Industrial Flooring

Sikafloor® 207

General Service Epoxy Binder/Coating

Description

A general service, two component, high solids, epoxy system for use as a coating or as a binder for a pigmented slurry/broadcast system. Applied using Sikafloor Epoxy Color Additive.

Where to Use

Designed for economical base coat application from 5 to 10 mils on concrete floors subjected to abrasion and/or chemical spills. Provides an economical binder for slurry-type applications.

Advantages

- High Solids / Low Odor
- Medium to High Build in one coat application
- Excellent chemical and abrasion resistance
- Wide range of colors with Sikafloor Epoxy Color Additive
- Meets USDA requirements for incidental food contact

How to Use

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 “shot-blast” 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 Sikafloor 207.

Typical 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.

Colors	Clear, Oxford Gray and other colors available with use of Epoxy Color Additive
Coverage	Approximately 160-320 sq. ft. (14.86 - 29.7 m^2) per gallon (5 - 10 mils w.f.t.) or 480-960 sq. ft. (44.6 - 89.1 m^2) per 3-gallon kit over primed, relatively smooth, dense concrete surfaces. Actual coverage will vary depending on the texture and porosity of the substrate and whether or not a Sika primer was used.
Recommended Film Thickness	5-10 mils per coat at 160-320 sq. ft. per gallon

Maintain resin and hardener below 80° F and under no circumstances mix these products above this temperature.

Pot Life @ 75°F (24° C)	The pot life on this product is approximately 24 minutes at 75°F (24° C) and 50% R.H. High temperature and high humidity will accelerate curing and reduce pot life.
Cure Rate	75° F (24° C) – 10 hrs. 60° F (15.5° C) – 19 hrs.
Shelf-Life	2 years in unopened container, Store dry between 40° - 90°F (5°-32°C).

Typical Physical Properties:

Hardness (Shore D)	ASTM D-2240	80-84
Bond Strength	ASTM D-4541	>400 psi (2.76 MPa) (100% concrete failure)
Tensile Strength	ASTM D-638	6400 psi (44.1 MPa)
Compressive Strength	ASTM D-695	10,400 psi (77.1 MPa)
Impact Resistance	ASTM D-2794	160 in-lbs. (18.1 N-m)
Abrasion Resistance *(CS-17 wheel, 1000 cycles, 1000 gm load)*	ASTM D-4060 Taber Abraser	65-70 mg loss
Flammability	ASTM D-635	Film is Self Extinguishing
Slip Resistance	Equivalent to ASTM D-2047	Passes
VOC (g/l)	ASTM D2369-07	21.3 g/l

Above typical values based on cure @ 75°F (24° C)

Packaging: Sikafloor 207 is packaged in pre-proportioned 3 gallon kits for easy jobsite mixing as well as in 15 gallon and 165 gallon bulk kits. Each 3 gallon kit consists of one gallon of Part “H” Hardener in a one gallon can packed in a corrugated carton (two per carton) and two gallons of Part “R” Resin in a 5 gallon pail short filled to serve as the mixing vessel. Must order in multiples of two kits (6 gallons total), one carton containing two Part H’s and two short filled pails of Part R. A 15 gallon bulk kit consists of two full 5 gallon pails of Part “R” Resin and one full 5 gallon pail of Part “H” Hardener. A 165 gallon bulk kit consists of two full 55 gallon drums of Part “R” Resin and one full 55 gallon pail of Part “H” Hardener.

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Self-leveling Slurry: 10-27 ft²/mixed gal. (R+H+Sand) (60-160 mils w.f.t.) 3 gallons (R+H) unit + 3 gallons F-62 Part C aggregate = 4.8 gallons

Compressive Strength	ASTM C-597	9,000 psi
Tensile Strength	ASTM C-307	1,800 psi
Flexural Strength	ASTM D-790	4,000 psi
Flexural Modules of Elasticity	ASTM D-790	2.01 x 106 psi

Priming

Sikafloor 107 Low Modulus, Low Viscosity Epoxy Primer should be applied at 275-300 sq. ft. (6.75 - 7.36 m^2) per gallon, over damp or dry concrete. Rough concrete surfaces will result in reduced coverage. Allow to cure (varies with temperature and humidity) until tack free and clear in appearance before applying subsequent coats. Ensure that the primer is pore free, pin hole free and provides uniform and complete coverage of the entire substrate.

Mixing

For bulk packaging when not mixing full units each component must be pre-mixed separately to ensure product uniformity.

It is important to remember that this coating has a limited pot life. Therefore it is recommended to check and make sure everything is in order before starting the mixing sequence. For 15 and 165 gallon kits, add two parts Resin (Part R) and one part Hardener (Part H) by volume to a clean mixing container. Do not count Epoxy Color Additive in the volume ratio.

Color Additives: If color is desired, the appropriate Sikafloor Epoxy Color Additive is added to the "Clear" Part "R" Resin at one quart per three mixed gallons. *Mix at low speed for a minimum of two minutes.*

1. Carefully empty the contents of the Part "H" Hardener entirely into the can of Part "R" Resin. The Part "R" container is oversized to allow for easy mixing (3 gallon kit only).
2. Mix with a very low speed jiffy mixer, until completely blended. This will take about 2 to 3 minutes. 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 coating. 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. Mix only that quantity that can be used within its pot life.

Self-leveling Slurry: add F-62 (Part C) to the blended components R and H. Mix for 90 seconds once all ingredients are combined, using the above mentioned mixer.

Application

1. This product should be applied by first pouring a bead of material in the form of a ribbon on the surface to be coated. The material should not be left in the container too long because it will set faster thus reducing the pot life.
2. Using a flat or notched squeegee, spread the bead of material at a rate of approximately 160-320 sq. ft. (14.86 - 29.7 m^2) per gallon. Apply as evenly as possible, working from left to right, and then back.
3. Back roll using a high quality 18", 3/8" nap roller.
4. Roll with a porcupine or plastic loop roller after 10 minutes to remove excess bubbles.

Self-leveling Slurry: Once the prime coat is tack free, apply the self-leveling coat onto the substrate using a notched squeegee or trowel. Level out and de-air using a spiked roller.

Critical Recoat Time

It is important to apply subsequent coats of this and other products within 12 to 24 hours (under normal curing conditions). If Sikafloor 207 is allowed to cure longer than the 24 hours before subsequent recoats, screening will be necessary. The floor surface should be screened to the effect that a uniform dullness is achieved. There should be no gloss present on the floor before applying the next coat.

Limitations

- Sika recommends appropriate Sikafloor Primer to be used prior to the installation of Sikafloor-207
- If Sikafloor-207 is on unprimed substrates, please adhere to the following guidelines:
  - o Substrate Moisture Content: Moisture content of concrete substrate must be < 4% by mass (pbw – part by weight) as measured with Tramex® moisture meter (as per ASTM F 2659) on mechanically prepared concrete surface according to this datasheet (see preparation section).
  - o If moisture content of concrete substrate is > 4% by mass (pbw – part by weight) as measured with Tramex® moisture meter (ASTM F 2659), use appropriate moisture tolerant Sika Primer or Sikafloor 81 EpoCem
  - o Just prior to application, confirm substrate moisture content, ambient relative humidity, and dew point. During installation, confirm above values at least two times every 6 hours.
  - o Apply the primer to the prepared surface using a squeegee and back roll to provide uniform coverage. Ensure that the coating is pore free, pin hole free and provides uniform and complete coverage of the entire concrete substrate. If necessary, apply an additional primer coats to achieve a pore/pinhole free surface.
- Minimum/Maximum substrate temperature: 60°F/85°F (15.5°C/30°C).
- Maximum ambient relative humidity: 85%
- Substrate temperature must be at least 5°F (3°C) above measured dew point.

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- It is recommended, when installing over concrete substrates, to install Sikafloor 207 during steady or declining ambient temperatures to minimize the risk of concrete outgassing Concrete outgassing may result in pinholing of the Sikafloor 207.
- Precondition material for at least 24 hours to between 65 F to 80 F (18 C – 26.5 C)
- Freshly applied Sikafloor 207 should be protected from dampness, condensation and water for at least 24 hrs.
- Do not thin this product. Addition of thinners will slow cure and reduce ultimate properties of this product. Use of thinners will void any applicable Sika warranty.
- Will discolor over time when exposed to sunlight (UV) and under certain artificial lighting conditions. UV resistant, light stable topcoats are available where ultimate color/clarity retention is required.
- Do not hand mix Sikafloor® materials / mechanical mix only
- For professional use only by experienced applicators

Caution

COMPONENT R: WARNING - IRRITANT, SENSITIZER: Contains epoxy resins, Nonyl Phenol (CAS 25154-52-3). Eye irritant. May cause skin/respiratory irritation. Prolonged and/or repeated contact with skin may cause allergic reaction/sensitization. Deliberate concentration of vapors for purposes of inhalation is harmful and can be fatal. Harmful if swallowed. **Strictly follow all use, handling and storage instructions.**

COMPONENT H: WARNING: CORROSIVE, SENSITIZER, IRRITANT. Contains amines (mixture). Contact with skin and eyes causes severe burns. Respiratory irritant. May cause eye/skin irritation. Possible skin sensitization/allergic reaction with prolonged or repeated exposure. Harmful if swallowed. Deliberate concentration of vapors for purposes of inhalation is harmful and can be fatal. **Strictly follow all handling, use and storage instructions.**

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

Wear protective equipment (gloves/safety glasses/clothing) to prevent contact with skin and eyes. Keep container closed in a cool dry place. Wash skin thoroughly with soap and water after use. Use with adequate, general and local, exhaust ventilation. In absence of adequate ventilation, use a properly fitted NIOSH respirator. Remove contaminated clothing. Launder before reuse.

Clean Up

Avoid direct contact with eyes and skin. Wearing chemical resistant goggles/gloves/clothing, collect spill. Ventilate area. In absence of adequate ventilation, use properly fitted NIOSH respirator. Sweep up spill and place in closed container. Dispose of in accordance with applicable local, state and federal environmental regulations.

Additional Info

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. Before applying for protection against specific chemical environments, consult Chemical Resistance Guide or Sika Technical Service.

Trouble Shooting

Problem Observed	Possible Causes
Fisheyes	Oil Contamination; Improper substrate cleaning; Mold Release Agents; Improper Mixing.
Peeling From Substrate	Insufficient preparation process; Oil impregnation; Moisture in concrete.
Peeling Between Coats	Past critical recoat time; Contamination between coats.
Coating Soft, Dulling	Improper mixing; Use of thinner in product; Extreme weather conditions.
Slow Cure	Low floor and ambient temperatures; Use of thinner in product; Improper mixing; Product applied too thin.
Fast Cure	High floor and ambient temperatures.
Bubbling	High temperatures and or direct sunlight exposure; Excessive substrate outgassing due to rising temperatures; Working product past pot life; Improper mixing overworked the product.

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

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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 Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **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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