

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Epoxy polyamide
<b>Description</b>	An economical, lead-free, high build maintenance-coating primer. Cures to hard, tough film with excellent sub-film corrosion resistance. Has excellent physical properties and good all-round chemical resistance. Carboguard 193 Primer has excellent adhesion and better tolerance of field application variables than other types of coatings.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent corrosion protection</li> <li>• High build film</li> <li>• Excellent adhesion</li> <li>• Very good abrasion resistance</li> <li>• Good all-round chemical resistance</li> </ul>
<b>Color</b>	Red (0500), Grey (0700)
<b>Finish</b>	Flat
<b>Dry Film Thickness</b>	76 microns (3 mils) per coat
<b>Solids Content</b>	By Volume 50% +/- 2%
<b>Theoretical Coverage Rate</b>	19.7 m <sup>2</sup> /l at 25 microns (802 ft <sup>2</sup> /gal at 1.0 mils) 6.6 m <sup>2</sup> /l at 75 microns (267 ft <sup>2</sup> /gal at 3.0 mils) Allow for loss in mixing and application.
<b>VOC Value(s)</b>	<b>As Supplied:</b> 3.00 lbs/gal (360 g/l) <b>Thinned:</b> 10 oz/gal w/ #2 : 3.20 lbs/gal (387 g/l) 15 oz/gal w/ #2 : 3.40 lbs/gal (413 g/l) 16 oz/gal w/ #33 : 3.50 lbs/gal (420 g/l)  These are nominal values and may vary slightly with color.
<b>Dry Temp. Resistance</b>	Continuous: 93°C (199°F) Non-Continuous: 121°C (250°F)  Discoloration and loss of gloss is observed above 200°F (93°C).
<b>Limitations</b>	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.  Not recommended for splash and spillage of strong solvents or concentrated acids.
<b>Topcoats</b>	Carboguard 193 Primer may be topcoated with catalyzed epoxies vinyls, modified phenolics or others as recommended.
<b>Wet Temp. Resistance</b>	Immersion temperature resistance depends upon exposure. Consult StonCor ME Technical Service for specific information. It is recommended that metal tanks operating above 140°F (60°C) be insulated.

## 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.
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### SUBSTRATES & SURFACE PREPARATION

<b>Steel</b>	Immersion : SSPC-SP10
	Non-Immersion : SSPC-SP6
	Surface Profile : 1.5-3.0 mills (45-75 microns)
<b>Concrete</b>	Immersion: 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.

### MIXING & THINNING

<b>Mixing</b>	Power mix separately, then combine and power mix.
<b>Thinning</b>	Spray: Up to 13 oz/gal (10%) w/ Carboline Thinner/ #2. Brush: Up to 19 oz/gal (15%) w/ Carboline Thinner #2 Roller: Up to 19 oz/gal (15%) w/ Carboline Thinner #2
	For hot and windy conditions above 80°F (24°C), use Carboline Thinner #33. Use of thinner other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
<b>Ratio</b>	1:1 Ratio (A to B)
<b>Pot Life</b>	12 Hour at 75°F (24°C) Pot life ends when coating loses body and begins to sag. Pot life time 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>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) Material Hose : 3/8" I.D. (min) Tip Size : .017-.021" Output PSI : 2100-2300 Filter Size : 60 mesh  Teflon packings are recommended and available from the pump manufacturer.
<b>Brush &amp; Roller (General)</b>	Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie in within 10 minutes at 75°F (24°C). Use a medium bristle brush or a short-nap synthetic roller cover with phenolic core.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	43°C (109°F)	43°C (109°F)	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.	Final Cure	Between Coats
10°C (50°F)	12 Days	24 Hours
16°C (61°F)	6 Days	12 Hours
24°C (75°F)	2 Days	6 Hours
32°C (90°F)	2 Days	3 Hours

These times are based on a 75 microns 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. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. Maximum recoat time is 6 months without special surface preparation. If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting or sanding before the application of additional coats.

## CLEANUP & SAFETY

<b>Cleanup</b>	Use Thinner #2 or acetone. 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 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.
<b>Ventilation</b>	When used in enclosed areas and product is thinned through air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapour concentration from reaching the lower explosion limit for the solvents used. Users 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 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>	Minimum 24 months  <b>*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.</b>
<b>Shipping Weight (Approximate)</b>	<u>7.6 Liters</u> 11.4 kg <u>38 Liters</u> 57 kg

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## PACKAGING, HANDLING & STORAGE

<b>Flash Point (Setaflash)</b>	Carboguard 193 Primer Part A: 46°F (8°C)
	Carboguard 193 Primer Part B: 60°F (16°C)
	Carboline Thinner #2: 24.8°F (-4°C)
	Carboline Thinner #33: 101°F (38°C)

**Storage** | Store in cool and dry conditions

## 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.