

SELECTION & SPECIFICATION DATA

| | |
|--|---|
| Generic Type | Modified Siloxane Hybrid |
| Description | Carboxane 2000 is a premium, ultra-durable coating that provides outstanding gloss and color retention for exterior exposures. When used over a suitable primer (as a two coat system) Carboxane 2000 provides the barrier properties normally seen using a three-coat system (primer, epoxy intermediate with an acrylic-polyurethane finish) for most environments. This tightly cross-linked film utilizes a UV-resistant siloxane binder resulting in a finish with outstanding barrier properties and weathering performance that far exceeds polyurethanes. |
| Features | <ul style="list-style-type: none"> • Isocyanate free • Exceptional weatherability • Outstanding color and gloss retention • Exceeds SSPC Coating Specification No. 36 Level 3A • Long service life • VOC compliant • Excellent abrasion resistance • Good flexibility |
| Color | Refer to Carboline Color Guide |
| Finish | Gloss |
| Primer | Compatible with inorganic and organic zinc rich primers, epoxies and others as recommended by Carboline Technical Service |
| Dry Film Thickness | 3 - 7 mils (76 - 178 microns) per coat As the finish of a two coat system (over a primer) a minimum of 5 mils (125 microns) is recommended. As the finish of a three coat system (primer and intermediate coat), a minimum of 3 mils (75 microns) is recommended. See Severe Exposures below. |
| Solids Content | By Volume 75% +/- 2% |
| Surface Burning Characteristics | Flame Spread Index: 0 Smoke Developed Index: 10 |
| Theoretical Coverage Rate | 1203 ft ² /gal at 1.0 mils (29.5 m ² /l at 25 microns) 401 ft ² /gal at 3.0 mils (9.8 m ² /l at 75 microns) 172 ft ² /gal at 7.0 mils (4.2 m ² /l at 175 microns) Allow for loss in mixing and application. |
| Severe Exposures | For severe marine environments (offshore structures) a three coat system is recommended. For other severe exposures, a two coat system may be used provided the minimum film thickness of 5 mils (125 microns) is achieved. |
| VOC Values | As Supplied : 1.8 lbs/gal (216 g/l) mixed Thinner 10 : 13 oz/gal: 2.29 lbs/gal (275 g/l) These are nominal values and may vary with color |
| Dry Temp. Resistance | Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C) |

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. Refer to specific primer's Product Data Sheet for detailed requirements of the specified primer |
| Steel | SSPC-SP6 with a 1.5-2.5 mil (37.5-62.5 micron) surface profile for maximum protection. SSPC-SP2 or SP3 as minimum requirement. Prime with recommended primer. |
| Galvanized Steel | SSPC-SP1 and prime with specific Carboline primers as recommended by your Carboline sales representative. |

PERFORMANCE DATA

| Test Method | System | Results |
|---------------------------------------|----------|--|
| Adhesion: ASTM D4541 | 859/2000 | 1362 psi |
| EMMAQUA Weathering | 2000 | Exposure 12 mos. Gloss Retention 90% Exposure 24 mos. Gloss Retention 73% Exposure 32 mos. Gloss Retention 61% |
| Flexibility: Conical Mandrel | 2000 | >3/8 inch |
| Pencil Hardness | 2000 | F |
| QUV-A Weathering | 2000 | Exposure 4000 hours Gloss Retention 99% Exposure 8000 hours 80% gloss retention Exposure 12000 hours Gloss Retention 53% |
| South Florida Weathering | 2000 | Exposure 4 years Gloss Retention 90% dE: 0.45 color change |
| Wet Adhesion: "X-Cut", Knife Adhesion | 859/2000 | No failure after 7 days |

MIXING & THINNING

| | |
|-----------------|--|
| Mixing | Power mix Part A separately. Part B requires no mixing. Then combine power mix. DO NOT MIX PARTIAL KITS. |
| Thinning | Not normally required. May be thinned up to 10% (13 oz/gal) with Thinner #10 for spray, and Thinner 214, 215, or 238 for brush and roll. |
| Ratio | 2.2:1 by volume: Part A to Part B |
| Pot Life | 8 hours at 75°F (23°C) and less at higher temperatures. Material is moisture sensitive. If left uncovered for extended periods or under very high humidity conditions, check for and remove any skinning that may occur. |

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) | This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers. |
|------------------------------------|--|

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.

| | |
|---|---|
| Airless Spray | Pump Ratio: 30:1 (min.) Volume Output: 2.5 gpm min. (11.5 l/min min.) Material Hose: ½" I.D. min. (12.5mm min.) Tip Size: 0.017-0.021" (0.43-0.53mm) Output Pressure: 1500-2000 psi (105-140kg/cm²) |
| Brush & Roller (General) | Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. |
| Brush | Use a medium natural bristle brush. |
| Roller | Use a short to medium-nap mohair roller cover with solvent resistant core. |

APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|-----------|-------------|--------------|--------------|----------|
| Minimum | 50°F (10°C) | 35°F (2°C) | 35°F (2°C) | 20% |
| Maximum | 90°F (32°C) | 110°F (43°C) | 110°F (43°C) | 90% |

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. Protect from high humidity, dew and direct moisture contact until fully cured. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or staining of the product.

CURING SCHEDULE

| Surface Temp. | Dry to Recoat | Dry to Touch | Hard Cure |
|---------------|---------------|--------------|-----------|
| 35°F (2°C) | 24 Hours | 8 Hours | 30 Hours |
| 60°F (16°C) | 12 Hours | 3 Hours | 24 Hours |
| 75°F (24°C) | 6 Hours | 2 Hours | 18 Hours |

These times are based on recommended coverage rates. Curing under low humidity conditions will extend times. Maximum recoat for this product is 30 days. After this period, it is best to degloss the surface by abrasive blasting or sanding prior to recoating.

Note: Like many coatings, this coating will develop full adhesion over the initial weeks following application.

*Hard Cure = Fingernail hard

CLEANUP & SAFETY

| | |
|--------------------|---|
| Cleanup | Use Thinner #2 or Acetone. 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. |
| Ventilation | When used 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 supplied air respirator. |

Carboxane[®] 2000

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

| | |
|---|---|
| Shelf Life | Part A: 24 months at 76°F (24°C) Part B: 24 months at 76°F (24°C) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. |
| Storage Temperature & Humidity | 40 -110°F (4°C-43°C) 0-90% Relative Humidity |
| Storage | Store Indoors. KEEP DRY. This product is solvent based and not affected by excursions below these published storage temperatures, down to 10°F, for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed. |
| Shipping Weight (Approximate) | 1 Gallon Kit - 13 lbs (6 kg) 5 Gallon Kit - 67 lbs (30 kg) |
| Flash Point (Setaflash) | Part A: 96°F (36°C) Part B: 75°F (24°C) Thinner 10: 83°F (28°C) Thinner 214: 102°F (38°C) Thinner 215: 128°F (53°C) Thinner 238: 102°F (38°C) Thinner 2: 23°F (-5°C) |

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.