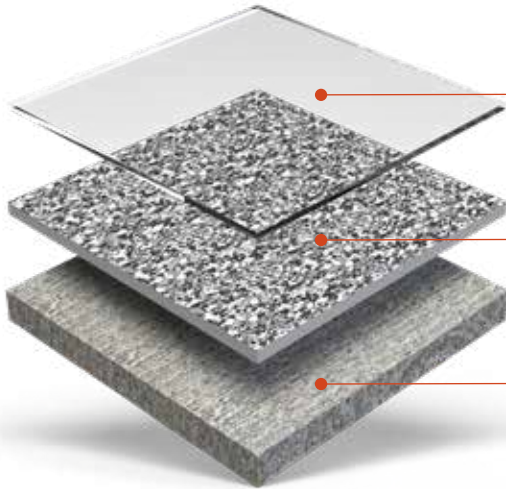




SIMFLAKE SB 1-DAY EPOXY SYSTEM GUIDE



TOPCOAT: POLYASPARTIC HS SLOW CURE

BASECOAT/BROADCAST: 1150FC 100% SOLIDS FAST-CURE EPOXY, PIGMENTED & DECORATIVE CHIP

PREPARED SUBSTRATE: CSP 3+

NOTE: PLEASE READ AND REVIEW THESE INSTRUCTIONS PRIOR TO INSTALLATION OF THE COATING SYSTEM. OTHER SIMIRON PRODUCTS MAY BE USED AS ALTERNATIVE PARTS OF THIS SYSTEM. CONTACT SIMIRON TECHNICAL SUPPORT AT CUSTOMERSERVICE@SIMIRON.COM OR 866-515-8775.

DESCRIPTION

SIMFLAKE SB 1-DAY EPOXY is a versatile, single-broadcast floor system that utilizes **Simiron Decorative Chip** to achieve easy to maintain, long-lasting results. This three-layer system offers a variety of blends. **Simflake SB 1-Day Epoxy** consists of a basecoat, ¼" vinyl chip broadcast, and topcoat. This system with 16 total mils of **1150FC** also resists moisture vapor transmission up to 12 pounds per 1,000 square feet in 24 hours per ASTM F1869 or 85% relative humidity in the slab as directed by ASTM F2170. The featured system has a gloss finish, but optional satin and non-skid texture is available. The base system will produce an average nominal thickness of over 50 mils.

PRODUCT INFORMATION

PRODUCT NAME	SIZE	COLOR/FINISH	ITEM NUMBER
1150FC Hybrid Base	2-Gallon	Clear / Gloss	40008086
1150FC Hybrid Activator	1-Gallon	Clear / Gloss	40002800
Decorative Chip	40 lb. Box	Variety of Blends	see simiron.com
Polyaspartic HS Slow Cure	2-Gallon Kit	Clear / Gloss	40008919
Polyaspartic HS Activator 5-Gallon	5-Gallon	Clear	40008956
Polyaspartic HS Slow Cure Base	5-Gallon	Clear	40008932

Pigment 3-gallons 1150FC clear with 1 pint Simiron U-Tint in a variety of colors, including: Haze Gray, Light Gray, Deck Gray, Sandstone, White, Black, & Tile Red. Polyaspartic HS is also available in medium and fast cure speeds.

COVERAGE RATES

PRODUCT NAME	WET FILM THICKNESS	DRY FILM THICKNESS	COVERAGE RATE
1150FC	16 mils	16 mils	100 sq. ft./gal.
Decorative Chip	N/A	N/A	6 sq. ft./lb. or 240 sq. ft. per 40 lb. box
Polyaspartic HS Slow Cure	10 - 16 mils	9 - 14 mils	100 - 160 sq. ft./gal.

PHYSICAL PROPERTIES

TEST NAME	TEST METHOD	RESULT
Adhesion to Concrete	ASTM D7234	> 400 PSI (100% Concrete Failure)
Coefficient of Friction (Wet DCOF)	ANSI A326.3	.65
Elongation	ASTM D2370	5 - 10%
Flammability		Self-Extinguishing on Concrete
Flexibility 1/8" Mandrel	ASTM D522	Passes/No Cracking
Hardness, Shore D (24 hours, 5 days)	ASTM D2040	70, 86
Taber Abrasion (CS-17 Wheel, 1000 mg. Load, 1000 Cycles)	ASTM D4060	30 mg Loss
Tensile Strength	ASTM D2370	4,000 psi
Gloss @ 60 Angle	ASTM D523	92 - 95
UV Resistance (gloss after 1000 hours in QUV)	ASTM G154	87 - 89
VOC	EPA Method 24	< 50 g/L

CHEMICAL RESISTANCE

CHEMICAL	RESULTS	CHEMICAL	RESULTS	CHEMICAL	RESULTS
10% Acetic Acid	G	Methyl Ethyl Ketone	E	Betadine	E
Vinegar	G	Xylene	E	Bleach	E
10% Citric Acid	G	Ethylene Glycol	E	Urine	E
10% Hydrochloric Acid	G	Isopropyl Alcohol	E	Coffee	E
30% Hydrochloric Acid (muriatic)	G	Mineral Spirits	F	Cola	E
10% Nitric Acid	NR	Brake Fluid	E	Ketchup	E
50% Phosphoric Acid	F	Transmission Fluid	E	Mustard	G*
10% Sulfuric Acid	F	Motor Oil	E	Red Wine	E
37% Sulfuric Acid	F	50:1 Gas/Oil Mixture	E		
70% Sulfuric Acid	F	E85 Gasoline	E		
20% Ammonium Nitrate	E	E95 Gasoline	E		
20% Sodium Chloride	E	Unleaded Gasoline	E		
50% Sodium Hydroxide	G	Skydrol	E		

*Stain is only defect.

KEY	
E = Excellent	G = Good
F = Fair	NR = Not Recommend

SURFACE PREPARATION

Concrete and coated concrete surfaces must be sound, clean, dry, and free of contaminants such as loose coatings, dirt, dust, grease, oil, silicone, and other contaminants that may negatively affect adhesion.

MOISTURE VAPOR BARRIER: A suitable moisture barrier must be in place for concrete slabs on-grade. If a moisture barrier is not in place, seasonal variations in ground moisture can cause excessive moisture vapor transmission (MVT) regardless of results measured prior to coating application. For 16 mils of 1150FC, MVT rate must not exceed 12 pounds per 1,000 square feet per 24 hours, as directed by ASTM F1869. The relative humidity (RH) of the slab must not exceed 85%, as directed by ASTM F2170. If there is a moisture situation in excess of the above rate, the use of **Simiron MVB** Moisture Vapor Barrier Primer may be required. Consult a Simiron Representative for details and application procedures.

NEW/BARE CONCRETE: Diamond grind or shotblast to a CSP-3 or greater surface profile. Refer to SSPC-SP13 / NACE 6 or ICRI Technical Guideline No. 310.2. New concrete must be cured a minimum of 28 days and should meet moisture vapor transmission (MVT) and relative humidity (RH) thresholds as described above.

SURFACE PREPARATION (CONT.)

PREVIOUSLY COATED SURFACES: Clean surface to prevent any contaminants from being spread/redistributed to a greater area being prepared. Thoroughly grind the surface with 30 grit metal diamonds to completely remove any grout or topcoats that are not epoxy based and provide proper surface profile required for adhesion of the system.

SAFETY & TECHNICAL

Refer to the SDS sheet before use. Safety precautions must be strictly followed during storage, handling, and use. Personal Protective Equipment (PPE) should be worn at all times. PPE will include (but is not limited to): Safety glasses with side shields, high-quality nitrile gloves, and properly fitted NIOSH approved respirators. To acquire additional information or technical and safety data, please visit: www.simiron.com.

TEMPERATURE

Air	35° - 85°F	2° - 29°C
Surface	35° - 85°F	2° - 29°C
Material	60° - 85°F	16° - 29°C

Higher temperatures and humidity will shorten pot-life and working time. Floor temperature must be at least 5 degrees over the current dew point. Systems applied below 60°F, need to utilize Polyaspartic HS Fast Cure as the topcoat.

SET-UP & MIXING AREA

Place the mixing area as close to the project area as possible. Cover mix area with plastic, a tarp, or cardboard and securely tape to the floor. Assemble all necessary application tools, safety supplies & PPE, and clean-up supplies and place in the mixing area prior to starting the application process.

TAPE AND TERMINATION POINTS: Apply masking tape to all perimeter areas where the coating system will terminate. Sawcut and key-in all termination points around drains, dock plates, and high traffic impact points (see Simiron Drawings/Architectural Details).

PATCHING

Cracks, holes, eroded & spalled areas of the floor should be patched with **Simiron Instant Patch** and ground smooth with the surface after it sets. A Simiron fast-cure, 100% solids epoxy thickened with fumed silica may also be used, depending on schedule and temperature. Scrape patch material flush with the surface.

JOINTS

Honor all isolation, expansion, and movable joints with the appropriate joint material after the coating system is installed. Contraction (sawcut) joints may be filled and coated over; However, the coating system may crack over time if the slab experiences excessive shrinkage or movement (see Simiron Drawings/Architectural Details).

APPLICATION EQUIPMENT

Assemble all required application equipment. Equipment will include (but is not limited to):

- Drill and Jiffy® type mixing blade
- High quality non-shed 3/8" nap roller covers
- Edge rollers & chip brushes
- Painters' tape
- Duct tape
- High quality flat & notched EPDM squeegees
- Flat metal spring blade squeegee
- Spiked shoes
- Roller pans
- Measuring and mixing containers

APPLICATION PROCEDURE

1150FC 100% SOLIDS FAST-CURE EPOXY: Basecoat/Broadcast

1150FC mix ratio is 2 Parts Base to 1 Part Activator by volume. Choose a U-Tint color that goes best with the colors in the blend of Decorative Chip being used.

1. Pre-mix Base at low speed for 1 minute. Pour base into a 2–5 gallon mixing pail. Mix **U-Tint** into the Base. Then, add Activator and mix for three minutes until uniform. Do not mix more material than can be applied in 10 – 15 minutes (material will stiffen or tack-up).
2. Immediately pour all the mixed epoxy on the floor in a long bead approximately 8 – 12 inches wide. Do not attempt to roll material out of a bucket or roller pan.
3. Wearing spiked shoes, spread evenly at 16 mils by pushing a flat or notched squeegee along the bead. Overlap previous passes in order to ensure concrete pinholes are filled. **The best way to minimize outgassing bubbles on soft/porous concrete is to split the 1150FC application into two steps: a tight, thin prime coat applied at 3-5 mils with no back-roll, then after the prime coat has set, apply the balance of the material to equal 16 mils total.**
4. Back-roll using a non-shed 3/8" roller and the primer evenly across the squeegee passes to minimize application lines and leave a consistent film thickness.

The entire thickness of 1150FC has to be at least 16 mils in order to get tolerance to Moisture Vapor Transmission up to 12 lbs. per ASTM F1869 or 85% RH per ASTM F2170.

5. Immediately broadcast **Decorative Chip** into the wet material before the surface skins over. Toss the flake up into the air to evenly scatter it. Continue to add flakes to the floor until the resin is completely covered. Do not dump or allow the chips flakes to pile on the floor.
6. After the coating under the chip sets up/cures enough to traffic, scrape and remove loose/extra flake from the surface.
7. Seal the broadcast with **Polyaspartic HS**.

POLYASPARTIC HS SLOW CURE: Topcoat

Slow Cure mix ratio is 1 Part Base to 1 Part Activator by volume.

1. Pre-mix Base for 1 minute. Add Activator and mix for 90 seconds or until uniform. Do not mix more material than can be applied in 10 – 15 minutes (material will stiffen or tack-up). Mix full kits only.
2. Using a flat or notched rubber squeegee (depending upon DFT required) with EPDM rubber blade, apply at a spread rate of 100 – 160 sq. ft. per gal. to yield 10 – 16 wet film thickness. Use a non-shed 3/8" roller for back-rolling.
3. In hot or humid conditions, apply via 18" roller in a dip and roll method from a roller pan as increased heat and humidity will decrease the working time of the material.
4. This material will cure faster with exposure to moisture in the air.
5. To avoid visible differences in texture or mix-to-mix "tie-ins" do not exceed 5 – 10 minutes from one mix to another.
6. Use joints as natural breaks to divide sections of the floor.
7. If less texture is desired, apply a second coating of 6 – 8 mils (no more than 200 sq. ft. per gal.) on top of the previous coat within 24 hours.

Applying thicker than recommended, allowing material to pool, or rolling into late may leave a white, hazy appearance.

CLEAN UP & DISPOSAL

Clean up mixing and application equipment immediately after use. Use acetone, or xylene; do not use alcohol. Follow solvent manufacturer's safety instructions. Be sure to follow all local, state, and federal regulations when disposing of materials.

MAINTENANCE

To maintain the appearance and extend the life of the newly sealed surface, it is imperative to have a routine maintenance program. Dirt and debris that is tracked over a finished floor will quickly scratch and dull the surface. Place walk-off mats at entrances. Sweep and mop/scrub floors regularly using soft bristles/pads and a mild cleaner. Some cleaning products and equipment or improper use of these can damage a surface. Remove spills quickly to minimize damage and/or stains. For systems that support parked vehicles or other heavy items on rubber wheels, place a small piece of nonporous material, such as sheet metal or plexiglass between the tires and floor to prevent tire marks. Reapplication may be necessary in heavy traffic areas.

LIMITATIONS

⚠️ 16 mils total thickness of **1150FC** is required for MVT Resistance up to 12 lbs. per ASTM F1869 or 85% RH per ASTM F2170. Only apply **1150FC** as a primer/basecoat. Product will yellow over time, so spots not covered by chip will discolor. Do not apply at temperatures or thicknesses not recommended. Do not delay in applying the mixed material. Do not make partial mixes. Do not apply over loose or unsound concrete, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, metal, polyesters, or elastomeric membranes. Moving joints and shrinkage cracks may reflect through system. Joints that are designed to move may reflect through the finished flooring system if they are not honored. Tire marking may occur.

SHELF LIFE & STORAGE

12 months from date of manufacture when stored indoors in the original unopened container at 60°F – 85°F (16°C – 29°C) in a dry location with humidity below 65%.

⚠️ Do not allow materials to freeze.

LIMITED WARRANTY

SIMIRON warrants this product to be free from defect in the material that affects its performance for a period of one year (from date of purchase). SIMIRON will replace at no charge the quantity of the coating that SIMIRON determines has failed to perform, as the sole and exclusive remedy for any breach of this warranty and/or any other defect or failure of the coating. Proof of purchase is required. Cost of labor for application of any product specifically is excluded. Warranty is void if Simiron products are mixed with or used in conjunction with materials that are substituted for Simiron products. Warranty is nontransferable.

TECHNICAL ASSISTANCE



Information is available by calling SIMIRON
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SYSTEM GUIDE: 01/11/2024

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