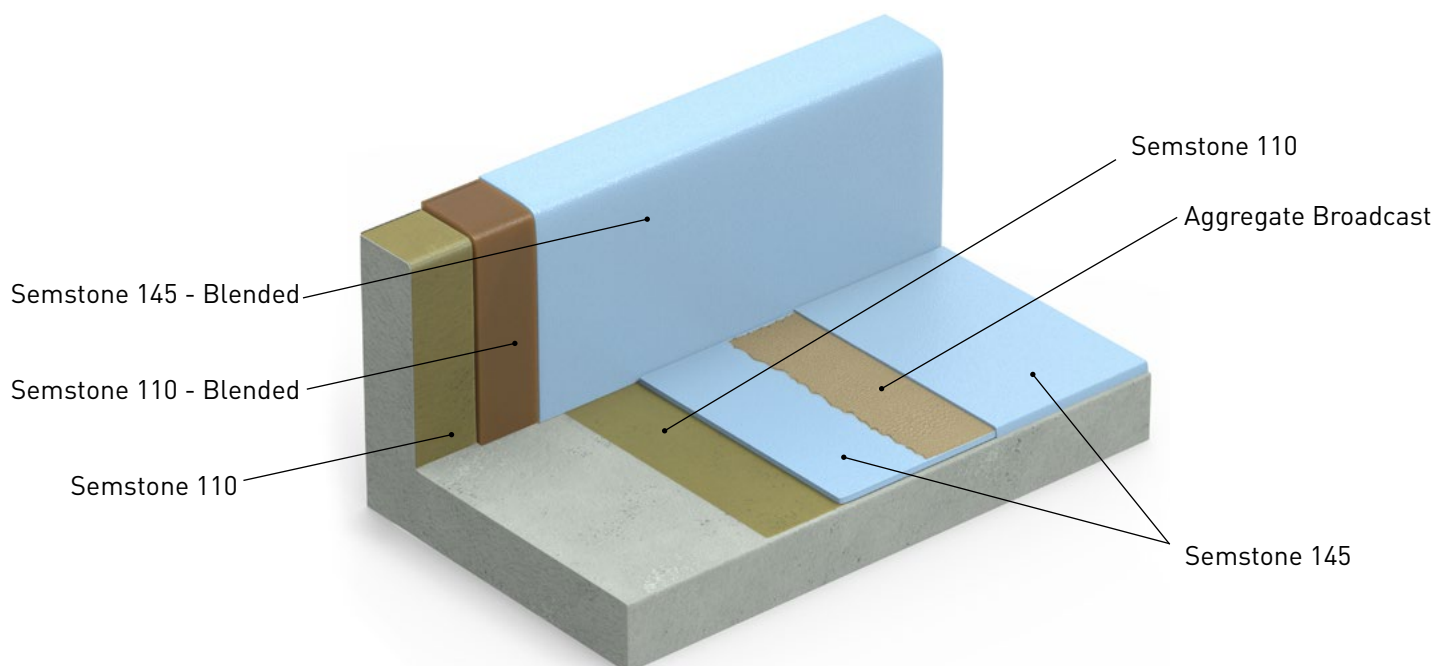


Semstone® 145 AFC

SYSTEM INFORMATION SHEET



- » **Broadcast aggregate filled coating system design for ultimate concrete protection in secondary containment areas.**
- » **Demonstrates excellent resistance to chemical attack.**
- » **Typical uses include:**
 - Process slabs
 - Tank farm floors
 - Chemical loading and unloading areas
 - Spill containment areas

TEST METHOD	RESULTS
Hardness, Shore D (ASTM D2240)	75 (Semstone 145 neat)
Adhesion (ASTM D4541)	100% concrete failure
Compressive Strength (ASTM C579)	16,000 psi
Flexural Strength (ASTM C580)	6,200 psi
Flexural Modulus of Elasticity (ASTM D790)	12.6 x10 ⁶ psi

Semstone 145 AFC

SYSTEM INFORMATION SHEET

HORIZONTAL SYSTEM					
SYSTEM STEPS	PRODUCT	THICKNESS	THEORETICAL COVERAGE RATE	RATIO	APPLICATION EQUIPMENT
A. Primer	Semstone 110	5 - 6 mils	400 - 480 ft² per 1.5 gallon kit	2:1 A:B	Medium nap roller
The mixed product can be poured out directly to the floor. Spread to the desired thickness with a medium nap roller. An optional light aggregate broadcast can be employed to protect the primer and extend maximum recoat times. Allow primer to cure to tack-free prior to continuing.					
B. Body coat	Semstone 145	25 - 30 mils	53 - 64 ft² per gallon	4:1 A:B	Notched squeegee Medium nap roller
The mixed product can be poured out directly to the floor. Spread to the desired thickness with a notched squeegee, finish by backrolling with a medium nap roller.					
C. Aggregate fill	20/40 mesh aggregate		1.5 lbs per ft²	N/A	N/A
Aggregate to be clean and dry. Broadcast aggregate evenly and achieve a dry beach sand appearance. Allow to cure until the system can support weight without disrupting the basecoat. Once cured, remove all excess aggregate.					
D. Topcoat	Semstone 145	15 - 20 mils	80-100 ft² per gallon	4:1 A:B	Flat squeegee Medium nap roller
Apply Semstone topcoat with flat squeegee and back-roll with a medium nap roller. Allow to cure a minimum of 48 hours @ 75°F prior to putting the area in service.					
NOTE: The topcoat thickness can be adjusted to reflect more of an aggressive non-skid effect or a more cleanable effect. @ 15 mils, the surface would result in an aggressive non-skid. @ 20 mils, the surface would result in a good non-skid surface and easily cleanable. @ 25 mils, the surface will lose it's non-skid and be very cleanable					

CHEMICAL RESISTANCE

Semstone 145 has demonstrated excellent resistance to the following chemicals.*

Aluminum Chloride	Calcium Nitrate	Fatty Acids	Hydrogen Sulfide Gas	Phenol<5%
Aluminum Hydroxide	Castor Oil	Ferric Nitrate	Isopropyl Acetate	Phosphoric Acid <85%
Aluminum Nitrate	Chlorinated water	Ferric Sulfate	Jet Fuel	Pine Oil
Ammonium Chloride	Citric Acid	Fuel Oil	Kerosene	Seawater
Beer	Crude Oil	Gasoline	Lard	Skydrol
Benzene	Deionized Water	Glycerine	Linseed Oil	Sodium Hydroxide <50%
Black Liquor	Dextrose	Glycolic Acid	Lithium Chloride	Sodium Phosphate
Boric Acid	Diesel Fuel	Heptane	Maleic Acid	Sulfuric Acid <98%
Brine	Diethylbenzene	Hexane	Methyl Ethyl Ketone	Tall Oil
Butanol	Ethyl Alcohol	Hydrochloric Acid<20%	Mineral Oil	Tap water
Calcium Chloride	Ethyl Benzene	Hydrofluoric Acid<20%	Mineral Spirits	White Liquor
Calcium Hydroxide	Ethylene Glycol	Hydrofluosilicic Acid<25%	Naphtha	Vegetable Oil

*The chemical resistance of Semstone 145 is not limited to the above list. For more details contact Carboline Technical Service.

Semstone 145 AFC

SYSTEM INFORMATION SHEET

VERTICAL APPLICATION					
SYSTEM STEPS	PRODUCT	THICKNESS	THEORETICAL COVERAGE RATE	RATIO	APPLICATION EQUIPMENT
1. Primer	Semstone 110	5-6 mils	400- 480 ft ² per 1.5 gallon kit	2:1 A:B	Medium nap roller
The mixed product can be rolled directly onto the wall. Allow to cure to a tacky state (6-8 hours) prior to topcoating.					
2. Form void filler	Semstone 110 - Blended*	up to 1/8 inch	64 ft ² per 1.5 gallon kit @1/16 inch	2:1 A:B	Flat trowel
Blend Semstone 110 with a fine silica (80/120 mesh) and Semstone Thixotrope "D" (Cab-O-Sil TS-720) at a ratio of 1:1:1 by Volume. Use a flat trowel to work into the voids as a scratch coat. Provide a (1" - 1-1/2") - 45° Chamfer at all inside and outside corners. Additional silica will be required to form the chamfer. *Carboguard 510 is an acceptable substitute. Refer to Carboguard 510 system information sheets for installation instructions.					
3. Topcoat	Semstone 145 - Blended	25-32 mils	40 ft ² per gallon @25 mils** 51 ft ² per gallon @32 mils**	4:1 A:B	Flat trowel
Blend Semstone 145 with a fine aggregate (80-120 mesh) and Semstone Thixotrope "D" (Cab-O-Sil TS-720) at a ratio of 1 part Semstone 145 to 1 part fine aggregate to .5 part Thixatrophe "D" by volume. If necessary, add Semstone Thixotrope Part "D" until the mixture hangs on a stir stick. Trowel apply @ 25 - 32 mils. Remove trowel marks with odorless mineral spirits on a clean trowel. **Coverage per blended gallon. For Chemical Service, allow to cure 48 hours @ 75°F prior to putting the area in service.					

INSTALL

This document is meant as a guideline for the installation of the Semstone 145 AFC system. Contact Carboline Technical service for further assistance prior to the installation of a Semstone system.

SURFACE PREPARATION

Follow NACE 6/SSPC 13 guidelines. Concrete or screed substrate should be sound, free from laitance, dust, and other contamination with a minimum of 3,625 PSI compressive strength. The substrate should be dry and free from excess rising moisture. Abrade the surface to achieve an ICRI CSP 2-7 surface profile.

All control joints must be honored. Welded joints and cracks in the concrete may be coated, but if movement occurs the coating will also crack. All residues must be removed to provide a dry, dust free open textured surface. Contact Carboline Technical Service for further information.

MIXING

All mixing should follow the mixing instructions on the specific Semstone Product Data pages.



Carboline Company
Global Headquarters
2150 Schuetz Road
St. Louis, MO 63146 USA
PH: +1-314-644-1000
www.carboline.com

NOTE:

The technical data presented in this document is accurate to the best of Carboline's knowledge based on laboratory testing of the product(s) or system(s) described. Actual results in the field may vary depending on field conditions and application methods. The performance characteristics stated do not constitute a guarantee or warranty that the products will meet the stated results under all circumstances. Contact Carboline technical staff with questions.