



SIMCRETE TC

PRODUCT DESCRIPTION

SIMIRON SIMCRETE TC is a three-component, urethane cement, topcoat that is used to seal a silica sand/quartz broadcast into **SIMCRETE SL** or **SF** to form a heavy-duty system that is extremely durable and withstands thermal shock, impact, abrasive traffic and chemical exposure.

Simcrete TC can also be used as a fast curing floor primer under Simcrete floor systems as well as a vertical cove primer under **Simcrete CB**. This cementitious urethane topcoat is formulated with a natural additive to be resistant to fungi growth per the industry standard, ASTM G21.

FEATURES AND BENEFITS

- Durable
- Low odor, fast return-to-service
- Thermal Shock, High Temperature resistance
- Steam Cleanable
- Chemical resistant
- Resistant to fungal growth per ASTM G21

RECOMMENDED USES

- Food and Beverage Plants
- Food Prep / Commercial Kitchens
- Meat and Poultry Plants
- Pharmaceutical Facilities
- Chemical Processing
- Pulp and Paper Facilities
- Wet Process & Packaging Areas

PRODUCT INFORMATION

1 mix = 1/2 gallon Part A + 1/2 gallon Part B + 1 Bag TC Filler + 1 UC Powder Pigment covers at least 120 sq. ft. over a broadcast into **Simcrete SL** or **SF**

PRODUCT NAME	SIZE	ITEM NUMBER
Urethane Cement Part A	0.5-Gallon	40007911
Urethane Cement Part B	0.5-Gallon	40007928
Urethane Cement Part A	5-Gallon	40007935
Urethane Cement Part B	5-Gallon	40007942
Simcrete Urethane Cement Part A	250-Gallon Tote	40008215
Simcrete Urethane Cement Part B	250-Gallon Tote	40008208
TC Filler	6.5 lb. bag	40008246
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 (without pigment)
Mix Ratio (by volume)	1/2 gal. Part A + 1/2 gal. Part B + 1 Bag Filler + 1 Bag Pigment
Pot-Life	15 minutes @ 77° F
VOC's	5 g/L
Application Temperature, Ambient	40 to 85°F
Application Temperature, Material	55 to 85°F

THEORETICAL COVERAGE	
Minimal Coverage is 120 sq. ft. (11.1 sq. m) per unit	
CURE TIMES	
Light Service	12 hours
Normal Service	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	5,900 psi
Flammability		Self extinguising over concrete
Flexural Strength	ASTM C580	2,900 psi
Impact Strength	ASTM D4226	> 160 in./lbs.
Resistance to Fungi Growth	ASTM G21	Passes, Rating of 1
Tensile Strength	ASTM C307	1,250 psi

CHEMICAL RESISTANCE

CHEMICAL	RESULTS	CHEMICAL	RESULTS	CHEMICAL	RESULTS
10% Acetic Acid	E	Methyl Ethyl Ketone	F	Betadine	E
Vinegar	E	Xylene	E	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	G	Brake Fluid	E	Ketchup	E
50% Phosphoric Acid	G	Transmission Fluid	E	Mustard	E
10% Sulfuric Acid	G	Motor Oil	E	Red Wine	E
37% Sulfuric Acid	F	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	E	Skydrol	E		

*Stain is only defect.

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

Chemical resistance was tested on fully cured material (after 5 days minimum). *Rating is functional and does not include discoloration or staining.



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SURFACE PREPARATION

Primary use is to topcoat aggregate broadcast into **Simcrete SL** or **SF**. Sweep and vacuum to remove excess particles before applying **Simcrete TC**.

If being used as a primer, 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 3-5 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. If using as a cove primer on cement board walls, sand to prepare the surface. DO NOT diamond grind.

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):

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

APPLICATION PROCEDURE

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

1. Pour 1/2 gallon of **Simcrete Part A** liquids into a measuring container.
2. If pigmenting, add 1 **UC Pigment Powder** Bag to the Part A and mix for 15 seconds.
3. Add 1/2 gallon of **Simcrete Part B** liquids to the Simcrete Part A and mix for 15 seconds.
4. Transfer mixed material into a clean mixing bucket or mortar mixer and add the **Simcrete TC Filler Part C**. Mix until the material is completely wet and uniform (1-2 minutes).
5. Immediately after mixing, pour material on to floor in ribbons.
6. To seal and topcoat a broadcast into **Simcrete SL** or **SF**, use a flat squeegee to move material uniformly across floor. Roll and back-roll material using 1/4" nap roller to a uniform appearance. Do not over work.



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CLEAN UP AND 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 for long-term performance and life expectancy of the newly sealed surface it is imperative to continue routine maintenance program. Each sealer type, traffic and other conditions require a certain routine maintenance program. To increase the life of the floor use inside and outside walk-off mats. Some cleaning products and equipment or improper use of products can damage a wear surface appearance over time. Reapplication may be necessary in heavy traffic areas with greater frequency. Periodic light applications are recommended to maintain gloss and protection.

LIMITATIONS

- ⚠ Material is not UV stable and will discolor unless topcoated with a coating system that is UV resistant.
- ⚠ 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.
- ⚠ Do not install on drywall walls or FRP.
- ⚠ Do not apply at a temperature below 40°F (4.4°C) or above 85°F (29°C).
- ⚠ Do not use material that has been frozen.
- ⚠ Do not split bags of Part C filler.

SHELF LIFE AND STORAGE

6 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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PRODUCT DATA SHEET: 09/19/2024

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