

SELECTION & SPECIFICATION DATA

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| Generic Type | Epoxy modified water based cementitious mortar |
| Description | An economical epoxy patching and surfacing compound that exhibits excellent bond strength to concrete and other masonry surfaces. It is ideally suited for patching spalled concrete and masonry wall surfacing to accept subsequent topcoats. Carboguard 510 repairs damaged concrete, fills large cracks, and can be used as a coving and sloping material for floor-wall transitions. |
| Features | <ul style="list-style-type: none"> • Epoxy modification improves chemical resistance for wastewater environment • Water based, low odor • Excellent film strength, abrasion, and impact resistance • Is castable, making it suitable for restoring pump foundations • Easily topcoated to provide additional chemical resistance or appearance • Used as a primer by mixing Parts A and B only - no sand, cement or aggregates • Topcoated with Carboline's lining systems provides protection from H₂S or MIC |
| Color | Gray |
| Primer | Normally self-priming on concrete and masonry surfaces by mixing only Part A and Part B together - do not add sand, portland cement, or pea gravel. |
| Dry Film Thickness | 0.2 - 0.5 inches (6350 - 12700 microns) per coat Normal 1/4- 1/2 inch per coat to resurface substrate. May be applied up to 2 inches (50800 microns) as required to fill voids. |
| Spreading Rate | As Primer Only: 120 square feet per gallon 3-gal kit with aggregate blend: 20 square feet @1 inch thick |
| VOC Values | As Supplied : < 0.10 lbs/gal (12 g/L) EPA Method 24 (calculated minus water and exempt solvents) |
| Limitations | <ul style="list-style-type: none"> • 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, Polyurethanes, or Epoxy-Novolacs depending on exposure and need. |

SUBSTRATES & SURFACE PREPARATION

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| 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. |

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

| Test Method | System | Results |
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| Abrasion Resistance Tabor Abrador CS-17 Wheel | Carboguard 510 | 0.09 mg |
| ASTM C-109 Compressive Strength | Carboguard 510 | 5840 psi |
| ASTM C-190 Tensile Strength | Carboguard 510 | 865 psi |
| ASTM C-348 Flexural Strength | Carboguard 510 | 1840 psi |
| Dynamometer Adhesion to concrete | Carboguard 510 | 350 psi |

Test reports and additional data available upon written request.

MIXING & THINNING

Mixing | **Primer:** power mix Parts A and B separately and then power mix them together until thoroughly mixed. Do not add sand, portland cement, or aggregate. Apply at a spreading rate of 120 square feet per gallon.
Cementitious mortar: apply within 4 hours of priming. Power mix Part A and Part B separately and then power mix them together until thoroughly mixed. Premix sand, portland cement, and pea gravel (if needed) before combining and thoroughly mixing with the previously mixed Part A and Part B. A horizontal blade mortar mixer is recommended.

Ratio | 1:2
½ Cubic foot kit (for voids, bugholes)
 Part A: 0.38 gal. (3.4 lbs.)
 Part B: 0.77 gal. (6.2 lbs.)
 Part C: Consists of Sand #40-80 angular mesh: 39 lbs. and Portland Cement (Type 1): 11 lbs.
3 Gallon Kit* (for filling up to 1" thick)
 Part A: 1 gallon (8.8 lbs.)
 Part B: 2 gallon (16. lbs.)
 Sand #30-50 angular mesh*: 150 lbs.
 Portland Cement (Type 1)*: 42 lbs.
3 Gallon Kit* (for filling over 1" thick)
 Part A: 1 gallon (8.8 lbs.)
 Part B: 2 gallon (16. lbs.)
 Sand #30-50 angular mesh*: 50 lbs.
 Portland Cement (Type 1)*: 42 lbs.
 Pea Gravel ¼": 100 lbs.
 Volume Yield: 1.66 cubic feet
 *Sand, cement and pea gravel for 3 and 15 gallon kits are not supplied by Carboline and should be bought locally.
Note: In thicknesses over 2", up to 15% additional pea gravel can be added to further extend volume by 5%. Components listed are for 3 gallon kit. Scale up appropriately for 15 gallon kit. Apply to the surface using rubber float or other suitable spreading tool.

Pot Life | 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.

General | Carboguard 510 may be applied using conventional concrete placement and finishing tools.

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) | 80% |

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 | Light Traffic | Heavy Traffic | Final Cure General |
|---------------|----------|---------------|---------------|--------------------|
| 75°F (24°C) | 12 Hours | 24 Hours | 48 Hours | 28 Days |

These times are based on 1/2" thickness at 70 °F (21 °C). Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. When using Carboguard 510 as an underlayment for epoxy, epoxy-novolac, or polyurethane coatings, it will be necessary to allow the Carboguard 510 to cure a minimum of 24 hours for every 2 inches of thickness. It is recommended that the Carboguard 510 have surface roughness or profile as designated by the topcoat to maximize intercoat adhesion. The maximum recoat time without surface preparation is 7 days at 85 °F. 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

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| 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 MSHA/NIOSH approved respirator. |

PACKAGING, HANDLING & STORAGE

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| Shelf Life | Part A & B: 24 months at 75 °F (24 °C) Part C for the 1/2 cubic ft kit: 24 months *Shelf Life: (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. |

Carboguard[®] 510

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

**Shipping Weight
(Approximate)**

- ½ cu. Ft. Kit - 62 lbs (28 kg)
- 3 Gallon Kit - 27 lbs. (12 kg)
- 15 Gallon Kit - 135 lbs. (61kg)

* Liquid components A & B only.

Flash Point (Setaflash)

Part A: >200 °F (93 °C)
Part B: >200 °F (93 °C) Part C: Not applicable.

WARRANTY

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