. Carefully collect the material and transfer to polyethylene-lined containers. Do not allow peroxide to dry out, add water if necessary.

AVAILABILITY/WARRANTY

Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on www.sikafloorusa.com. Proper material application is the responsibility of the user. Site visits made by Sika personnel are for making technical recommendations only and not for supervising or providing quality control.

LIMITATIONS

- Sikagard CRV 20, as a primary or secondary containment system, is best installed by skilled and experienced applicators. Consult Sika Technical Service for advice and recommendations.
- As a Vinyl Ester, this material does not bond well to damp substrates. It must be applied over a surface primed with Sikagard WDE Primer as recommended in the Application section.
- Minimum / Maximum ambient and substrate temperature; 14°F / 86°F
- Substrate temperature must be at least 5.5°F above the measured dew point.
- Do not apply onto porous surfaces where moisture vapor transmission will occur during application
- Moisture content of a concrete substrate must be <4% (Tramex method) before application of Sikadur WDE Primer otherwise use Sikafloor- 22 NA PurCem® or Sikafloor- 24 NA PurCem® as an initial barrier before applying the required smooth or build-up systems
- Maximum relative humidity during application and cure; 85%
- It is very important to provide efficient ventilation to prevent Sikagard CRV 20 fumes from remaining in the coated area, as this will inhibit proper cure. Ventilation should be provided during application and during the entire cure period.
- Minimum wet film thickness per coat of 10 mils as recommended in the application section.
- Due care should be exercised in applying the system as it is flammable.
- Protect from dampness, condensation and water contact during the initial 24 hour cure period.
- Surface may discolor in areas exposed to ultraviolet light.
- Sikagard CRV 20 is not suitable for use on exterior, slab-on-grade concrete substrates.

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.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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Product Data Sheet
Sikagard® CRV-20
April 2019, Version 01.02
020816990020000002

SikagardCRV-20-en-US-(04-2019)-1-2.pdf

