

**SELECTION & SPECIFICATION DATA**

<b>Generic Type</b>	Amine cured modified epoxy phenolic
<b>Description</b>	Highly cross-linked primer with exceptional chemical resistance. Widely used as a tank lining primer in the petrochemical industry as well as in other aggressive immersion conditions like jet fuel, municipal and industrial waste water as part of the tank lining system. Can also be used as a protective coating under insulation due to its excellent resistance to wet and dry cycling conditions at elevated temperatures.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent overall chemical resistance</li> <li>• Very good abrasion resistance and flexibility</li> <li>• VOC compliant to current AIM regulations</li> <li>• Meets all performance requirements of DOD-P-23236 Type 1, Class 1 Phenoline 187 Primer &amp; 187 Finish system</li> <li>• Complies with FDA 21CFR 175.300 criteria for food contact</li> </ul>
<b>Color</b>	Red
<b>Finish</b>	Low gloss
<b>Dry Film Thickness</b>	100 to 150 microns per coat
<b>Solid(s) Content</b>	By Volume: 65% ± 2%
<b>Theoretical Coverage Rates</b>	6.4m <sup>2</sup> per litre at 100 microns 4.3m <sup>2</sup> per litre at 150 microns Allow for loss in mixing and application
<b>VOC Value(s)</b>	Thinner # 2 12%: 363 g/l As supplied: 300 g/l  These are nominal values and may vary slightly with colour.
<b>Under Insulation Resistance</b>	Continuous: 204°C (399°F) Non-Continuous: 218°C (424°F)  Discolouration and loss of gloss is observed above 93°C
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Do not use in water immersion over 54°C</li> <li>• Epoxies lose gloss, discolour and eventually chalk in sunlight exposure</li> </ul>
<b>Topcoats</b>	Normally topcoated with Phenoline 187 Finish.

**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>	<b>Immersion:</b> ISO 8501 Sa2½ <b>Non-Immersion:</b> ISO 8501 Sa2 <b>Surface Profile:</b> 50 to 75 microns

# Phenoline 187 Primer

## PRODUCT DATA SHEET



### SUBSTRATES & SURFACE PREPARATION

**Concrete** | **Immersion:** Concrete must be cured 28 days at 25°C and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258-92 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

**Stainless Steel** | Surface profile should be a dense angular 50 to 60 micron and is best achieved through abrasive blasting. Remove all surface contaminants that would interfere with the performance of stainless steel for the intended service such as, but not limited to, embedded iron or chlorides.

### PERFORMANCE DATA (TYPICAL VALUES)

Test Method	System	Results
Abrasion ASTM D4060	Blasted steel 1 Coat 187 Primer 1 Coat 187 Finish	163.3mg loss CS17 Wheel 1000gm load 1000 cycles
Adhesion ASTM D4541 (Elcometer)	Blasted steel 1 Coat 187 Primer 1 Coat 187 Finish	5.8 MPa
Gardner Impact ASTM D2794	Blasted steel 1 Coat 187 Primer 1 Coat 187 Finish 2.04kgm	Direct Impact: 7.9mm diameter Reverse Impact: 1,6mm diameter
Permeability Method B Condition C ASTM D1653	Blasted steel 1 Coat 187 Primer 1 Coat 187 Finish	Permeability .0076; WVP 0.29 metric perms; 0.44 perms; MVT 5.72
Salt Spray ASTM B117	Blasted steel 1 Coat 187 Primer 1 Coat 187 Finish	No blistering, rusting, cracking, or delamination; less than 1.6mm rust creepage at the scribe at 1000 hours

The performance data above is a Phenoline 187 Primer and Phenoline 187 Final system. Test reports and additional data are available upon written request.

### MIXING & THINNING

**Mixing** | Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

**Thinning** | May be thinned up to 25% with Thinner # 2. Use of thinners other than those supplied or recommended by StonCor Africa may adversely affect product performance and void product warranty, whether expressed or implied.

**Ratio** | 4:1 Ratio (A to B)

**Pot Life** | 4 Hours at 25°C  
Pot life ends 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>Conventional Spray</b>	Pressure pot equipped with dual regulators, 12mm minimum material hose, .055-.070" I.D. fluid tip and appropriate air cap.
<b>Airless Spray</b>	<p><b>Pump Ratio:</b> 45:1  <b>GPM Output:</b> 3.0 (min)  <b>Material Hose:</b> 12mm I.D. (min)  <b>Tip Size:</b> .015 to .019  <b>Output PSI:</b> 2100 to 2300  <b>Filter Size:</b> 60 Mesh</p> <p>PTFE packings are recommended and available from the pump manufacturer.</p>
<b>Brush &amp; Roller (General)</b>	Not recommended for tank lining applications except when striping welds and touching up.
<b>Brush</b>	Use a medium bristle brush.
<b>Roller</b>	Use a short-nap solvent resistant roller.

## 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)	38°C (100°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 Immersion	Maximum Recoat Time	Minimum Recoat Time
10°C (50°F)	NR	30 Days	4 Days
16°C (61°F)	30 Days	30 Days	2 Days
24°C (75°F)	15 Days	15 Days	24 Hours
32°C (90°F)	7 Days	7 Days	12 Hours

These times are based on a 100 to 150 micron 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. If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting prior to application of additional coats.

**Curing Details** | **Relative Humidity:** 50%

**Ambient Cure** | Final cure temperatures below 16°C are not recommended for tank linings.

# Phenoline 187 Primer

## PRODUCT DATA SHEET



### CURING SCHEDULE

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<b>Force Cure</b>	Force curing is beneficial to the performance of all tank linings, especially for storage of food grade products. The following schedule may be used to force cure the coating after the final coat is applied. Cure at 25°C for 4 hours followed by 8 hours at 66°C. Elevate temperature no more than 16°C every 30 minutes. Final cure requirement varies depending upon exposure. Contact StonCor Africa Technical Service for additional force curing and safety information.
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### CLEANUP & SAFETY

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<b>Cleanup</b>	Use Thinner # 2. In case of spillage, absorb and dispose of in accordance with local 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 including personnel protection equipment.
<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. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.
<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

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<b>Shelf Life</b>	Part A & B: Min 24 months at 25°C  <b>* Shelf life (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.</b>
<b>Shipping Weight (Approximate)</b>	<b>5 Litre Kit:</b> Part A: 6.78kg Part B: 1.15kg
<b>Storage Temperature &amp; Humidity</b>	4-43°C 0-90% Relative Humidity
<b>Flash Point (Pensky Martens Closed Cup)</b>	Part A: 19°C Part B: 20°C Mixed: 19°C
<b>Storage</b>	Store indoors



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## PRODUCT DATA SHEET

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### **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.