

Selection & Specification Data

Generic Type	Polyamine Epoxy Novolac
Description	<u>Single-coat, plural-component applied, ultra-high build coating for use on steel and concrete substrates where rapid cure characteristics are required.</u> Phenoline 380 has the same application and physical properties of Phenoline 379 but also provides rapid cure to handle and cure to immersion characteristics.
Features	<ul style="list-style-type: none"> ▪ Rapid cure-to-handle and cure-to-immersion characteristics ▪ Single coat application reduces labor costs ▪ Ultra-high build capabilities provides a void-free film and excellent edge ▪ Resistant to inorganic and organic acids, caustics and most solvents ▪ Exceptional bond strength ▪ Can be mat reinforced where exposure conditions dictate ▪ VOC compliant to current AIM regulations
Color	Refer to Carboline Color Guide
Finish	Eggshell
Primers	Self-priming
Topcoats	Not recommended
Dry Film Thickness	<u>1 coat system:</u> 20-25 mils (500-625 microns) <u>2 coat system:</u> 20-25 mils (500-625 microns) per coat
Solids Content	By Volume: 99% ± 1%
Theoretical Coverage Rate	1588 mil ft ² (39.0 m ² /l at 25 microns) Allow for loss in mixing and application
VOC Values	As supplied: 0.1 lbs/gal (12 g/l) These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 140°F (60°C) Non-Continuous: 180°F (82°C) Discoloration and loss of gloss is observed above 140°F (60°C).
Wet Temp. Resistance	Immersion temperature resistance depends upon exposure. Consult Carboline Technical Service for specific information. It is recommended that metal tanks operating above 140°F (60°C) be insulated.

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	<u>Immersion:</u> SSPC-SP5 <u>Surface Profile:</u> 2-4 mils (75-125 micron) <u>Non-Immersion:</u> SSPC-SP10 <u>Surface Profile:</u> 2-4 mils (75-125 micron)
Concrete	<u>Immersion and Non-Immersion:</u> Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258-92 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

Application Equipment

Spray Application (Plural Component)	Recommended for application by plural component airless spray. This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. Contact Carboline Technical Service for plural component equipment recommendations.
Conventional Spray	Not recommended
Airless Spray	Not recommended
Brush	Not recommended
Roller	Not recommended

Mixing & Thinning

Mixing	Power mix each component separately. Phenoline 380 is applied with two component airless spray.
Ratio	4:1 Ratio (A to B)
Thinning	Not recommended. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Pot Life	25 minutes at 75°F (24°C). Pot life ends when material begins to thicken and starts to heat up. Pot life times will be less at higher temperatures.

Cleanup & Safety

Cleanup	Use #2 Thinner 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. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	Vapors and/or spray mist may cause explosion. When used as a tank lining or 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. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.
Caution	This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60°-85°F (16°-29°C)	60°-85°F (16°-29°C)	60°-90°F (16°-32°C)	0-80%
Minimum	35°F (2°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	90°F (32°C)	125°F (52°C)	110°F (43°C)	90%

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. Special application techniques may be required above or below normal application conditions. To reduce outgassing when applying to concrete substrates, do not apply in direct sunlight or when surface temperatures are increasing. Best results are obtained when ambient and surface temperatures are decreasing or constant.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Minimum Recoat Time	Maximum Recoat Time	Final Cure for Immersion Service
35°F (2°C)	36 Hours	6 Days	36 Hours
60°F (16°C)	18 Hours	2 Days	18 Hours
75°F (24°C)	12 Hours	1 Day	12 Hours
90°F (32°C)	4 Hours	12 Hours	4 Hours

These times are based on a 20.0 mil (500 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times. Condensation on the surface or humidity above 25% during application and curing will result in a surface haze or blush. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. If the maximum recoat time is exceeded, the surface must be washed with detergent and water, then abraded by sweep blasting prior to the application of additional coats. **For force curing, contact Carboline Technical Service for specific requirements.**

Packaging, Handling & Storage

Shipping Weight (Approximate)	1 Gallon Kit 22 lbs (10 kg)	20 Gallon Kit 172 lbs (78 kg)
Flash Point (Setaflash)	Part A: >205°F (96°C) Part B: >205°F (96°C)	
Storage (General)	Store Indoors.	
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-100% Relative Humidity	
Shelf Life	1 year if stored at 50°-85°F. To ensure maximum film build, Phenoline 310 should be applied within three (3) months of the manufactured date.	



350 Hanley Industrial Court St. Louis, MO 63144-1599
314-644-1000 314-644-4617 (fax) www.carboline.com

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