

SELECTION DATA

GENERIC TYPE : Flexible epoxy-amine. Part A and Part B mixed prior to application.

GENERAL PROPERTIES : A modified epoxy-amine system having unique flexibility properties. Flexibility is retained even after long aging. Is superior in acid, caustic and salt resistance to straight epoxy-amine catalyzed materials. A semi-gloss finish with excellent weathering characteristics. Long pot life. Primer has sub-film corrosion resistance and wetting properties.

RECOMMENDED USES : System provides very effective maintenance protection for industries such as chemical processing, pulp and paper, oil and gas, and food processing. Used for protection of structural steel and equipment exteriors exposed to splash, spillage and fumes of acid, caustic or salt atmospheres. In exterior service, the Carboline 188 system weathers exceptionally well. Carboline 188 Primer is used as a prime coat to upgrade virtually any generic type system. A system of Carbozinc 11 and Carboline 188 High Build and/or Finish gives outstanding protection in severe chemical environments.

NOT RECOMMENDED FOR : Immersion service, aromatic and ketone solvent exposure or severe oxidizing acid service.

CHEMICAL RESISTANCE GUIDE :

<u>Exposure</u>	<u>Splash & Spillage</u>	<u>Fumes</u>
Acids	Excellent (except strong oxidizing acids)	Excellent
Alkalies	Good	Excellent
Solvents	Poor to Good	Good
Salt	Excellent	Excellent
water	Excellent	Excellent

TEMPERATURE RESISTANCE : (Non-immersion)

Continuous : 160°F(71°C)
Non-continuous : 180°F(82°C)

FLEXIBILITY : Excellent **WEATHERING :** Very Good

ABRASION RESISTANCE : Good

SUBSTRATES : Carboline 188 Primer may be applied over properly prepared steel, concrete or others as recommended.

TOPCOAT REQUIRED : For Carboline 188 HB or Finish, normally none. Carboline 188 Primer may be topcoated with vinyls, catalyzed epoxies, modified phenolics or others as recommended. Acceptable topcoats are Polyclad 933-1 or Carboline 190 HB.

COMPATIBILITY WITH OTHER COATINGS : Carboline 188 HB or Finish may be applied directly over inorganic zincs, catalyzed epoxies, modified phenolics or other coatings as recommended. Acceptable primers are Carbozinc 11 Carbomastic 15 or Carboline 195 Surfacer.

Apply Carboline 188 Primer directly to the substrate or properly prepared catalyzed epoxies and phenolics. A mist coat may be required to minimize bubbling over inorganic zincs.

SPECIFICATION DATA

THEORETICAL SOLIDS CONTENT OF MIXED MATERIAL :

	<u>By Volume</u>
Carboline 188 Primer	40% ± 2%
Carboline 188 HB	42% ± 2%
Carboline 188 Finish	40% ± 2%

RECOMMENDED DRY FILM THICKNESS PER COAT :

Carboline 188 Primer	3 mils (75µ)
Carboline 188 HB	5 mils (125µ)
Carboline 188 Finish	3 mils (75µ)

THEORETICAL COVERAGE PER MIXED GALLON KIT* : (1.12 gal.)

Carboline 188 Primer or Finish
719 mil sq. ft (16.0 sq. m/l at 25µ)
240 sq. ft. at 3 mils (5.3 sq. m/l at 75µ)

Carboline 188 HB
755 mil sq. ft (16.8 sq. m/l at 25µ)
151 sq. ft. at 3 mils (3.4 sq. m/l at 125µ)

*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 : Carboline 188 Primer – Brick Red only ; Carboline 188 HB and Finish – available in a variety of colors . Consult your local Carboline representative or Carboline Customer Service for availability.

GLOSS : Finish, semi-gloss ; HB, low gloss.

ORDERING INFORMATION

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

APPROXIMATE SHIPPING WEIGHT :

	<u>1's (1.12gal.)</u>	<u>5's (5.6gal.)</u>
Carboline 188 Primer HB and Finish	14 lbs.(64.4 kg)	66 lbs.(30 kg)
Polyclad Thinner	9 lbs.(4.1 kg)	45 lbs.(20.4 kg)
Carboline Thinner #25	9 lbs.(4.1 kg)	45 lbs.(20.4 kg)

FLASH POINT : (Pensky-Martens Closed Cup)

Carboline 188 Primer HB and Finish Part A	28°F(-2°C)
Carboline 188 Part B	53°F(12°C)
Polyclad Thinner	64°F(18°C)
Carboline Thinner #25	77°F(25°C)

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To the best of our knowledge the technical data contained herein are true and accurate at the date of issuance and are 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. 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. Prices and cost data if shown, are subject to change without prior notice. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY THE SELLER EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OR LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

APPLICATION INSTRUCTIONS

SURFACE PREPARATIONS : Remove any oil or grease from surface to be coated with clean rags soaked in Carboline Thinner #2 or toluol, in accordance with SSPC-SP 1-82.

Steel : Preferred : Carboline 188 Primer-Dry abrasive blast to a commercial Grade finish in accordance with SSPC-SP 6-82 to a degree of cleanliness in accordance with NACE #3 to obtain a 1-2 mil (25-50µ) blast profile.

Acceptable : Carboline 188 Primer -Power Tool per SSPC-SP 3-82 Carboline 188 HB and Finish should be applied over clean, dry recommended primer.

Concrete : Do not coat concrete treated with hardening solutions unless test patches indicate satisfactory adhesion. Do not apply coating unless concrete has cured at least 28 days at 70°F(21°C) and 50% R.H. or equivalent time.

Apply to properly prepared or surfaced concrete.

Mixing : Mix separately, then combine and mix in the following proportions:

	<u>1 Gal. Kit</u>	<u>5 Gal. Kit</u>
Carboline 188 Primer, HB or Finish Part A	1 gal.	5 gals.
Carboline 188 Part B	1 pt. unit	5 pt. unit

Thin up to 25% by volume with Polyclad Thinner. For hot or windy condition use Carboline Thinner #25.

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 : Ten hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating loses body and begins to sag.

APPLICATION TEMPERATURES :

	<u>Material</u>	<u>Surfaces</u>
Normal	60-90°F(16-32°C)	60-85°F(16-29°C)
Minimum	50°F(10°C)	50°F(10°C)
Maximum	95°F(35°C)	110°F(43°C)
	<u>Ambient</u>	<u>Humidity</u>
Normal	60-90°F(16-32°C)	30-70%
Minimum	50°F(10°C)	0%
Maximum	110°F(43°C)	85%

Special thinning and application techniques may be required above or below normal conditions. Do not apply unless surface is 5°F (3°C) above the dew point.

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 3/8" minimum I.D. material hose. Hold gun approximately 12-14 inches from the surface and at a right angle to the surface.

<u>Mfr. & Gun</u>	<u>Fluid Tip</u>	<u>Air Cap</u>
Binks #18 or #62	66	63PB
DeVilbiss P-MBC or JGA	E	704
	Approx..070" I.D.	

Airless : Use a 3/8 " 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>
DeVilbiss JGB or JGN	QFA-514 or QFA-519
Graco 205-591	President 30 : 1 or Bulldog 30 : 1
Binks Model 700	B5-18 29 : 1 or B8-36 37 : 1

* Teflon packing are recommended and available from pump manufacturer.

Use a .015-.015" tip with 2200 psi.

BRUSH OR ROLLER : Use a natural bristle brush or short nap roller. Use full strokes and avoid rebrushing. Thin up to 25% by volume with Carboline Thinner #25. Two coats may be required. Spray will result in a more uniform application.

DRYING TIMES :

<u>Temperature</u>	<u>Dry to Recoat</u>	<u>Final Cure</u>
50°F(10°C)	24 Hours	6 Days
60°F(16°C)	12 Hours	4 Days
75°F(24°C)	6 Hours	2 Days
90°F(32°C)	4 Hours	1 Day

CLEAN UP : Use Carboline Thinner #2 or Ketone solvent.

STORAGE CONDITIONS : (store indoors)

Temperature : 40-110°F(4-43°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.

