

Selection & Specification Data

Generic Type	Amine-Cured Novolac Epoxy
Description	Glass flake-filled coating with dense cross-linking that exhibits excellent overall chemical resistance to a variety of aggressive chemicals. Glass reinforcement provides added abrasion resistance, permeation resistance and internal reinforcement. 1205 exhibits very good acid resistance. Excellent for use as a lining for tanks or pipes in process facilities where hot water or abrasive conditions exist. Also used as a primary or secondary containment lining for a variety of aggressive chemicals.
Features	<ul style="list-style-type: none"> ▪ Excellent resistance to acids, caustics, ethanol, gasoline, jet fuels and solvents. ▪ Excellent abrasion resistance. ▪ Excellent thermal shock resistance. ▪ VOC compliant to current AIM regulations. ▪ Excellent resistance to deionized or demineralized water up to 200°F (93°C) continuous. ▪ Excellent resistance to crude oil up to 200°F (93°C).
Color	Red (0500); Gray (5742)
Finish	Satin
Primers	Self-priming. May be applied over epoxies and phenolics as recommended.
Topcoats	Not recommended
Dry Film Thickness	15.0 mils (375 microns) minimum to be achieved in 1 or 2 coats.
Solids Content	70% ± 2%
Theoretical Coverage Rate	1117 mil ft ² (27.9 m ² /l at 25 microns) Allow for loss in mixing and application.
VOC Values	As supplied: 2.08 lbs/gal (250 g/l) Thinned: 13 oz/gal w/ #213: 2.58 lbs/gal (308 g/l) 13 oz/gal w/#2 2.54 lbs/gal (305 g/l) These are nominal values.
Dry Temp. Resistance	Continuous: 425°F (218°C) Non-Continuous: 450°F (232°C) Discoloration is observed above 200°F (93°C).
Temperature Resistance (Immersion*)	Water/Brine: 200°F Crude Oil: 200°F Crude Oil/Water: 200°F Demineralized water: 180°F Ethanol: 130°F

*Linings exposed to cargos warmer than the outside steel temperature are subject to a "cold-wall" effect. The smaller the temperature differential, the less negative influence on performance.

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-SP10 <u>Non-Immersion:</u> SSPC-SP6 <u>Surface Profile:</u> 2.0-3.0 mils (50-75 micron)
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.

Performance Data

Test Method	System	Results	Report #
Temperature Cycling Test <i>Modified Freeze/Thaw test cycling from 0°F – 425°F for 11 days</i>	Blasted steel 2 cts	No blistering, cracking or checking. No delamination or loss of adhesion.	SR 332
Cyclic Steam-Out Simulation 300°F	Blasted steel 1 ct	No blistering, cracking, or delamination	03744

Test reports and additional data available upon written request.

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 (General)	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
Conventional Spray	Pressure pot equipped with dual regulators, ½" I.D. minimum material hose, .110" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 45:1 (min.)* GPM Output: 3.0 (min.) Material Hose: ½" I.D. (min.) Tip Size: .035-.041" Output PSI: 2200-2500 *Teflon packings are recommended and available from the pump manufacturer.
Brush	Recommended for touch up and striping of welds only. Use a natural bristle brush with full strokes. Avoid rebrushing.
Roller	Not recommended.

Mixing & Thinning

Mixing Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Ratio 4:1 Ratio (A to B)

Thinning May be thinned up to 13 oz/gal (10%) Thinner #213. For application on horizontal surfaces, may be thinned up to 13 oz/gal (10%) with Thinner #2. Agitate Thinner #213 before use. Thinner #213 will have a thick viscous appearance, which is normal. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Pot Life 3 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.

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 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	65°-85°F (18°-29°C)	65°-85°F (18°-29°C)	65°-85°F (18°-29°C)	30-60%
Minimum	55°F (13°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	110°F (43°C)	100°F (38°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. & 50% Relative Humidity	Dry to Handle	Dry to Recoat or Topcoat	Final Cure for Immersion & Maximum Recoat Times
50°F (10°C)	18 Hours	48 Hours	21 Days
60°F (16°C)	12 Hours	32 Hours	14 Days
75°F (24°C)	6 Hours	16 Hours	7 Days
90°F (32°C)	3 Hours	8 Hours	4 Days

These times are based on a 15.0 mil (375 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. If the maximum recoat time is exceeded, the surface must be 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 5 Gallon Kit
12 lbs (5.5 kg) 58 lbs (26.3 kg)

Flash Point (Setaflash) Part A: 53°F (12°C)
Part B: 200°F (93°C)

Storage (General) Store Indoors.

Storage Temperature & Humidity 40° - 110°F (4° - 43°C)
0-90% Relative Humidity

Shelf Life Part A & B: Min. 36 months at 75°F (24°C)

***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

An **RPM** Company

September 2006 replaces October 2005

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 or injuries resulting from use. Liability, if any, is limited to replacement of products. 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. Carboline® and Phenoline® are registered trademarks of Carboline Company.