Bitumastic® 300 M COE

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Coal Tar Epoxy
Description	Renowned high build coal tar epoxy for protection for steel and concrete in single or two-coat applications developed specifically for the Corps of Engineers (COE).
Features	• Excellent chemical, corrosion and abrasion resistance • High-build, 12-14 mils (300-350 microns) in a single coat • Compatible with controlled cathodic protection • Meets Corps of Engineers C200, C200a specification • Suitable for use in exposures as referenced in the following specifications: SSPC-Paint 16 & Steel Tank Institute Corrosion Control System STI-P3
Color	Black (P900) and Red (P500) Contact your Carboline Representative for availability.
Finish	Gloss Will discolor, chalk and lose gloss in sunlight exposure.
Primer	Self-priming. Consult Carboline Technical Service for other suitable primers.
Dry Film Thickness	14 - 16 mils (356 - 406 microns) in one or two coats Total dry film thickness less than 8 mils (200microns) or in excess of 35 mils (890 microns) is not recommended. Wet-on-wet spray techniques should be used for high thicknesses allowing time for solvents to flash between passes.
Solids Content	By Volume 74% +/- 2%
Theoretical Coverage Rate	1187 ft²/gal at 1.0 mils (29.1 m²/l at 25 microns) 85 ft²/gal at 14.0 mils (2.1 m²/l at 350 microns) 74 ft²/gal at 16.0 mils (1.8 m²/l at 400 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 1.85 lbs/gal (222 g/l) Thinner 10 : 20 oz/gal*: 2.6 lbs/gal (309 g/l) These are nominal values. *Maximum thinning for 250 g/l restricted areas is 6 oz/gal.
Dry Temp. Resistance	Continuous: 350°F (177°C) Non-Continuous: 370°F (188°C)
Limitations	Do not use for potable water requirements.
Topcoats	Not recommended
Wet Temp. Resistance	Immersion temperature should not exceed 120° F (49° C)

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.

SUBSTRATES & SURFACE PREPARATION

Steel	**Immersion:** SSPC-SP10 **Non-Immersion:** SSPC-SP6 SSPC-SP2 or SP3 as minimum requirement. **Surface Profile:** 2.0-3.0 mils (50-75 micron)
Concrete or CMU	Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

PERFORMANCE DATA

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

Test Method	System	Results
ASTM B117 Salt Fog	Blasted Steel 2 cts. 300 M	No blistering, rusting or delamination. No measurable undercutting at scribe after 2000 hours
ASTM D2794 Impact	Blasted Steel 2 cts. 300 M	Impact site diameter, Inches: 3/8, 3/8, 1/2 100 in/lbs Gardner Impactor at 1/2 in. diam.
ASTM D4060 Abrasion	Blasted Steel 2 cts. 300 M	130 mg. loss after 1000 cycles, CS17 wheel, 1000 gm load
ASTM D4541 Adhesion	Blasted Steel 2 cts. 300 M	1443 psi (Pneumatic)

Test reports and additional data available upon written request.
***Disclaimer:** Bitumastic 300 M COE is a proprietary formula that is not necessarily formulated to the exact compositional guidelines set forth in some of these standards. Minor deviations that control and improve application characteristics may be present, but does not have a detrimental effect on the suitability for use outlined therein.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix for a minimum of two minutes. DO NOT MIX PARTIAL KITS.
Thinning	Up to 12 oz/gal (10%) w/ Thinner #10 for most applications Up to 20 oz/gal (16%) w/ Thinner #10 for the first coat application to concrete. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	4:1 Ratio (A to B)
Pot Life	75°F (24°C) 2 Hours 90°F (32°C) 1 Hour Pot life ends when coating loses body and begins to sag.

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. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

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Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, with 50' maximum material hose .086" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1* GPM Output: 3.0 (min.) Material Hose: ½" I.D. (min.) Tip Size: .023-.035" Output PSI: 2100-2500 Filter Size: 30 mesh *Teflon packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	Recommended for touch up, striping of weld seams and hard-to-coat areas only. Avoid excessive re-brushing or re-rolling.
Brush	Use a medium bristle brush.
Roller	Use a short-nap synthetic roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	125°F (52°C)	110°F (43°C)	90%

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	Final Cure Immersion	Maximum Recoat Time	Minimum Recoat Time
50°F (10°C)	8 Hours	14 Days	24 Hours	10 Hours
75°F (24°C)	4 Hours	7 Days	24 Hours	6 Hours
90°F (32°C)	2 Hours	5 Days	24 Hours	3 Hours

These times are based on a 14.0-16.0 mil (350 - 400 micron) dry film thickness. Higher film thickness, insufficient ventilation, high humidity or cooler temperatures will require longer cure times. 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.
Holiday Detection (if required): Wet sponge types may be used if the dry film thickness is below 20 mils (500 microns). High voltage spark testing should be used when the dry film thickness exceeds 20 mils (500 microns). Refer to NACE RP0188-90 for specific procedures.

CLEANUP & SAFETY

Cleanup	Use #2 Thinner or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

CLEANUP & SAFETY

Safety	Read and follow all caution statements on this product data sheet and on the SDS 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.
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, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: Min. 24 months at 75°F (24°C) Part 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.
Storage Temperature & Humidity	40° -110°F (4°-43°C) 0-100% Relative Humidity
Storage	Store indoors
Shipping Weight (Approximate)	1.25 Gallon Kit - 12 lbs (6 kg) 5 Gallon Kit - 50 lbs (26 kg)
Flash Point (Setaflash)	Part A: 75°F (24°C) Part B: >200°F (93°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.