carboline®
Coatings - Linings - Fireproofing

Semstone 140 CT

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Description	Semstone 140CT is a 100% solids, high performance, epoxy lining system designed for concrete. Semstone 140CT is a semi-leveling coating which may be applied as an aggregate filled and/or reinforced coating system. Semstone 140CT is specially formulated to withstand some of industry's most aggressive chemicals. Used for: • Process Slabs • Tank Farm Floors • Chemical Loading and Unloading Areas • Spill Containment Areas
Features	• Excellent resistance to chemical attack • Excellent abrasion and impact resistance • Exceptional thermal shock resistance • Superior bonding qualities • High cohesive strength • Low permeability • Low odor
Primer	Apply Semstone 110 Primer in accordance with the product data sheet. Allow the primer to cure prior to the application of Semstone 140CT. **Note:** For substrates with out-gassing concerns use Carboguard 1340. Primer should be applied while the substrate temperature is decreasing.
Typical Uses	• Process Slabs • Tank Farm Floors • Chemical Loading and Unloading Areas • Spill Containment Areas

SUBSTRATES & SURFACE 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. For recommendations or additional information regarding substrate preparation, please contact Carboline's Technical Service Department. **Coverage:** Semstone 140CT will cover 1,604 mils sq. ft./gal. For estimating purposes, one gallon of Semstone 140CT 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, immersion service vs. splash-spill, etc.). 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.).
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.
Concrete or CMU	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.

SUBSTRATES & SURFACE PREPARATION

Special Instruction

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperatures are 35°F/2°C at the time of application.
- Maximum surface temperatures should not exceed 60°F/16°C during the time of application.
- Substrate temperature should be greater than 5°F/3°C above dew point.
- Application and curing times are dependent upon ambient and surface conditions. Consult Carboline's Technical Servicem Department if conditions are not within the recommended guidelines.

MIXING & THINNING

Mixing

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, substrate temperature must be between 35°F/2°C and 60°F/16°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 35°F/2°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 hot substrate (60°F/16°C to 100°F/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.

Pot Life

35°F 30-40 min*
*Significantly less at elevated temperatures

CURING SCHEDULE

Surface Temp.	Chemical Service	Dry to Touch	Firm
2°C (35°F)	36 Hours	8 Hours	16 Hours

CLEANUP & SAFETY

Cleanup

MEK, Toluene or Xylene solvents are recommended for clean up of Semstone 140CT material spills. Use these materials only in strict accordance with manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.

Safety

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.

Ventilation

- 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.
- Use only with adequate ventilation.

PACKAGING, HANDLING & STORAGE

Shelf Life

Keep product tightly sealed in its original container until ready for use. Store at 50-85°F/10-29°C out of direct sunlight. The cure mechanism of this product is not affected for a minimum of 24 months. Film build (per coat) decreases with age. Fresh: Over 60 mils; 3-6 months: 50-30 mils; After 6 months: Less than 30 mils Follow intercoat preparation requirements. Twenty-four hours before application, all materials (components A and B, aggregate, etc.) should be stored at 70-85°F/21-29°C to facilitate handling.

PACKAGING, HANDLING & STORAGE

Shipping Weight (Approximate)	0.84 gallon unit weighs 9.6 lbs (4.4 kg) and includes: Part A - 0.64 gallon (resin) Part B - 0.2 gal (hardener) 4.21 gallon unit weighs 46.4 lbs (21.1 kg) and includes: Part A - 3.2 gallon (resin) Part B - 1.0 gallon (hardener)
Storage Temperature & Humidity	Store all components between 40-75°F/4-24°C in a dry area. Keep out of direct sunlight. Twenty-four hours before application, all materials (components A and B, aggregate, etc.) should be stored at 70-85°F/21-29°C to facilitate handling.
Storage	Avoid excessive heat and do not freeze.

WARRANTY

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, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. 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. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.