



# 1100SL - SLOW, STANDARD, FAST CURE

## PRODUCT DESCRIPTION

**SIMIRON 1100SL** is a 100% solids, zero VOC, blush-resistant, self-leveling epoxy. This basecoat is designed to be used over sealed concrete where high-build and durability are needed. This workhorse epoxy has toughness and good chemical resistance. Use with **Decorative Chip**, quartz, or **Metallic Additive** to create systems that are attractive and durable, or broadcast non-skid aggregates to produce a slip-resistant surface.

**1100SL SLOW CURE** has extended working time. It is an excellent choice for applicators with less experience or decorative coating installations like metallic that may require more work time.

**1100 SL FAST CURE** is an epoxy with reduced work and cure times for experienced installers with large crews and jobs that require shorter time between coats.

## FEATURES & BENEFITS

- Self Leveling
- Seamless
- Solvent Free
- 100% Solids
- Chemical Resistant
- Durable
- Excellent Adhesion Properties
- Impact Resistant
- User-Friendly Work Time

## RECOMMENDED USES

- Use as a basecoat over **1000HS Primer** for all **Simiron** systems as a build layer.
- Combine with **Metallic Additive** or broadcast into with **Decorative Chip**, quartz, or silica sand.

## PRODUCT INFORMATION

| PRODUCT NAME   | SIZE      | COLOR/FINISH  | ITEM NUMBER |
|--|-----------|---------------|-------------|
| 1100SL 100% Solids Self-Leveling Epoxy, Base               | 2-Gallons | Clear / Gloss | 40004156    |
| 1100SL Slow Activator                                      | 1-Gallon  | Clear / Gloss | 40008383    |
| 1100SL 100% Solids Self-Leveling Epoxy, Standard Activator | 1-Gallon  | Clear / Gloss | 40004155    |
| 1100 Fast Cure Activator                                   | 1-Gallon  | Clear / Gloss | 40009076    |

*3-gallons 1100SL clear can be pigmented with 1-pint Simiron U-Tint in the following colors: Haze Gray, Light Gray, Deck Gray, Sandstone, White, Black, & Tile Red (2 pints White and Sandstone can be used to improve hide).*



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## TECHNICAL DATA

| PHYSICAL DATA         |                                      |
|-----------------------|--------------------------------------|
| Components            | 2 (Base & Activator)                 |
| Color                 | Clear                                |
| Finish                | High Gloss                           |
| Mix Ratio (by volume) | 2 Base: 1 Activator                  |
| Curing Mechanism      | Chemical reaction between components |
| Solids by Volume      | 100%                                 |
| Solids by Weight      | 100%                                 |
| Mixed Viscosity       | 2800 cP                              |
| VOC (EPA Method 24)   | 0 g/L                                |

| THEORETICAL COVERAGE                      |                 |                  |
|---|-----------------|------------------|
| Wet Mil (microns)                         | 10 (254) - min. | 30 (762) - max.  |
| Coverage sq. ft./gal. (m <sup>2</sup> /L) | 53 (1.3) - min. | 160 (3.9) - max. |

|                    | CURE TIMES @ 72 °F (25 °C) 50% RH * |                 |                 |
|--------------------|-------------------------------------|-----------------|-----------------|
|                    | SLOW                                | STANDARD        | FAST            |
| Work Time          | 40 - 45 minutes                     | 20 - 25 minutes | 12 - 17 minutes |
| Tack Free          | 12 hours                            | 5.5 hours       | 3 hours         |
| Light Foot Traffic | 24 hours                            | 10 hours        | 6 hours         |
| Heavy Traffic      | 4 days                              | 2 days          | 2 days          |
| Full Cure          | 7 days                              | 5 days          | 5 days          |
| Minimum Recoat     | 16 hours                            | 8 hours         | 5 hours         |
| Maximum Recoat     | 24 hours **                         | 24 hours **     | 24 hours **     |

*\*Higher temperatures will shorten pot-life and working time.*

*\*\*Apply another coat of epoxy or a topcoat within 24 hours of the initial coat of 1100SL. If the re-coat window is missed, the coating system will need to be sanded.*

## PHYSICAL PERFORMANCE PROPERTIES

| PHYSICAL PROPERTIES                                   | TEST METHOD | RESULTS                           |
|---|-------------|-----------------------------------|
| Adhesion  | ASTM D4541  | > 400 psi (100% Concrete Failure) |
| Compressive Strength                                  | ASTM D695   | 11,600 psi                        |
| Flammability  | —           | Self-extinguishing over concrete  |
| Flexural Strength                                     | ASTM D790   | 12,800 psi                        |
| Gloss @ 60° Angle                                     | ASTM D523   | > 90                              |
| Hardness, Shore D (24 hours)                          | ASTM D2240  | 75                                |
| Taber Abrasion (CS17 Wheel, 1000 g Load, 1000 Cycles) | ASTM D4060  | 50 mg loss                        |
| Tensile Strength                                      | ASTM D638   | 9,600 psi                         |

## CHEMICAL RESISTANCE

| CHEMICAL                         | RESULTS | CHEMICAL              | RESULTS | CHEMICAL | RESULTS |
|----------------------------------|---------|-----------------------|---------|----------|---------|
| 10% Acetic Acid                  | G       | Methyl Ethyl Ketone   | G       | Betadine | G*      |
| Vinegar                          | G       | Xylene                | F       | Bleach   | E       |
| 10% Citric Acid                  | G       | Ethylene Glycol       | G       | Urine    | E       |
| 10% Hydrochloric Acid            | G       | Isopropyl Alcohol     | F       | Coffee   | E       |
| 30% Hydrochloric Acid (muriatic) | G       | Mineral Spirits       | E       | Cola     | E       |
| 10% Nitric Acid                  | G*      | Brake Fluid           | F       | Ketchup  | G       |
| 50% Phosphoric Acid              | F       | Transmission Fluid    | E       | Mustard  | G       |
| 10% Sulfuric Acid                | G       | 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     | G       |          |         |
| 50% Sodium Hydroxide             | E       | 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 dirt, dust, grease, oil, silicones 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, depending on total thickness of system. Refer to SSPC-SP13/NACE 6 or ICRI Technical Guideline No. 310.2. Prime concrete with 1000HS Primer to minimize outgassing bubbles.

New concrete must be cured a minimum of 28 days and should meet moisture vapor transmission (MVT) and relative humidity (RH) thresholds as described in Surface Preparation section.

### 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 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](http://www.simiron.com).

## APPLICATION EQUIPMENT

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

- Drill and Jiffy® type mixing blade
- Spiked Shoes
- Flat metal spring blade or flat EPDM squeegee.
- 3/8" shed-resistant woven roller covers with phenolic core (tape to remove loose roller hair).
- Edge rollers, chip brushes
- Painter's tape, duct tape, measuring and mixing containers

## TEMPERATURE

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

Higher temperatures will shorten pot-life and working time. Floor temperature must be at least 5 degrees over the current dew point. 1100SL epoxy used below 60°F must be the Fast Cure version.



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## APPLICATION PROCEDURE

1100SL 100% Solids Epoxy mix ratio is 2 Parts Base to 1 part Activator by volume. We recommend installing 1100SL over a Simiron primer to reduce outgassing on uncoated concrete floors.

1. Pre-mix Base at low speed for 1 minute. If pigmenting, add E-Tint into the Base. 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. Immediately pour all mixed 1100SL on the floor in a long bead approximately 8 – 12 inches wide. Do not scrape sides or leave pail overturned to drain. Do not attempt to roll material out of a bucket or roller pan.
3. Wearing spiked shoes, spread evenly at 10 – 30 mils by pushing a 1/8" notched squeegee along the bead. Overlap previous passes in order to ensure consistent coverage.
4. Push the squeegee with a slight angle to plow extra material to the side, moving it down the floor.
5. Using a non-shed 3/8" roller, back-roll the 1100SL evenly across the squeegee passes to minimize application lines and leave a consistent film thickness. **Do not back-roll material after it begins to get sticky. The epoxy will not level and colored epoxy may turn a different shade.**

## 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

- ⚠ Do not apply at a temperature or thickness not recommended.
- ⚠ Do not delay in pouring mixed material onto the floor.
- ⚠ 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 AND 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.

## TECHNICAL ASSISTANCE

- ❓ Information is available by calling SIMIRON  
Toll Free: 1.866.515.8775 / +1.248.686.3600

## 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.

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PRODUCT DATA SHEET: 6/2023