

SELECTION & SPECIFICATION DATA

Generic Type	Modified siloxane hybrid
Description	Carboxane 2100 FC is an isocyanate free, ultra-durable, fast-cure corrosion resistant coating that provides outstanding color and gloss retention for exterior exposures that exceeds many acrylic aliphatic polyurethanes. It combines the chemical resistant properties of epoxies with the weathering characteristics of acrylic-polyurethanes. This tightly cross-linked film results in a finish with outstanding barrier properties. It provides good corrosion protection and can be applied direct to metal (DTM) in exposures designated "urban to light industrial" (C1 - C4 according to ISO 12944). For improved corrosion protection it can be applied over approved primers. It is most often used as the finish coat of a 2 coat system utilizing a zinc-rich primer for maximum corrosion resistance and longevity. These 1 - 2 coat systems can eliminate the need for typical primers and/or intermediate coats to significantly speed up the painting process. This product meets the most stringent VOC regulations for field applied coatings of less than 100 g/l volatile organic content.
Features	<ul style="list-style-type: none"> • Isocyanate free • Fast cure with good pot life - speeds the painting process • Excellent weathering - SSPC Coating Spec. No. 36 Level 3A (highest level) for polyurethanes • Can be applied DTM • Excellent corrosion protection - ISO 12944-6 C3 High and C4 Medium, 1 coat applied DTM • 1 - 2 coats instead of 2 - 3 coats saves significant time, labor, and money • Low VOC (less than 100 g/l) • Excellent durability - abrasion and impact resistant • Meets IEEE ANSI C57.12.29-2005 Standard For Pad Mounted Equipment
Color	1864 (White), 5555 (Safety Red), 6666 (Safety Yellow), C703 (Grey), C705 Light Grey), and C900 (Black). Other colors are available on request. Contact your Carboline Representative for availability.
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 a single-coat (DTM) or as the finish of a 2 coat system (over a primer) a minimum of 5 mils (125 microns) is recommended. As the finish of a 3 coat system (primer and intermediate coat), a minimum of 3 mils (75 microns) is recommended. See Severe Exposures below.
Solids Content	By Volume 85% +/- 2%
Theoretical Coverage Rate	1363 ft ² /gal at 1.0 mils (33.5 m ² /l at 25 microns) 454 ft ² /gal at 3.0 mils (11.2 m ² /l at 75 microns) 195 ft ² /gal at 7.0 mils (4.8 m ² /l at 175 microns) Allow for loss in mixing and application.
Severe Exposures	For severe marine environments (offshore structures) a 3 coat system is recommended. For other severe industrial exposures, a 2 coat system may be used provided the minimum film thickness of 5 mils (125 microns) for the finish is achieved.

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VOC Value(s)	Per EPA Method 24: 0.75 lbs/gal (90 g/l) mixed 10 oz/gal of Thinner 10: 1.23 lbs/gal (148 g/l) 10 oz/gal of Thinner 236 E: 0.75 lbs/gal (90 g/l) These are nominal values and may vary slightly with color. This product contains US EPA VOC-exempt solvent(s).
Dry Temp. Resistance	Continuous: 302°F (150°C) Non-Continuous: 338°F (170°C) Some discoloration and loss of gloss may be experienced at elevated temperatures.

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	For use over recommended primer: Follow specific primer recommendations For use direct-to-metal: SSPC-SP6 with a 1.5-2.5 mil (37.5-62.5 micron) surface profile for optimum performance.
Galvanized Steel	Recommended: SSPC-SP 16

MIXING & THINNING

Mixing	Power mix components separately then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Not normally required. May be thinned up to 10% (13 oz/gal) with Thinner 236 E or up to 8% (10 oz/gal) with Thinner 10 for areas allowing more than 100 g/l VOC emissions.
Ratio	4:1 by volume.
Pot Life	5 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.
Airless Spray	Pump Ratio: 30:1 (min.) Volume Output: 2.5 gpm min. (11.5 l/minute min.) Material Hose: ½" I.D. min. (12.5 mm min.) Tip Size: 0.017-0.021" (0.43-0.53 mm) Output Pressure: 1500-2000 psi (105-140 kg/cm ²)

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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.

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 phenolic 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 it is dry to handle. 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 Touch	Dry to Recoat	Dry to Handle
35°F (2°C)	10 Hours	24 Hours	24 Hours
50°F (10°C)	9 Hours	8 Hours	9 Hours
75°F (24°C)	2 Hours	3 Hours	4 Hours
90°F (32°C)	1 Hour	2 Hours	3 Hours

These times are based on recommended coverage rates and 50% RH. 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.

Product may be force cured up to 140°F as needed. Product will cure to handle after 30 min when force cured at 140°F.

CLEANUP & SAFETY

Cleanup | Use Thinner 2, Thinner 225 E 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[®] 2100 FC

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 24 months at 75°F (24°C) Part B: 12 months at 75°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.
Shipping Weight (Approximate)	1 Gallon Kit - 13 lbs. (6 kg) 5 Gallon Kit - 67 lbs. (30 kg)
Flash Point (Setaflash)	Part A: 109°F (43°C) Part B: 100°F (38°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.