Carboguard® 510 SG

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy Modified Cementitious Mortar
Description	A spray-grade, economical, epoxy-based repair mortar, patching and surfacing compound that exhibits excellent bond strength to concrete and other masonry surfaces. It is ideally suited for resurfacing deteriorated concrete in wastewater environment. Topcoated with Carboline's lining systems provides protection from H_2S or MIC. Unique spray grade (SG) formulation speeds application properties for quick turnaround projects.
Features	• Epoxy modification improves chemical resistance for wastewater environment • Trace VOC • Water based, low odor • Excellent film strength, abrasion, and impact resistance • Easily topcoated to provide additional chemical resistance or appearance • Self-priming over concrete • Aggregate reinforced
Color	Greenish Gray
Primer	Normally self-priming to concrete or masonry surfaces.
Dry Film Thickness	0.2 inches (6350 microns) per coat "Normal 1/4 inch (6350 microns) per coat to resurface substrate. Thicknesses greater than 1/4 inch may require application techniques as described under Substrates & Surface Preparations."
Theoretical Coverage Rates	3-gallon mixed unit will yield approximately 39 ft^2 at 1/8” thick.
VOC Values	**As Supplied** : < 0.10 lbs/gal (12 g/L) **EPA Method 24** (calculated minus water and exempt solvents)
Limitations	• Minimum surface and ambient temperature is 50 °F (10 °C). • Not for use under vinyl ester or polyester materials.
Topcoats	May be coated with Epoxies, Epoxy-Novolacs, Polyurethanes, or Polyureas depending on exposure and need.

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Concrete or CMU	Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the appropriate ICRI CSP 4-7. **CMU:** Mortar joints should be thoroughly cured for a minimum of 15 days at 75 °F (24 °C) and 50% relative humidity or equivalent. (compaction)

MIXING & THINNING

Mixing	Carboguard 510 SG is supplied as a 3-component kit consisting of: 1.5 quarts of Part A (liquid) 3 quarts of Part B (liquid) A pail containing 11 lbs of Portland cement and 2.5 gals (32.5 lbs) of (dry) sand is Part C (Dry) Power mix Parts A and B together. For ease of mixing, slowly add the cement powder first, followed by the sand. Power mix until uniform. Thinning is not normally needed.
Pot Life	45-60 minutes at 75 °F (24 °C)

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General)	Carboguard 510 SG is formulated for spray application using a piston-type pump with atomized gun set-up. Mixing can be done by a standard, Jiffy-type mixer or one that is “mountable” on a carriage to aid in handling. It may also be applied and/or smoothed out by trowel and other concrete finishing tools. For filling form voids on vertical surfaces that are 3/8" to 1/2" deep force the material into the voids and allow to set 30 to 60 minutes @ 75 °F prior to re-troweling and/or smoothing. For voids deeper than 1/2" force the material into voids in lifts (successive coats) or form the surface. Formed surfaces must have a minimum of 1" annular space to form surface for rodding.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	125°F (52°C)	110°F (43°C)	90%

This product simply requires the substrate temperature to be above the dew point. Special application techniques may be required above or below normal application conditions. Note: When conditions such as excessive wind and high ambient temperatures exist, cover the area with polyethylene sheeting

CURING SCHEDULE

Surface Temp.	Set Time to Topcoat	Light Traffic	Heavy Traffic	Final Cure
75°F (24°C)	12 Hours	24 Hours	48 Hours	28 Days

These times are based on up to 1/2" thickness at 70 °F (21 °C). Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times. During high humidity conditions, it is recommended that the application be done while temperatures are increasing.
Carboguard 510 SG must be clean and free of all contaminants prior to topcoating. It is recommended that the Carboguard 510 SG have surface roughness or profile as designated by the topcoat to maximize intercoat adhesion. The maximum recoat time with an approved solvent based epoxy is 60 days at 85 °F. The maximum recoat time with an approved 100% solids coating is 7 days at 85 °F. If these recoat times are exceeded it will be necessary to Brush-Off Blast Clean per NACE No. 4/SSPC-SP 7 or abrade the surface to create sufficient mechanical anchor profile. Remove all contaminants prior to topcoating.

CLEANUP & SAFETY

Cleanup	Use scouring pads and water. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation and wear gloves or use protective cream on face and hands. Keep container closed when not in use.

CLEANUP & SAFETY

Ventilation	When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

PACKAGING, HANDLING & STORAGE

Shelf Life	24 months at 75 °F (24 °C) *Shelf L ife: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	50-90 °F (10-32 °C) **Do not freeze.**
Storage	Store Indoors.
Shipping Weight (Approximate)	3.06 Gal. Kit - 55 lbs (25 kg)
Flash Point (Setaflash)	Part A >200 °F (93 °C)) Part B >200 °F (93 °C) Aggregate Container: Sand and Cement: Not applicable.

WARRANTY

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