

Selection & Specification Data

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| Generic Type | Polyamine Epoxy Novolac |
| Description | Single-coat, plural-component applied, ultra-high build coating for use on steel and concrete substrates where rapid cure characteristics are required. Phenoline 380 has the same application and physical properties of Phenoline 379 but also provides rapid cure to handle and cure to characteristics. |
| Features | <ul style="list-style-type: none"> ▪ Rapid cure-to-handle and cure-to-service characteristics ▪ Single coat application reduces labor costs ▪ Ultra-high build capabilities provide a void-free film and excellent edge protection. ▪ 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 | Standard in gray (F744). |
| Finish | Eggshell |
| Primers | Self-priming |
| Topcoats | Not recommended |
| Dry Film Thickness | Normal application is a single-coat of 20-50 mils (500-750 microns) depending on the need. Can be applied up to 50 mils (1250 microns) in a single coat if fresh material is used. If two coats are desired follow intercoat adhesion procedures under Surface Preparation. |
| 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). |
| Limitations | Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. This coating commonly develops an amine blush during cure. While this condition will not adversely affect performance of the coating, this blush must be removed before applying additional coats and may require removal before placing into service. |

Substrates & Surface Preparation

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| 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 <u>Surface Profile:</u> 2-3 mils (50-100 microns) for structural steel 3-4 mils for tank linings |
| Concrete | 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. |
| Intercoat Preparation | Before any touch-up or recoat material can be applied, the first coat must be properly prepared for intercoat adhesion. The first coat must be cured firm to the touch. Coating on floors must be able to support foot traffic. Scrub the first coat with soap and water and thoroughly rinse and dry. If the first coat cures more than 24 hours, lightly sand or mechanically abrade the surface after scrubbing down with soap and water. Any surface to be touched up or recoated should be protected. When the recoat material is applied, the surface must be free of all dirt, dust, debris, oil, grease, and other contamination. |

Application Equipment

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. **General Guidelines:**

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 or Airless Spray, Brush or Roller Not recommended

Mixing & Thinning

Mixing Power mix each component separately. Phenoline 380 is applied with plural component airless spray machine such as a Hydracat or WIWA Duo-Mix.

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 15-20 minutes at 75°F (24°C). Pot life ends when material starts to heat up. Pot life times will be less at higher temperatures. This product exotherms, particularly in a mass.

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 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 | Part A 110°F Part B 90-100°F | 35-110°F (16°-29°C) | 35°-110°F (16°-32°C) | 0-80% |
| Minimum | Part A 110°F Part B 90-100°F | 35°F (2°C) | 35°F (2°C) | 0% |
| Maximum | Part A 130°F Part B 120°F | 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 | Final Cure |
|---------------------------------------|---------------------|------------|
| 35°F (2°C) | 14 -18 Hours | 36 Hours |
| 60°F (16°C) | 12 Hours | 18 Hours |
| 75°F (24°C) | 6 Hours | 12 Hours |
| 90°F (32°C) | 4 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. In all cases follow intercoat adhesion procedure to ensure proper adhesion. If the maximum recoat time is exceeded, the surface must be washed with detergent and water and then abraded prior to the application of additional coats. **For force curing, contact Carboline Technical Service for specific requirements.**

Packaging, Handling & Storage

| | 1 Gallon Kit | 20 Gallon Kit |
|-------------------------------|----------------|-----------------|
| Shipping Weight (Approximate) | 22 lbs (10 kg) | 172 lbs (78 kg) |

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| Flash Point (Setaflash) | Part A: >205°F (96°C) Part B: >205°F (96°C) |
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Storage (General) Store Indoors.

Storage Temperature & Humidity 50°- 85°F (11°-30°C)
0-100% Relative Humidity

Shelf Life Part A & B: 6 months if stored at 50°-85°F. To ensure maximum film build, Phenoline 380 is best if applied within three (3) months of the manufactured date.

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



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

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