

Sikafloor® Merflex 125

Description	Sikafloor Merflex 125 is a monolithic, flexible, and abrasion resistant flooring system that is designed for areas requiring a combined water protection membrane and wearing surface. It consists of a prime coat of Sikafloor 265, a two component, high solids and flexible epoxy for use as a flexible membrane, a base coat of Sikafloor 265 broadcasted with quartz aggregate, and sealed with Sikafloor 207, a two component high solids, epoxy grout coat and Sikafloor 315, a high solids, abrasion resistant, aliphatic polyurethane coating. Sikafloor 265 is a true elastomer for use as a seamless, waterproofing membrane. This unique, flexible polymer system maximizes flexibility and elongation to provide excellent crack bridging capabilities. Can be used alone as a Clear or with Sikafloor Epoxy Color Additive.
Where to Use	<ul style="list-style-type: none"> ■ Mechanical equipment rooms ■ Interior floor spaces where humidity & temperature are micro-controlled ■ Access floor systems for computer rooms and offices where liquid lines prevail ■ Areas requiring an elastomeric water protection surface that can accept heavier traffic
Advantages	<ul style="list-style-type: none"> ■ Lower maintenance and life cycle cost vs. tile, sheet goods, and carpet ■ Tough, durable and seamless floor ■ Performance benefits of both an elastomeric membrane & a wearing surface combined in one system ■ Excellent crack bridging capabilities.
Chemical Resistance	Before applying for protection against specific chemical environments, consult Sikafloor 315 Chemical Resistance Guide or refer to the Chemical Resistance Guide of the top coat applied or contact Sika Technical Services at 800-933-SIKA (7452).
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 265.
System Coverage	<p>Primer: Sikafloor 265: Sikafloor 265 pigmented applied at 65 mils (25 sq.ft. per gallon).</p> <p>Broadcast Coat: Sikafloor 265: Sikafloor 265 pigmented applied at 20 mils (80 sq.ft. per gallon) and broadcasted to refusal with 35 mesh sand or colored quartz aggregate.</p> <p>Grout Coat: Sikafloor 207: Sikafloor 207 pigmented at 12 mils (130 sq.ft. per gallon).</p> <p>Topcoat: Sikafloor 315 - 450 sq. ft./gal.</p>
Cure Mechanism	<p>Primer Coat & Broadcast Coat: Sikafloor 265 Pigmented: At 75°F (24°C), the primer coat and broadcast coat should be ready for foot traffic within 12 hours.</p> <p>Grout Coat: Sikafloor 207; At 75°F (24°C), the body coat should be ready for foot traffic within 12 hours.</p> <p>Top Coat: Sikafloor 315; At 75°F (24°C), allow 8 hours for foot traffic and 24 hours for light traffic. For heavy traffic and/or chemical spillages allow 72 hours</p>

Typical Data (Sikafloor 265)

Hardness (Shore D)	ASTM D-2240	40
Adhesion, Bond Strength	ASTM D-4541	520 lbs/in ² -Concrete Failure
Impact Resistance: (Gardener Impact Tester)	ASTM D-2794	>160 in – lb (18.1 N-m)
Flammability	ASTM D-635	Self Extinguishing
Tensile Strength	ASTM D-638	1050 psi (7.2 MPa)
Tensile Elongation	ASTM D-638	125%
Modulus of Elasticity	ASTM D-638	246,000 psi (1697 MPa)
Tear Strength	ASTM D-1938	90 lbs (0.4003399)
Thermal Cycling: 24 hrs.	ASTM C-884	No Cracking

-5.8°F-77°F; -21°C to 25°C

Above typical values based on 7 days cure @ 75° F (24° C)



Mixing

Primer Coat and Broadcast Coat: Sikafloor 265 Pigmented: 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 the Sikafloor 265 has a limited pot life. Review that all surface preparation is complete and application equipment is in good working order, before starting the mixing sequence.

Color Additives: If color is desired, the appropriate Sikafloor Epoxy Color Additive is added to the "Clear" Part R resin 1 pint of Epoxy Color Additive to 1 mixed gallon of Sikafloor 265. Mix at low speed for a minimum of two minutes.

1. The Part R Resin must be thoroughly mixed prior to the addition of Part H Hardener.
2. Mix ratio is 1 Part Resin to 1 Part Hardener by volume. Pour into an empty clean pail correct amount of Resin and Hardener, 1 R:1 H.
3. 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.
4. Due to the difference in viscosity between the Part "R" Resin and Part "H" Hardener, care must be taken to ensure that both components are thoroughly mixed in order to avoid weak or partially cured spots in the coating.
5. Since this product does not need any induction time, it should be used immediately after mixing.

Grout Coat: Sikafloor 207 Pigmented: 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. Refer to the Epoxy Color Add Data Sheet for specific ratios. 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.

Top Coat: Sikafloor 315: Do not mix more material than can be applied within the working time limits at the actual field temperature. Empty completely the Part H, into a clean mixing container large enough to accommodate the 1.5 or 4.5 gallon mix. Then with a Jiffy mix paddle and drill, add the Part R. Mix at low speed for 1 minute. Then add pint of color pack if required. Mix this for 2 minutes. Then slowly sift in the wear additive F-5/HG with the mixer running to avoid clumping. Mix for 2 minutes.

Application

Primer Coat and Broadcast Coat: Sikafloor 265: Apply 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. Using a notched squeegee, spread the bead of material at a rate of approximately 80 square feet per gallon. Apply as evenly as possible, working from left to right, and then back. Back roll using a high quality 18", 3/8" nap roller and/or looped roller depending on thickness and desired finish. Broadcast the second coat with neutral 35 mesh sand OR decorative quartz aggregate depending on the desired finished look.

Grout Coat: Sikafloor 207: 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 105 sq. ft. 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 plastic loop roller after 10 minutes to remove excess bubbles.

Topcoat: Sikafloor 315: The floor should be divided into sections that can be completed without stopping. Sections should be divided at expansion joints or doorways when possible. The end of a section should be taped off to form a straight line providing a clean edge for an adjacent section. The Sikafloor 315 must be applied with a 3/8" nap roller. The roller should be wet in a roller tray or bucket and then the excess coating is removed by lightly rolling in the tray or bucket screen so as to avoid drips. Then apply 3 pairs of 8-10 foot long paths on to the floor. Then spread the material with roller passes perpendicular to the paths of coating. This material may be aggressively rolled to even the thickness. It is extremely important to apply the coating at a rate of 3-3.5 mils to achieve proper appearance, texture, and color development. If areas are too thick, the coating may blister, if too thin, the coating will appear very flat in sheen. It is also very important to remix the material often with the roller in the tray to keep the F-5 aggregate from settling. Cross roll the entire area with straight uninterrupted passes across the entire width of the floor. This will reduce roller marks and make the color even. If appearance is still not uniform after a few of these passes, repeat this procedure.

Limitations

- Minimum/Maximum substrate temperature: 60°F/85°F (15.5°C/30°C).
- Maximum relative humidity: 85%.
- Substrate temperature must be 5°F (3°C) above measured dew point.
- Conduct quantitative anhydrous calcium chloride testing in accordance with ASTM-F1869. Maximum acceptable test result is 3 pounds per 1,000 ft² per 24 hours. Determine the surface moisture content by using an impedance moisture meter designed for use on concrete as detailed in ASTM E-1907. Acceptable test results shall be 4% by mass or less. If over, use Sikafloor EpoCem 81/82.
- Freshly applied Sikafloor 265, 207 and 315 should be protected from dampness, condensation and water for at least 24 hours.
- This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the coating.
- Do not thin this product. Addition of thinners will slow down the cure and reduce the ultimate properties of this product.

Additional Info

Sikafloor System Sheets describe a series of Sikafloor products installed in progression. For specific information on the individual products mentioned, including, Mixing, Application, Chemical Warnings, First Aid, Handling & Storage, and Clean Up, PLEASE REFER TO THE INDIVIDUAL PRODUCT'S TECHNICAL DATA SHEET, available at www.sikafloorusa.com. System 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.

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