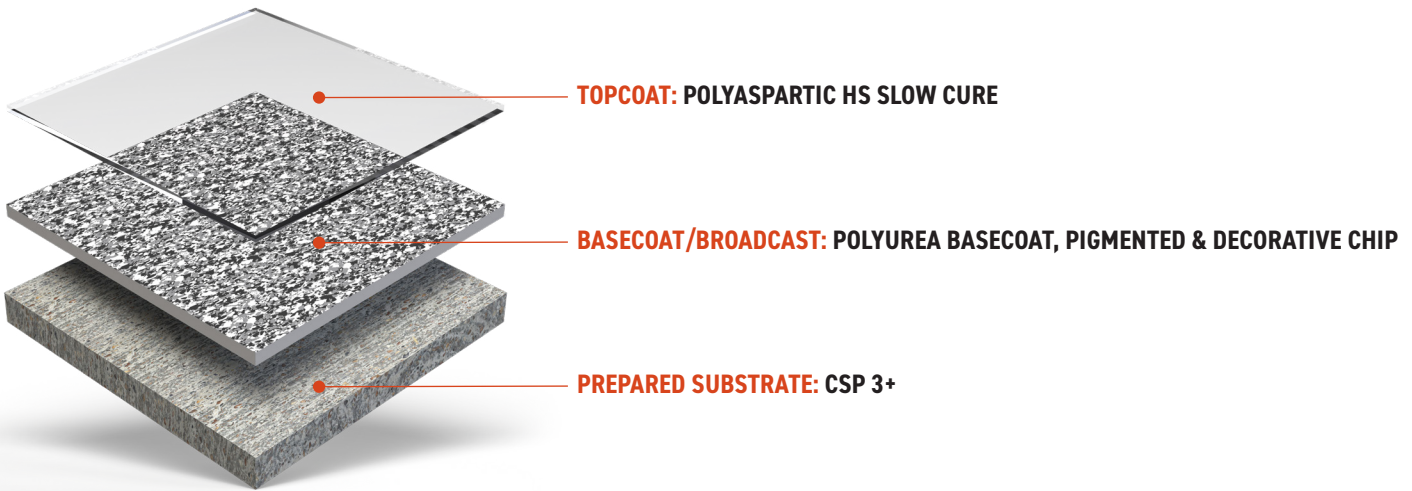




SIMFLAKE SB 1-DAY POLYUREA SYSTEM GUIDE



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 POLYUREA 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. The featured system has a gloss finish, but optional satin and non-skid texture is available. **Simflake SB 1-Day Polyurea** consists of a basecoat, 1/4" vinyl chip broadcast, and topcoat. The base system will produce an average nominal thickness of over 50 mils.

PRODUCT INFORMATION

PRODUCT NAME	SIZE	COLOR/FINISH	ITEM NUMBER
Polyurea Summer Basecoat Gray	1.5-Gallon Kit	Gray / Gloss	40009014
Polyurea Summer Basecoat Tan	1.5-Gallon Kit	Tan / Gloss	40009052
Polyurea Summer Basecoat Gray Base	5-Gallon	Gray	40008994
Polyurea Summer Basecoat Tan Base	5-Gallon	Tan	40009069
Polyurea Basecoat Activator	5-Gallon	Neutral	40009007
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

Polyurea is available in Gray and Tan. It is also available in a Winter (fast) version. Polyaspartic HS is available in Medium and Fast Cure speeds.

COVERAGE RATES

PRODUCT NAME	WET FILM THICKNESS	DRY FILM THICKNESS	COVERAGE RATE
Polyurea Basecoat	6 - 8 mils	6 - 8 mils	200 - 267 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	F	Methyl Ethyl Ketone	G	Betadine	G*
Vinegar	F	Xylene	F	Bleach	E
10% Citric Acid	E	Ethylene Glycol	E	Urine	E
10% Hydrochloric Acid	E	Isopropyl Alcohol	E	Coffee	E
30% Hydrochloric Acid (muriatic)	E	Mineral Spirits	E	Cola	E
10% Nitric Acid	NR	Brake Fluid	NR	Ketchup	F
50% Phosphoric Acid	NR	Transmission Fluid	E	Mustard	F
10% Sulfuric Acid	E	Motor Oil	E	Red Wine	E
37% Sulfuric Acid	G	50: 1 Gas/Oil Mixture	E		
70% Sulfuric Acid	NR	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. MVT rate must not exceed three pounds per 1,000 square feet per 24 hours, as directed by ASTM F1869. The relative humidity (RH) of the slab must not exceed 75%, 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. Completely remove previous coatings or sealers. 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.

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

POLYUREA BASECOAT: Basecoat/Broadcast

Polyurea mix ratio is 2 Parts Base to 1 Part Activator by volume. Choose gray or tan 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. Then, add Activator and mix for one minute until uniform. Do not mix more material than can be applied and broadcasted in 15 minutes (material will stiffen or tack-up).
2. Wearing spiked shoes, quickly apply material at 6-8 mils using a roller. Dip and roll. Do not apply any thicker than 200 sq. ft. per gallon or allow material to fill joints or deep holes/cracks - These spots will swell/raise due to foam formation.
3. 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. Since the broadcast is only into 6-8 mils, use 1/8" flakes for best results. Do not dump or allow the chip flakes to pile on the floor.
4. After coating under the chip sets up/cures enough to traffic (about 1.5 hours), scrape and remove loose/extra flake from the surface.
5. 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 Part A for 1 minute. Add Part B 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. 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

⚠️ Only apply Polyurea as a primer/basecoat. Product will yellow over time, so spots not covered by flake 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
Toll Free: 1.866.515.8775 / +1.248.686.3600



CORPORATE OFFICE:

Simiron Inc.
3000 Research Drive
Rochester Hills, MI 48309-3580
(248) 686-3600 / (866) 515-8775

SYSTEM GUIDE: 4/2023

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