

SELECTION & SPECIFICATION DATA

Description	Semstone 870 is a high performance, vinyl ester lining system designed for concrete. Semstone 870 is a semi-leveling coating which may be applied as an aggregate filled and/or reinforced coating system. Semstone 870 is specially formulated to withstand some of industry's most aggressive chemicals, including a broad range of organic chemicals. A cooler temperature version (870 CT) is available on special order. Uses: Process Slabs Tank Farm Floors Chemical Loading and Unloading Areas Spill Containment Areas
Features	<ul style="list-style-type: none"> • Excellent resistance to chemical attack • Excellent abrasion and impact resistance • Exceptional thermal shock resistance • Superior bonding qualities • High cohesive strength • Low permeability • Low odor
Finish	N/A
Topcoats	Not Applicable

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.
Steel	<p>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.</p> <p>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.</p>
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.
Special Instruction	<ul style="list-style-type: none"> • Apply only on clean, sound, dry and properly prepared substrates. • Minimum ambient and surface temperatures are 65°F/18°C at the time of application. • Maximum surface temperatures should not exceed 90°F/32°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 Service Department if conditions are not within the recommended guidelines.

Semstone 870 CT

PRODUCT DATA SHEET



PERFORMANCE DATA

Test Method	Results
Bond Strength (ASTM D-4541)	>400psi (100% concrete failure)
Compressive Strength	17,500 psi (ASTM C-579: AFC)
Flammability	Non-flammable
Flexural Modulus of Elasticity (ASTM D-790) (ASTM C-580)	Neat: 10.9×10^5 psi Reinforced: 15.6×10^5 psi Aggregate Filled: 15.3×10^5 psi
Flexural Strength (ASTM D-790) (ASTM C-580)	Neat: 8,200 psi Reinforced: 22,000 psi Aggregate Filled: 5,800 psi
Hardness	Neat: 80 (ASTM D-2240, Shore D)
Permeability	0.0042 perm. -in. (ASTM E-96)
Tensile Strength (ASTM D-638)	Neat: 5,300 psi Reinforced: 10,000 psi
Water Vapor Transmission	0.0120 grams/hr./ft ² (ASTM E-96)
Weight per Mixed Gallon	10.4 lbs.

MIXING & THINNING

Pot Life | Pot Life @ 75°F 45 to 60 min*

CURING SCHEDULE

Surface Temp.	Chemical Service	Dry to Touch	Firm
16°C (60°F)	48 Hours	12 Hours	24 Hours
24°C (75°F)	48 Hours	12 Hours	24 Hours

PACKAGING, HANDLING & STORAGE

Shelf Life | The shelf life is 3 months in the original, unopened container.

Storage Temperature & Humidity | Store all components between 50-65°F/10-18°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 months in the original, unopened container. Twenty-four hours before application, all materials (components A and B, aggregate, etc.) should be stored at a 60-75°F/18-21°C to facilitate handling.

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.