product data

carboline®

# Phenoline® 187 Primer/Finish

## Selection & Specification Data

**Generic Type**
Two-components, modified epoxy phenolic.

**Description**
Highly cross-linked coating with excellent chemical resistance. Widely used as a tank lining system in petrochemical industry as well as in other aggressive immersion conditions such as fuel and cargo tanks.

**Features**
- Excellent overall chemical resistance
- Very good abrasion resistance and flexibility
- VOC compliant to current AIM regulations
- Complies with FDA 21CFR 175.300 criteria for food contact

**Color**
Primer: Red
Finish: White and Grey

**Finish**
Semi Gloss

**Topcoats**
None for Phenoline 187 HFP Finish. Phenoline 187 HFP Primer may be topcoated with epoxies, modified phenolics or other types as recommended by Carboline.

**Dry Film Thickness**
100 - 175 µm per coat, normally 125 µm.

**Wet Film Thickness**
150 - 265 µm per coat, normally 190 µm.

**Solids Content**
By volume: 66 ± 2%

**Theoretical Coverage Rate**
5,3 $m^2$/l at 125µm
Allow for loss in mixing and application.

**Dry Temp. Resistance**
Continuous: 150°C
Non-continuous: 200°C

**Immersion Temp. Resistance**
Continuous: 40°C
Non-continuous: 55°C

**Limitations**
Not recommended for continous immersion in water over 54ºC, strong mineral- and organic acids.

**May 2009** replaces December 2005

## Substrates & Surface Preparation

**General**
Surface 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.

**Steel**
Abrasive blast to ISO 8501-1 Sa 2½ to obtain a 35 – 75 microns blast profile. Weld slag must be remove and welds ground to a rounded contour. Stripe coating of properly prepared welds with Phenoline 187 HFP Primer by brush or spray is recommended. After abrasive blasting, all dust, foreign particles and spent abrasives must be removed by blowing down with clean, dry, oil-free air, brushing and vacuum cleaning.

**Concrete**
Concrete must be cured at least 28 days at 24ºC and 50% relative humidity or equivalent. Prepare surfaces in accordance with with ASTM D42582 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

## Application Equipment

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.

**Spray Application (General)**
The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

**Airless Spray**

| | |
|---|---|
| Pump ratio: | 30:1 (min.) * |
| GMP Output: | 3.0 (min.) |
| Material Hose: | 3/8" I.D. (min.) |
| Tip Size: | .021-.025" |
| Output PSI: | 2200 |
| Filter Size: | 60 mesh |

* Teflon packings are recommended and available from the pump manufacturer.

**Brush & Roller**
For stripe coating of welds and touch-up of small areas only.

## Mixing & Thinning

**Mixing** Power mix separately, then add part B to Part A and power mix. DO NOT MIX PARTIAL KITS.

**Ratio** 2 : 1 (A to B) by volume

**Thinning** May be thinned up to 25% with Carboline Thinner #33. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

**Pot Life** 4 hours at 24ºC and longer at lower temperatures.

## Cleanup & Safety

**Cleanup** Use Carboline Thinner #2. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

**Safety** 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.

**Ventilation** When used 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.

**Caution** 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 applicable regulations. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

## Application Conditions

| Condition | Material | Surface | Ambient | Humidity |
|---|---|---|---|---|
| Normal | 15-30°C | 15-30°C | 18-29°C | 30-60% |
| Minimum | 13°C | 10°C | 10°C | 0% |
| Maximum | 35°C | 75°C | 40°C | 85% |

Industry standards are for substrate temperatures to be 3ºC above the dew point. Special application techniques may be required above or below normal application conditions.

## Curing Schedule

| Surface Temp. & 50% Relative Humidity | Between Coats | Final Cure |
|---|---|---|
| 10°C | 4 Days | Not recommended |
| 16°C | 2 Days | Not recommended |
| 24°C | 18 Hours | 15 Days |
| 32°C | 12 Hours | 7 Days |

These times are based on 125 microns dry film thickness. Excessive film thickness or inadequate ventilation conditions after application require longer dry times and will cause premature failure in extreme cases. Excessive humidity or condensation on the surface during curing may result in surface haze or blush; any haze or blush should be removed by washing with water before recoating.

## Packaging, Handling & Storage

**Kit Standard** Part A 13,3 litres
Part B 6,7 litres

**Storage (General)** Store indoors

**Storage Temperature & Humidity** 5° - 45°C
0 - 95% relative humidity

**Shelf Life** Max. 24 months at 24°C

## Note

This product shall only be used as a single-coat or in a system with other recommended Carboline products. Otherwise an approval shall be issued by Carboline.

CARBOLINE NORGE AS
P.O Box 540, 3412 Lierstranda
Tel. +47 32 85 74 00 Fax +47 32 85 74 96

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