

PRODUCT DESCRIPTION

Sanitile 945 SL is a 100% solids, high performance, epoxy coating designed for concrete. Sanitile 945 SL is a self-leveling coating which may be applied as a neat, aggregate filled and/or reinforced coating system. Sanitile 945 SL is acceptable for use in USDA inspected facilities and is specially formulated to withstand some of industry's most aggressive chemicals.

USES, APPLICATIONS

- Process Areas
- Tank Farm Floors
- Production Areas
- USDA inspected facilities
- Spill Containment Areas
- Light Manufacturing

PRODUCT ADVANTAGES

- Excellent resistance to chemical attack
- Excellent abrasion and impact resistance
- Exceptional thermal shock resistance
- Superior bonding qualities
- High cohesive strength
- Low permeability
- Low odor

CHEMICAL RESISTANCE

Sanitile 945 SL is formulated to resist a variety of chemical solutions. Please consult chemical resistant chart or Carboline Technical Service Department for specific recommendations.

COLORS

Standard colors: Off-white (1898), Medium Grey (C703), Light Grey (C705), Tan (0217), Blue (4169), and Tile Red (0516)

VOC

0.02 lbs/gal (2 grams/liter)

PACKAGING

Sanitile 945 SL has a 2.2:1 mix ratio by volume and is available in 1 gallon and 5 gallon units.

1 gallon unit consists of:

- 1 gallon (partial) can of Part A (resin)
- 1 gallon (partial) can of Part B (hardener)

5 gallon unit consists of:

- 5 gallon (partial) pail of Part A (resin)
- 3 gallon (partial) pail of Part B (hardener)

COVERAGE

One gallon of Sanitile 945 SL will cover 64 sq. ft./5.96 sq. m at a thickness of 25 mils/0.63 mm. Application thickness may vary from 30-150 mils/0.75-3.8 mm, depending on expected service conditions (i.e., chemical exposure, temperature, traffic load and other mechanical abuse, splash-spill, etc.). Normally applied a minimum of 20 mils in one or two coats. Consult Carboline's Technical Service Department for specific thickness recommendations. In addition, coverage rates will be affected by the condition of the surface being coated (degraded vs. smooth, steel vs. concrete, etc.).

STORAGE CONDITIONS

Store all components between 40-110°F/4-43°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is minimum one year in the original, unopened container.

PHYSICAL CHARACTERISTICS

Compressive Strength.....13,500 psi (ASTM C-579: AFC)

Tensile Strength.....Neat: 5,500 psi
(ASTM D-638) Reinforced: 7,800 psi

Flexural Strength.....Neat: 7,200 psi
(ASTM D-790) Reinforced: 13,000 psi
(ASTM C-580) Aggregate Filled: 5,300 psi

Flexural Modulus of Elasticity.....Neat: 3.5×10^5 psi
(ASTM D-790) Reinforced: 6.1×10^5 psi
(ASTM C-580) Aggregate Filled: 9.7×10^5 psi

Hardness.....Neat: 70 (ASTM D-2240, Shore D)

Bond Strength.....> 400 psi
(ASTM D-4541) (100% concrete failure)

Water Vapor Transmission.....0.0120 grams/hr./ft² (ASTM E-96)

Permeability.....0.0042 perm. -in. (ASTM E96)

Weight per Mixed Gallon.....9.9 lbs.

Pot Life @ 75°F.....45 to 60 min.*

Cure Times @ 75°F.....Dry to Touch: 12 hrs
Foot traffic: 24 hrs
Vehicular traffic or Chemical Service: 36 hrs

Flammability.....Non-flammable

* Significantly less at elevated temperatures

Warming the materials (components A and B, aggregate) to 70-85°F/21-29°C twenty-four hours before application will facilitate handling.

SUBSTRATE PREPARATION

General

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent and rinsing with clean water.

Concrete

Concrete should be properly cured for 28 days and have the following characteristics:

- Substrate tensile strength of at least 300 psi.
- pH in the range of 7 to 11.

The surface must show open pores throughout and have a sandpaper texture.

Steel

Equipment base plates, etc. to be coated along with the concrete should be abrasive blasted to a near white metal finish (SSPC-10 or NACE-2) with a 1 to 2 mils anchor profile.

Masking

Mask surfaces that are not to be coated. This material is difficult to remove once applied.

April 2006 replaces February 2006

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Semstone® are registered trademarks of Carboline Company.

S945

Sanitile® 945 SL

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, substrate temperature must be between 60-80°F/15-27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 50°F/10°C. This will allow the material to achieve a proper cure. Also, a cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (60-80°F/15-27°C) will aid in the material's workability; however, a hot substrate (80-100°F/27-37°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling. Substrate temperature should be greater than 5°F/3°C above dew point.

APPLICATION

Priming

Carboguard 1340 or Semstone 110 should be used to prime concrete prior to the application of Sanitile 945 SL. Apply primer at a rate of 400 ft²/gal for Carboguard 1340 and 200 ft²/gal for Semstone 110.

Note: For substrates with out-gassing concerns, primer should be applied while the substrate temperature is decreasing for best results.

Neat Application

A neat application is typically for thicknesses below 30 mils.

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into the Part A pail and mix thoroughly for 2 minutes.

Apply Sanitile 945 SL at the desired thickness using a notched squeegee. Back roll the Sanitile 945 SL with a spiked roller, this will assist in air release from the coating. When excessive out-gassing occurs, it has been found for best results to apply two coats with light sanding between coats.

Broadcast Application

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into the Part A pail and mix thoroughly for 2 minutes.

Apply a base coat at the specified thickness using a squeegee or a notched trowel. For a 60 mil/1.5 mm system apply a 25 mil/0.63 mm base coat and for a 125 mil/3.1 mm system apply a 50 mil/1.3 mm base coat. Immediately after applying the base coat begin broadcasting the aggregate until a dry appearance is achieved.

Note: The use of a 20/40 mesh aggregate is highly recommended. One gallon of 20/40 mesh silica weighs 13-14 lbs.

After the base coat has cured, remove the loose aggregate. Apply a 15-20 mil/0.38-0.5 mm topcoat using a squeegee or roller.

Material Coverages

Below is a list of coverages for the Broadcast application depending upon desired thickness and texture.

MATERIAL	Nominal 60 mils/1.5 mm	Nominal 75 mils/1.9 mm	Nominal 125 mils/3.1 mm
Carboguard 1340 @ 4 mils or (Semstone 110 @8 mils.)	400 ft ² /gal (200 ft ² /gal)	400 ft ² /gal (200 ft ² /gal)	400 ft ² /gal (200 ft ² /gal)
Sanitile 945 SL Base Coat	64 ft ² /gal	45 ft ² /gal	32 ft ² /gal
Aggregate	1.5 lbs./ ft ²	1.5 lbs./ ft ²	2 lbs./ ft ²
Sanitile 945 SL Topcoat - 15 mils	100 ft ² /gal	100 ft ² /gal	100 ft ² /gal

Blended Application

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into Part A and thoroughly mix for 2 minutes. After mixing Part A and Part B, split the mix into two 5 gallon buckets. While continuing to mix with a Jiffy Mixer, slowly add the aggregate.

Note: A 2:1 sand to liquid weight ratio will produce a trowel-like consistency. A 3:1 sand to liquid weight ratio will produce a grout-like consistency.

Note: The use of a 20/40 mesh silica aggregate is highly recommended. One gallon of 20/40 mesh silica weighs 13-14 lbs.

Apply the mixture at the desired thickness using a notched trowel.

Note: The surface must be sanded prior to re-coating after an initial cure of 24 hours.

For vertical applications contact Carboline's Technical Service Department.

Material Coverages

Below is a list of coverages for the Blended application.

MATERIAL	Coverage
Carboguard 1340 (4 mils) or Semstone 110 (8 mils)	400 ft ² /gal 200 ft ² /gal
Sanitile 945 SL mortar - 125 mils	20 sq.ft./gal

Reinforced (Broadcast)

A fiberglass scrim cloth may be added to the 125 mil broadcast system. For the 125 mil broadcast system. Apply fiberglass scrim cloth into the base coat prior to applying the aggregate.

Reinforced (Blended)

A fiberglass scrim cloth may be added to the 125 mil blended system. For the 125 mil blended system apply a 25-35 mil/0.63-0.88 mm base coat and lay the fiberglass scrim cloth into the base coat.

Allow the base coat to become tacky and then apply Sanitile 945 SL mortar at 90-100 mils.

Note: Application of base coat, fiberglass scrim cloth, and mortar should be completed in the same day.

For vertical applications contact Carboline's Technical Service Department.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperatures are 50°F/10°C
- Maximum surface temperatures should not exceed 90°F/32°C
- Substrate temperature should be greater than 5°F/3°C above dew point.
- Application and curing times are dependent upon ambient and surface conditions.

PRECAUTIONS

- MEK, Toluene or Xylene solvents are recommended for clean up of Sanitile 945 SL material spills. Use these materials only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- The use of a NIOSH/MSHA approved respirator using a #TC-23C-738 organic vapor or a #TC-23C-740 organic vapor acid gas cartridge is mandatory.
- The selection of proper protective clothing and equipment will significantly reduce risk to injury. Body covering apparel, safety goggles and impermeable gloves are highly recommended.
- In case of contact, flush the area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- Use only with adequate ventilation.

NOTES

- Material Safety Data Sheets are available on request.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Carboline products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.



350 Hanley Industrial Court, St. Louis, MO 63144-1599
314/644-1000 314/644-4617 (fax) www.carboline.com

An **RPM** Company

April 2006 replaces February 2006

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Semstone® are registered trademarks of Carboline Company.