

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"> • Exceptional weatherability • Long life performance • Outstanding gloss/color retention • VOC compliant • Excellent abrasion resistance • Isocyanate free • Flexible Film
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	76 - 178 microns (3 - 7 mils) 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	29.5 m ² /l at 25 microns (1203 ft ² /gal at 1.0 mils) 9.8 m ² /l at 75 microns (401 ft ² /gal at 3.0 mils) 4.2 m ² /l at 175 microns (172 ft ² /gal at 7.0 mils) 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: 93°C (200°F) Non-Continuous: 121°C (250°F)

Carboxane 2000

PRODUCT DATA SHEET



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	Part A: 2.2:1 Part B: by volume.
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.
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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	10°C (50°F)	2°C (35°F)	2°C (35°F)	20%
Maximum	32°C (90°F)	43°C (110°F)	43°C (110°F)	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
2°C (35°F)	24 Hours	8 Hours	30 Hours
16°C (60°F)	12 Hours	3 Hours	24 Hours
24°C (75°F)	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 MSDS 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.

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PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 12-24 months at 76°F (24°C) Check container label 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.
Shipping Weight (Approximate)	1 Gallon Kit - 13 lbs (6 kg) 5 Gallon Kit - 67 lbs (30 kg)
Storage Temperature & Humidity	40 -110°F (4°C-43°C) 0-90% Relative Humidity
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)
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.

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.