

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Epoxy Polyamide
<b>Description</b>	Epoxy-polyamide primer with zinc phosphate. Carboguard 193 P Primer has excellent resistance to salts, alkalis and water. It has also good resistance to mild acids and solvents. The film cured is hard and abrasion resistant.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent corrosion resistance.</li> <li>• Cured film is tough and abrasion resistant.</li> <li>• Can be used as tie-coat over inorganic zinc silicate and metallized steel.</li> <li>• Widely used within petrochemical, off-shore and naval industries.</li> </ul>
<b>Color</b>	Red (ACQPA 27122) and Gray (ACQPA 23912). Others upon request.
<b>Finish</b>	Flat As an epoxy, it can chalk in sunlight exposure.
<b>Primer</b>	Self-priming. May be applied over steel, aluminum, stainless steel, metallized, zinc silicate (Carbozinc 11), concrete.
<b>Dry Film Thickness</b>	30 – 70 micron per coat. May be applied over organic and inorganic zinc primers. A mist coat may be required to minimize bubbling over inorganic zinc primers. Do not exceed a DFT of 70 microns in a single coat
<b>Solid(s) Content</b>	By Volume: 52 +/- 2%
<b>Theoretical Coverage Rates</b>	7,4 m <sup>2</sup> /l at 70 microns Allow for loss in mixing and application
<b>Dry Temp. Resistance</b>	Continuous: 120°C (248°F)
<b>Limitations</b>	Not recommended for immersion service and in contact of strong and oxidant acids. Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.
<b>Topcoats</b>	May be topcoated with Acrylic, Epoxy, Polyurethane or other coating as recommended by Carboline.

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	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.
<b>Steel</b>	For most application: SSPC-SP10 / ISO 8501-1 Sa 2½, to obtain a blast profile of 25-50µ. UHP Water Jetting could be used. May also be applied over SSPC-SP3/ISO 8501-1 ST3 for touch-up or small areas.

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### SUBSTRATES & SURFACE PREPARATION

<b>Concrete</b>	Concrete must be cured 28 days at 24°C (75°F) and RH 50% or equivalent. Prepare surfaces in accordance with ASTM D 4258 Surface Cleaning of Concrete and ASTM D 4259 Abrading Concrete. Voids in concrete may require surfacing.
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### MIXING & THINNING

<b>Mixing</b>	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
<b>Thinning</b>	Up to 25% by volume with Thinner #15. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
<b>Ratio</b>	By volume: Part A: 3 Part B: 1
<b>Pot Life</b>	4 Hours at 20°C. Pot-life end when coating loses body and begins to sag. Pot-life times will be less at higher temperatures.

### 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.

<b>General</b>	The following spray equipment has been found suitable and is available from manufacturers such as Binks, De Vilbiss and Graco.
<b>Conventional Spray</b>	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.
<b>Airless Spray</b>	Pump Ratio: 30:1 (min.) GPM Output: 3.0 (min.) 11.5 liters/min Material Hose: 3/8" I.D. (min.) Tip Size: 0.015"-0.021" Output PSI: 2000-2100 Filter Size: 60 mesh  PTFE packings are recommended and available from the pump manufacturer.
<b>Brush &amp; Roller (General)</b>	Recommended for touch up, striping of weld seams and hard-to-coat areas only. Avoid excessive re-brushing or re-rolling.
<b>Brush</b>	Use a medium bristle brush.
<b>Roller</b>	Use a short nap synthetic roller cover with phenolic core.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	5°C (41°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	40°C (104°F)	75°C (167°F)	50°C (122°F)	85%

Do not apply when the surface temperature is less than 3°C 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.	Dry to Touch	Between Coats	Final Cure
5°C (41°F)	4 Hours	16 Hours	21 Days
15°C (59°F)	2 Hours	12 Hours	14 Days
25°C (77°F)	1 Hour	6 Hours	10 Days
30°C (86°F)	20 Minutes	3 Hours	5 Days

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 times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats.

## CLEANUP & SAFETY

<b>Cleanup</b>	Use #2 Thinner . In case of spillage, absorb and dispose of in accordance with local applicable regulations.
<b>Safety</b>	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
<b>Ventilation</b>	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. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.
<b>Caution</b>	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.

## PACKAGING, HANDLING & STORAGE

<b>Shelf Life</b>	24 months at 24°C (75° F) When kept at recommended storage conditions and in original unopened containers.
<b>Storage Temperature &amp; Humidity</b>	4° - 43°C (40°-110°F) 0-100% Relative Humidity
<b>Flash Point (Setaflash)</b>	Part A: 25 °C (77°F) Part B: 25 °C (77°F)

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## PACKAGING, HANDLING & STORAGE

<b>Storage</b>	Store indoors.
	20 liters Kit:   Part A: 15 liters   Part B: 5 liters
<b>Packaging</b>	5 liters Kit: *   Part A: 3,75 liters   Part B: 1,25 liters
	* Not available in all Carboline

## 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 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, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. 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.