



SIMCRETE SL

PRODUCT DESCRIPTION

SIMIRON SIMCRETE SL is a self-leveling urethane cement. This heavy-duty seamless flooring system is typically installed at 1/8" and broadcast to rejection with silica sand or quartz to achieve 3/16" total thickness. **Simcrete SL** is an extremely durable flooring system that withstands thermal shock, impact, abrasive traffic and chemical exposure.

Simcrete SL can be applied with a variety of surface textures and topcoat options to meet individual project requirements and can also be used as a concrete resurfacing product or a moisture vapor control system. **Simcrete SL** is formulated with a natural additive to be resistant to Fungi Growth per the industry standard ASTM G21.

FEATURES AND BENEFITS

- Seamless, hygienic finish
- Low odor, fast return-to-service
- Durable with chemical resistance
- Steam Cleanable
- Thermal Shock, High Temperature resistant
- Slip resistant
- Resistant to 12 lbs. moisture vapor transmission per ASTM 1869 or 85% RH per ASTM F2170
- Resistant to fungi growth per ASTM G21

RECOMMENDED USES

- Restore eroded concrete floors in tough environments
- Prep/Commercial Kitchens
- Food and Beverage Plants
- Meat and Poultry Plants
- Pharmaceutical / Chemical Processing
- Pulp and Paper Facilities
- Wet Processing and Packaging

PRODUCT INFORMATION

| PRODUCT NAME | SIZE | ITEM NUMBER |
|--|-----------------|-------------|
| Urethane Cement Part A (need 2 per 40-lb. bag SL filler) | 0.5-Gallon | 40007911 |
| Urethane Cement Part B (need 2 per 40-lb. bag SL filler) | 0.5-Gallon | 40007928 |
| Urethane Cement Part A | 5-Gallon Pail | 40007935 |
| Urethane Cement Part B | 5-Gallon Pail | 40007942 |
| Urethane Cement Part A | 250-Gallon Tote | 40008208 |
| Urethane Cement Part B | 250-Gallon Tote | 40008215 |
| SL Filler | 20-lb. Bag | 40008000 |
| SL Filler (SLX2) | 40-lb. Bag | 40004743 |
| UC Powder Pigment Red | 1-lb. Bag | 40008130 |
| UC Powder Pigment Gray | 1-lb. Bag | 40008123 |
| UC Powder Pigment Dark Gray | 1-lb. Bag | 40008222 |

TECHNICAL DATA

| PHYSICAL DATA | |
|-----------------------------------|---|
| Components | Three |
| Mix Ratio (by volume) | 1/2 gal Part A + 1/2 gal Part B + 20 lb. Bag Filler + 1 Bag Pigment |
| Pot-Life | 15 minutes @ 77° F |
| Solids by Volume | 100% |
| VOC's | 5 g/L |
| Application Temperature, Ambient | 40 to 85°F |
| Application Temperature, Material | 60 to 80°F |

THEORETICAL COVERAGE
 Coverage is 25 sq. ft. per unit at application thickness of 1/8".
 Finished floor thickness of 3/16" after broadcast to rejection.

| CURE TIMES | |
|---------------------|----------|
| Light Foot Traffic | 12 hours |
| Light Wheel Traffic | 24 hours |
| Full Cure | 7 Days |

Tested at 72°F and 50% humidity. Cooler temperatures may slow down cure times. Higher temperatures and humidity may speed up cure time

PHYSICAL PERFORMANCE

| PHYSICAL PROPERTIES | TEST METHOD | RESULTS |
|----------------------------|-------------|----------------------------------|
| Bond Strength | ASTM D4541 | 100% Concrete Failure |
| Compressive Strength | ASTM C579 | 8,550 psi |
| Flammability | | Self extinguishing over concrete |
| Flexural Strength | ASTM C580 | 2,780 psi |
| Impact Strength | ASTM D4226 | > 160 in./lbs. |
| Resistance to Fungi Growth | ASTM G21 | Passes, Rating of 1 |
| Service Temperature | | 190°F maximum |
| Tensile Strength | ASTM C307 | 1,120 psi |

SURFACE PREPARATION

Apply only to properly prepared clean, dry and sound concrete substrates that are free of all coatings, sealers, curing compounds, oils, greases or any other contaminants.

1. New concrete should be cured for a minimum of 14 days and reach a minimum 3,500 psi compressive strength to reduce possible shrinkage cracking in the concrete and allow for proper surface preparation. However, early curing movement, shrinkage or cracking that may occur in the concrete will be reflected through the **Simcrete SL** flooring.
2. Concrete that has been contaminated with chemicals or other foreign matter must be neutralized or removed.
3. Remove any laitance or weak surface layers including broom finished concrete surfaces.
4. Concrete should have a minimum pull-off strength of at least 300 PSI per ASTM D4541.
5. Surface profile shall be CSP-5 or greater meeting ICRI (international Concrete Repair Institute) standard guideline #03732 for coating concrete, producing a profile equal to 40-grit sandpaper or coarser.
6. Prepare surface by mechanical means to achieve this desired profile. All concrete surface irregularities, cracks, expansion joints, control joints and terminations should be properly addressed and prepared prior to application of the flooring. To prevent lifting or delamination, keyways (minimum 5/16" wide x 5/16" deep) must be cut at all terminations, joints, columns, doorways, and drains. Moving joints and cracks may reflect through the installed **Simcrete SL** flooring.
7. Option: Use **Simcrete CB** Cove Base material to install a cove and/or base as required. The cove/base can be installed before or after the installation of the **Simcrete SL** depending on the specification and or the desired result. **Simcrete CB** can be used to create a 45 degree cant cove as well.
8. Honor all joints that are designed to move by saw cutting the joint and installing a joint filler designed to accommodate the structural movement of the joint after the installing of the **Simcrete SL**.

SAFETY AND 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 and high-quality nitrile gloves. To acquire additional information or technical and safety data, please visit: www.simiron.com.

TEMPERATURE

| | | |
|----------|------------|------------|
| Air | 40° - 85°F | 4° - 29°C |
| Surface | 40° - 85°F | 4° - 29°C |
| Material | 60° - 80°F | 16° - 27°C |

Do not store material outdoors in a trailer or building that is not heated/air conditioned. Material that is cold will be difficult to work. Material at higher temperatures will have shorter pot-life and working time. Relative humidity must be less than 80%. DO NOT install unless the floor temperature is more than five degrees over the current dew point.

APPLICATION EQUIPMENT

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

- MAN-U-FAB M-61 (1 HP) mixer with a 10 gallon pail and TR4-10 mixing arm (www.mixall.com)
- Cam rake or trowel
- Spike roller
- Loop/Texture roller

APPLICATION PROCEDURE

The following installation summary is for reference only and should only be installed by trained persons experienced in polyurethane concrete flooring applications.

1. It is very important to utilize a proper mixer and paddle to ensure a complete mix and to reduce the risk of introducing excessive air into the mixture.
2. With the mixer running, pour 1/2 Gallon Part A into the pail.
3. If pigmenting, add 1 **UC Powder Pigment** bag to Part A and mix about 15 seconds.
4. Add 1/2 Gallon Part B and mix another 15 seconds.
5. Gradually add all contents of a 20-lb. **Simcrete SL** Filler bag into the liquid mixture and blend thoroughly until all particles are wetted out, normally about two minutes.
6. Immediately after mixing (within 3 minutes), spread the mixed **Simcrete SL** onto the floor at the desired thickness, using a cam rake or trowel. Approximately 1/8" for a 3/16" finished floor after broadcasting 20/40 mesh silica sand or quartz aggregate.
7. Lay abutting edges within 10 minutes to ensure a clean edge. A "wet edge" installation is imperative during large placements to avoid lines and ridges in the finished floor.
8. Evenly apply to desired thickness while trying to keep cam rake lines to a minimum. Back-roll across slurry with spike roller to help settle aggregates and blend cam rake lines. Further roll with loop/texture roller perpendicular to cam rake lines over entire floor to even and settle slurry prior to broadcasting.
9. Broadcast to rejection specified broadcast media (aggregate or decorative flakes) onto the wet slurry. Do not broadcast onto the wet edge area until settling and back-rolling is complete. Continue broadcasting until no wet areas remain. Coverage rate for quartz or silica sand is approximately .75 lbs./sq. ft. Coverage rate for decorative flake is approximately 6 sq. ft./lb.
10. After curing (approximately 6-8 hours to withstand foot traffic), remove all excess broadcast media and scrape floor as required.
11. Apply specified topcoat to lock system and achieve desired slip resistance. For a nonskid texture, remove excess aggregate and apply specified topcoat at 12-16 mils. See system guide for topcoat options.

CLEAN UP AND DISPOSAL

Clean up mixing and application equipment immediately after use. Use toluene, 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

- ⚠ Do not apply at a temperature below 40°F (10°C) or above 85°F (29°C).
- ⚠ Do not delay in mixing and pouring mixed material onto the floor.
- ⚠ Do not use partial bags or attempt to make a partial mix.
- ⚠ 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.
- ⚠ This product is not UV stable and will discolor unless top coated with UV stable coating system.
- ⚠ Blisters or outgassing bubbles may develop if sand or aggregate is not broadcast into the slurry while wet.
- ⚠ 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.
- ⚠ Must be applied over clean, sound, concrete. Oil, grease, silicones, mold release agents, paint, epoxy coatings, and other contaminants may negatively affect adhesion.



SIMCRETE SL

SHELF LIFE AND STORAGE

6 months from date of manufacture when stored indoors in the original unopened container at 60°F – 80°F (16°C – 27°C) in a dry location with humidity below 65%.

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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PRODUCT DATA SHEET: 6/2023

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