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 environments. 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 environments • Trace VOC - <12 mg / lt, EPA Method 24) • Water based, low odour • Excellent film strength, abrasion, and impact resistance • Easily topcoated to provide additional chemical resistance or appearance • Self-priming over concrete • Aggregate reinforced
Colour	Greenish Grey
Primer	Normally self-priming to concrete or masonry surfaces.
Dry Film Thickness	6350 microns (0.2 inches) per coat Normally 6350 microns (¼") per coat to resurface substrate. Thicknesses greater than 6 mm may require application techniques as described under "Substrates & Surface Preparations".
Theoretical Coverage Rates	3.06 US gallon (11.57 litres) mixed unit will yield approximately 3.7 square metres at 3 mm thick.
Limitations	• Minimum surface and ambient temperature is 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 (or equivalent standard). <u>Dealing with form voids on vertical surfaces</u>: • • 6 mm depth 510SG in a single application • • 9 to 13 mm depth, fill voids and let set for 30 to 60 minutes @ 21-25°C and re-trowel and rubber float • • 12 mm and above apply in lifts (successive coats) or form the surface. Formed surfaces must have a minimum of 25 mm annular space to form surface for rodding (compaction)

PERFORMANCE DATA

Test Method	Results
Abrasion Resistance Taber Abrader CS-17 Wheel, 1 kg load 1000 cycles	0.09 mg weight loss
ASTM C-109 Compressive Strength	40.3 MPa (5840 psi)
ASTM C-190 Tensile Strength	6.0 MPa (865 psi)
ASTM C-348 Flexural Strength	12.7 MPa (1840 psi)
Dynonomometer Adhesion to Concrete	2.4 MPa (350 psi) Concrete cohesion failure

MIXING & THINNING

Mixing

Carboguard 510 SG is supplied as a 3-component kit consisting of:
•• Part A - 1.5 quarts (1.4 lt liquid)
•• Part B - 3 quarts (2.8 lt liquid)
•• Part C - 5 gallon pail containing 11 lbs Portland cement and 2.5 gallons dry sand (powders)
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.
For trowel application thinning is not normally needed.
Thin for spraying with clean potable water using 460 mls per kit and up to maximum 700 mls per kit in hotter conditions.

Thinning | Potable Water - restricted to levels noted above.

Pot Life | 45-60 minutes at 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

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	52°C (125°F)	43°C (110°F)	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
24°C (75°F)	12 Hours	24 Hours	48 Hours	28 Days

These times are based on up to 12.5 mm (1/2") thickness at 21 °C. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times.
The maximum recoat time without surface preparation is 7 days at 30°C. Always take precautions to prohibit the surface from becoming contaminated prior to application of topcoating, it will be necessary to detergent wash and abrasive blast or sand the surface if it has been contaminated.

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.
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 suitable approved respirator.

PACKAGING, HANDLING & STORAGE

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

WARRANTY

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