

SELECTION & SPECIFICATION DATA

Generic Type	Modified siloxane hybrid
Description	Carboxane 2100 FC is a premium, ultra-durable, fast-cure coating that provides outstanding gloss and color retention for exterior exposures. 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 and weathering performance that far exceeds polyurethanes. This product meets the most stringent VOC regulations for field applied coatings of less than 100 g/l volatile organic content. It is most often used as the finish coat of a two-coat system utilizing a zinc-rich primer for maximum corrosion resistance and longevity. It can be used as a direct-to-metal (DTM), self-priming coating in exposures designated "urban to light industrial" (C1-C3 according to ISO 12944).
Features	<ul style="list-style-type: none"> • Exceptional weatherability • Long life performance • Outstanding gloss/color retention • VOC compliant (less than 100 g/l) • Excellent impact and abrasion resistance • Isocyanate free • High gloss
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 a single-coat (DTM) or 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 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 three-coat system is recommended. For other severe industrial exposures, a two-coat system may be used provided the minimum film thickness of 5 mils (125 microns) for the finish is achieved.
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: 200°F (93°C) Non-Continuous: 250°F (121°C)

Carboxane[®] 2100 FC

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	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 236E 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/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/cm ²)
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 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 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 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.

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)

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WARRANTY

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