



SELECTION & SPECIFICATION DATA

Generic Type	Epoxy Polyamide
Description	Carboguard 61 is a high solids, corrosion resistant coating designed as a potable water lining for tanks and pipes. This product has excellent wetting properties resulting in good adhesion properties.
Features	<ul style="list-style-type: none"> • Low odor • Low VOC • Low temperature cure • Available in a variety of colors • NSF/ANSI 61 compliant for use in potable water tanks, pipes, and valves.* • AWWA D102 Inside System #1 and #2 <p>*Contact Carboline Technical Service for approved dimensions. Valid when manufactured at a certified location.</p>
Color	White (S800), Blue (4169) and Gray (0794) Limited other colors may be available. Contact your Carboline Representative for availability.
Finish	Semi-Gloss
Primer	Self-priming.
Dry Film Thickness	10 - 20 mils (254 - 508 microns) 2-3 coats Two or three coats to yield 10-20 mils total DFT. Maximum DFT for two or three coats is 20 mils (500 microns) for ANSI/NSF Standard 61 service.
Solids Content	By Volume 72% +/- 2%
Theoretical Coverage Rate	1155 ft ² /gal at 1.0 mils (28.3 m ² /l at 25 microns) 115 ft ² /gal at 10.0 mils (2.8 m ² /l at 250 microns) 58 ft ² /gal at 20.0 mils (1.4 m ² /l at 500 microns) Allow for loss in mixing and application.
VOC Values	As Supplied : 2.00 lbs./gal 240 g/l Thinner 2 : 13 oz/gal 2.47 lbs./gal 296 g/l Thinner 2 : 6 oz/gal 2.23 lbs./gal 267 g/l These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 250°F (121°C) Non-Continuous: 275°F (135°C) Discoloration and loss of gloss is observed above 200 °F (93 °C).
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.

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.
Steel	SSPC-SP10 to obtain a blast profile of 1.7-3.0 mils (42-75 microns).
Concrete or CMU	Concrete must be cured minimum 28 days. (Refer to ACI 308R-01) Prepare surfaces in accordance with SSPC-SP13/NACE 6. Voids in concrete may require resurfacing.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	System	Results
ASTM D2794 Impact Resistance	Blasted Steel 1ct.	100 in. lbs direct
ASTM D3363 Pencil Hardness	Blasted Steel 1 ct.	4H-5H
ASTM D4541 Adhesion Pneumatic	Blasted Steel 1 ct. Blasted Steel 2 ct.	1ct 1500+ psi 2 ct. 1500+ psi
ASTM D522 Flexibility	Blasted Steel 1 ct.	No cracking, 5/8" Conical Mandrel Bend

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. Allow mixed product 15 minute sweat-in time before thinning if material is under 70 °F (21 °C). DO NOT MIX PARTIAL KITS.
Thinning	Spray: Up to 13 oz/gal (10%) with Thinner 2. Brush & Roller: Up to 13 oz/gal (10%) with Thinner 2.
Ratio	1:1 Ratio (A to B)
Pot Life	4 Hours at 75 °F (24 °C) Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures.

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.

Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 2.5 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: 0.017"-0.021" Output PSI: 2100-2300 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	Not recommended for tank lining applications except when striping welds. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive rebrushing or rerolling. For best results, tie-in within 10 minutes at 75 °F (24 °C).
Brush	Use a medium bristle brush.

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Roller | Use 3/8" nap phenolic core roller.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	90°F (32°C)	140°F (60°C)	120°F (49°C)	85%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions

CURING SCHEDULE

Surface Temp.	Dry to Touch	Dry to Handle	Dry to Recoat	Maximum Recoat Time
40°F (4°C)	3 Hours	30 Hours	48 Hours	1 Year
50°F (10°C)	1.5 Hours	20 Hours	24 Hours	1 Year
60°F (16°C)	1 Hour	8 Hours	16 Hours	1 Year
75°F (24°C)	45 Minutes	5 Hours	12 Hours	1 Year
90°F (32°C)	30 Minutes	3 Hours	12 Hours	1 Year

*Surface temperatures reported were at 50 % RH.

NSF 61 cure to service is 7 days at 70 °F (21 °C)

These times are based on a 5.0 mil (125 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating.

NOTE: The maximum recoat times in the chart above are for atmospheric exposures. If the maximum recoat times have been exceeded, the surface must be abraded by brush off blast cleaning or mechanical methods prior to the application of additional coats. For force curing, contact Carboline Technical Service for specific requirements. **12 hours minimum** recoat time for potable water.

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. 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 insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

TESTING / CERTIFICATION / LISTING

Underwriters Laboratories, Inc.	Two or three coats at 5.0-10.0 mils DFT (125- 250 microns) per coat. Maximum DFT for two or three coats is 20 mils (500 microns) for ANSI/ UL NSF 61 service.
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Carboguard® 61

PRODUCT DATA SHEET



TESTING / CERTIFICATION / LISTING

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: 36 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	40-100 °F (4- 38 °C) 0-100% Relative Humidity
Storage	Store Indoors
Shipping Weight (Approximate)	2 Gallon Kit - 26 lbs (12 kg) 10 Gallon Kit -127 lbs (58 kg)
Flash Point (Setaflash)	Part A: 82 °F (28 °C) Part B: 71 °F (22 °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.