

Selection Data

GENERIC TYPE : Epoxy-coal tar. Part A and Part B mixed prior to application.

GENERAL PROPERTIES : A heavy-duty, high-build epoxy coal tar coating for the protection of steel and concrete in immersion service. Can be applied at thicknesses up to 12 mils (300 μ) per coat. Cures to a hard, smooth finish. Simple 1:1 mixing ratio. Both components have low viscosity resulting in easy mixing.

RECOMMENDED USES : Lining for tanks, piping, trenches, sumps and as heavy-duty maintenance coating for steel and concrete - splash, spillage and fumes. Widely used for protection of offshore structures, marine installation and pilings. Also as lining for barges and tankers carrying sour crude, petroleum products and salt water ballast. Recommended for concrete and steel surfaces in sewage treatment plants, paper mills, chemical plants, etc. Excellent protection for underground surfaces.

NOT RECOMMENDED FOR : Immersion in aromatic or ketone solvents ; strong oxidizing acids.

CHEMICAL RESISTANCE :

Exposure	Immersion	Splash & Spillage	Fumes
Acids	Very Good	Excellent	Excellent
Alkalies	Very Good	Excellent	Excellent
Solvents	Fair	Good	Very Good
Salt	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

TEMPERATURE RESISTANCE : (Non-Immersion)

Continuous : 200°F(93°C)
Non-Continuous : 250°F(121°C)

For immersion, temperature depends on exposure, but maximum is 130°F (54°C)

FLEXIBILITY : Fair

WEATHERING : Good (chalks)

ABRASION RESISTANCE : Very Good

SUBSTRATES : Apply to properly prepared steel or others as recommended.

TOPCOAT REQUIRED : Not required. May be topcoated with Carboline Anti-fouling paints as directed. Coal tar bleed-through is likely with topcoats.

COMPATIBILITY WITH OTHER COATINGS : Coating is self-priming. Can also be applied over catalyzed epoxies or other as recommended. An acceptable primer for steel is Carboguard 893 Primer. When an inorganic zinc primer is used, a tie-coat of Carboguard 893 Primer or Carboguard D893 is recommended. For concrete, epoxy surfacer may be necessary.

Specification Data

THEORETICAL SOLIDS CONTENT OF MIXED MATERIAL :

	By Volume
Carbomastic 14	75% \pm 2%

RECOMMENDED DRY FILM THICKNESS PER COAT :

8 mils (200 μ)

THEORETICAL COVERAGE PER MIXED GALLON* :

1203 mil sq. ft. (30 sq. m/l at 25 μ)
150 sq. ft. at 8 mils (3.7 sq. m/l at 200 μ)

*NOTE : Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

SHELF LIFE : 24 months minimum when stored at 75°F(24°C).

COLORS : Black and dark red only

GLOSS : High initially, becomes flat.

Ordering Information

Prices may be obtained from Carboline Sales Representative or Main Office.

APPROXIMATE SHIPPING WEIGHT :

	2's	10's
Carbomastic 14	28 lbs.(12.7 kg)	135 lbs.(61.3 kg)
Carbomastic Thinner	9 lbs. in 1's (3.2 kg)	45 lbs. in 5's (20.4 kg)
Surface Preparation #1	9 lbs. in 1's (4.1kg)	45 lbs. in 5's (20.4kg)

FLASH POINT : (Setaflash)

Carbomastic 14 Part A	78°F(26°C)
Carbomastic 14 Part B	84°F(29°C)
Carbomastic Thinner	83°F(28°C)
Surface Preparation #1	73°F(23°C)

Carbomastic® 14

SURFACE PREPARATIONS : Remove any oil or grease from surface to be coated with clean rags soaked in Carboline Thinner #2 in accordance with SSPC-SP 1.

STEEL : For immersion service, abrasive blast to a White metal Finish in accordance with SSPC-SP 10 to a degree of cleanliness in accordance with NACE #1 to obtain a 2-3 mil (50-75µ) blast profile. For non-immersion, abrasive blast to a Commercial finish in accordance with SSPC-SP 6 to a degree of cleanliness in accordance with NACE #3 to obtain a 2-3 mil (50-75µ) blast profile. Acceptable for non-immersion SSPC-SP 3, Power Tool cleaning.

MIXING : Power mix separately, than combine and mix in the following proportions :

	<u>2 Gal. Kit</u>	<u>10 Gals. Kit</u>
Carbomastic 14 Part A	1 Gal	5 Gals
Carbomastic 14 Part B	1 Gal	5 Gals

Thin up to 25% by volume with Carbomastic Thinner.

NOTE : Use of thinners other than those supplied or approved by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

POT LIFE : Six hours at 75°F (24°C) and less at higher temperatures. Pot life ends then the coating loses body and begins to sag.

APPLICATION TEMPERATURES :

	<u>Material</u>	<u>Surfaces</u>
Normal	65-85°F(18-29°C)	60-95°F(16-35°C)
Minimum	55°F(4°C)	50°F(10°C)
Maximum	90°F(32°C)	120°F(49°C)

	<u>Ambient</u>	<u>Humidity</u>
Normal	60-90°F(16-32°C)	20-60%
Minimum	50°F(10°C)	0%
Maximum	120°F(49°C)	85%

Do not apply when the surface temperature is less than 5°F (3°C) above the dew point.

Excessive humidity or condensation on surface during curing may result in a surface haze, or blush, which must be washed off with water before recoating.

Special thinning and application techniques may be required above or below normal conditions.

SPRAY : Use sufficient air volume for correct operation of equipment.

Use a 50% overlap with each pass of the gun. On irregular surfaces, coat the edges first, making an extra pass later.

NOTE : The following equipment has been found suitable, however, equivalent equipment may be substituted.

Conventional : Use a 1/2 " minimum I.D. material hose. Hold gun 12-14 inches from the surface and at a right angles to the surface.

<u>Mfr. & Gun</u>	<u>Fluid Tip</u>	<u>Air Cap</u>
Binks #18 or #62	67	67PB
DeVilbiss P-MBC or JGA	D	64
Approx..086" I.D.		

Airless : Use a 1/2 " minimum I.D. material hose. Hold gun 18-20 inches from the surface and at a right angles to the surface.

<u>Mfr. & Gun</u>	<u>Pump*</u>
Graco 207-300	Bulldog 30:1 or King 45:1
Binks Model 720	Jupiter B8-36 37:1
Either of the above(DeVilbiss)	Huskie QFA-519

* Revers-A-Clean tip is recommended. Use a 0.021- 0.029" tip with 2400 psi.

BRUSH OR ROLLER : Use medium bristle brush or medium nap phenolic core roller.

DRYING TIMES : (at recommended thickness)

Between Coats : (Note 1 and 2)

50°F(10°C)	4 Days
60°F(16°C)	2 Days
75°F(24°C)	1 Days
90°F(32°C)	1/2 Day

Final Cure : (Immersion Service - Note 3)

50°F(10°C)	14 Days
60°F(16°C)	12 Days
75°F(24°C)	7 Days
90°F(32°C)	4 Days

Note 1 : If final cure is attained and recoat is necessary, wipe with Surface Preparation #1 before recoating.

Note 2 : If exposed to sunlight for more than 36 hours, wipe with Surface Preparation #1 before topcoating.

Note 3 : Force curing is suggested for all tank linings. 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 proper ventilation, fresh air respirators or fresh air hoods must be used by all application personnel. Where flammable solvents exist, explosion proof lighting equipment must be used. Hypersensitive persons should wear clean protective clothing, gloves and/or protective cream on face, hands and all exposed areas.

CLEAN UP : Use Carboline Thinner #2.

STORAGE CONDITIONS :

Temperature	: 45°F-110°F(7-43°C)
Humidity	: 0-100%

CAUTION: CONTAINS FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST. WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES.

