

SELECTION & SPECIFICATION DATA

Generic Type	Aliphatic Polyester Polyurethane
Description	A high gloss polyurethane finish designed to comply with the composition and performance of MIL-PRF-85285 Type II, Class H for all United States Departments of Defense support equipment applications. This polyurethane finish provides a smooth, durable finish with excellent weathering and good chemical resistance.
Features	<ul style="list-style-type: none"> • QPL Approved for MIL-PRF-85285 Type II, Class H Polyurethane, Grade P • Meets the performance requirements of UFGS 09 97 13.27 • Excellent weatherability • Extremely durable • Excellent chemical resistance, including Skydrol (PE-5) • Good flow characteristics for application via spray, brush, and roller • Ready to apply with no thinning required
Color	Black (C900). FED-STD-595 colors frequently used by the Departments of Defense such as 17925 White (9810), 13446 Beige (B214). Other colors available upon request. Contact your Carboline Representative for availability.
Finish	High Gloss
Primer	Compatible with Carboguard 824 and many other Carboline coatings. Refer to Substrates & Surface Preparation.
Dry Film Thickness	1.7 - 2.3 mils (43 - 58 microns) per coat
Solids Content	By Volume 62% +/- 2%
Theoretical Coverage Rate	994 ft ² /gal at 1.0 mils (24.4 m ² /l at 25 microns) 585 ft ² /gal at 1.7 mils (14.4 m ² /l at 42 microns) 432 ft ² /gal at 2.3 mils (10.6 m ² /l at 58 microns) Allow for loss in mixing and application.
VOC Values	As Supplied : 2.7 lbs./gal (324 g/l) Thinner 215 : Thinned 2.5 oz/gal (2%): 2.8 lbs./gal (340 g/l) Thinner 225 E : Thinned 6 oz/gal (5%): 2.7 lbs./gal (324 g/l) These are nominal values per ASTM D3960 and may vary slightly with color.
Dry Temp. Resistance	Continuous: 250°F (121°C) Some discoloration and loss of gloss may be experienced at elevated temperatures.

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be clean, dry and free of oil, grease, dirt, dust or other materials which could impair the bond of the product to the substrate in accordance with SSPC-SP 1.
Galvanized Steel	Employ adequate methods to remove dirt, dust, oil and other contaminants that could interfere with adhesion of the coating in accordance with SSPC-SP 16. Prime with Carboguard 824 or the specific Carboline primer as recommended by your Carboline Sales Representative. Refer to the specified primer's Product Data Sheet for substrate and surface preparation requirements.

SUBSTRATES & SURFACE PREPARATION

Previously Painted Surfaces	All surfaces must be clean, dry and free of oil, grease, dirt, dust or other materials which could impair the bond of the product to the substrate in accordance with SSPC-SP 1. It is recommended to lightly abrade the existing coating to roughen and degloss the coating. Existing coatings should attain a minimum 3A rating in accordance with ASTM D3359 Measuring Adhesion by Tape Test.
Ferrous Metal	Maximum service life can be attained by abrasive blast cleaning to a minimum Commercial Blast Clean in accordance with NACE No. 3/SSPC-SP 6 or Power Tool Clean in accordance with SSPC-SP 15. It is recommended to follow the substrate and surface preparation requirements on the Product Data Sheet of Carboguard 824 or the specified Carboline primer as recommended by your Carboline Sales Representative.
Non-Ferrous Metals	Clean to remove all contaminants which could impair the bond of the product to the substrate in accordance with SSPC-SP 16. Prime with Carboguard 824 or the specific Carboline primer as recommended by your Carboline Sales Representative. Refer to the specified primer's Product Data Sheet for substrate and surface preparation requirements.

MIXING & THINNING

Mixing	Power mix Part A separately, then combine with Part B and power mix. Take precautions to avoid entraining air while mixing. DO NOT MIX PARTIAL KITS.
Thinning	No thinning required for typical application via spray, brush, and roller. May be thinned with MIL-T-81772, Type I or Thinner 225E at up to 6 oz/gal (5%) if needed. Thinner 215 may be added up to 2.5 oz/gal (2%) for better application properties in hot and/or humid weather. Use of thinners other than those listed above or those recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	2:1 (A to B, by volume)
Pot Life	4 hours at 75°F (24°C) and less at higher temps. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION.

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. Spray equipment is available from manufacturers such as Binks, DeVilbiss, Graco, etc.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" (0.95 cm) I.D. minimum material hose, 0.070" (0.18 cm) I.D. fluid tip and appropriate air cap.

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Airless Spray	Pump Ratio: 30:1 (min.) GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (0.95 cm) (min.) Tip Size: 0.013-0.015" (0.03-0.04 cm) Output PSI: 2,100-3,000 Filter Size: 60 mesh PTFE packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive brushing or rolling.
Roller	Use a high quality short-nap roller with solvent resistant core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	20%
Maximum	100°F (38°C)	120°F (49°C)	95°F (35°C)	90%

Industry standards are for substrate temperatures to be above 5°F (3°C) the dew point. Caution: This product is moisture sensitive in the liquid stage and until cured. Protect from high humidity, dew and moisture contact until 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 microbubbling of the product.

CURING SCHEDULE

Surface Temp.	Dry to Touch	Dry to Topcoat Minimum	Dry to Handle	Dry Hard	Final Cure General	Maximum Recoat
75°F (24°C)	2.6 Hours	4 Hours	6 Hours	12 Hours	7 Days	7 Days

These times are based on a 2.0 mil (50 micron) dry film thickness per ASTM D5895. These times may differ from method ASTM D1640. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

CLEANUP & SAFETY

Cleanup	Use Thinner 2, Thinner 225E, Acetone, or MIL-T-81772, Type I. In case of spillage, 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. Keep container closed when not in use.
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 ensure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

PACKAGING, HANDLING & STORAGE

Packaging	0.75 Gallon Kit Part A (Carbothane 157 Part A): 0.5 gallons Part B (Carbothane 157 Part B): 0.25 gallons
	3 Gallon Kit Part A (Carbothane 157 Part A): 2 gallons Part B (Carbothane 157 Part B): 1 gallon
Shelf Life	Part A: 24 months at 75°F (24°C) Part B: 24 months at 75°F (24°C)
	Shelf Life: when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	40° -110°F (4°-43°C) 0-90% Relative Humidity
Storage	Store Indoors.
	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)	0.75 Gallon Kit 9 lbs. (4.1 kg)
	3 Gallon Kit 37.2 lbs. (16.9 kg)
Flash Point (Setaflash)	Part A: 75°F (24°C) Part B: 80°F (27°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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.