



SELECTION & SPECIFICATION DATA

Generic Type	Phenolic epoxy novolac
Description	This product is a solvent-free, high performance epoxy coating specifically designed as a pit filling primer with ideal flow properties allowing it to wet-out and fill moderate to severe pitting on steel tank bottoms. It's unique formula allows simple batch mixing for ease of application. With an appropriate lining, it can handle exposures typically seen in the oil and gas industries. It is resistant to crude oil, NGL condensates, produced water, brines, and industrial process water.
Features	<ul style="list-style-type: none"> • Highly penetrating formula to handle severe pitting • Blast hold protection • Batch mix formulation, single leg airless spray. • Superior adhesion to steel • Excellent abrasion resistance and flexibility • Can be applied down to 35°F/2°C • Can be used with multiple lining systems • Non-blushing with a long recoat window • Convenient packaging for batch mix • Low odor • Meets drinking water criteria of NSF/ANSI/CAN 600
Color	Standard: 0200 (Manilla)
Primer	Self-priming.
Dry Film Thickness	3 - 5 mils (76 - 127 microns) after pits are filled For moderate to severely pitted steel tank bottoms apply as needed to fill and seal pits. This may result in an average of 15 mils or more. Plan accordingly.
Solids Content	By Volume 93% +/- 2%
Theoretical Coverage Rate	1492 ft ² /gal at 1.0 mils (36.6 m ² /l at 25 microns) 497 ft ² /gal at 3.0 mils (12.2 m ² /l at 75 microns) 298 ft ² /gal at 5.0 mils (7.3 m ² /l at 125 microns) Allow for loss in mixing and application.
VOC Values	As Supplied : 56 g/l
Wet Temp. Resistance	Immersion temperature resistance depends upon exposure, consult Carboline Technical Service for specific information

SUBSTRATES & SURFACE PREPARATION

General	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
Steel	Cleanliness: Abrasive blast to SSPC-SP10 (minimum) Profile: Minimum 3 mil (75 micron) dense, sharp anchor profile free of peening, as measured by ASTM D 4417. Defects exposed by blasting must be repaired. Use appropriate abrasive mix to clean pit depressions.

Phenoline[®] Tank Shield FP

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Stainless Steel	Prepare by abrasive blasting to SSPC-SP 17 Thorough Abrasive Blast to a minimum of 3 mils (75 microns) dense angular anchor profile.
Concrete	Concrete: Clean and dry. Remove all loose, unsound concrete. Do not apply coating unless concrete has cured at least 28 days @ 70°F (21°C) and 50% RH or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require filling/surfacing.

MIXING & THINNING

Mixing	This product may be batch mixed and applied using standard airless spray equipment. Combine and power mix until homogeneous. Scrape sides and bottoms of cans to mix thoroughly. Component Details: Manilla (0200): The Part A is black and part B is yellow. Grey (Z700): The Part A is black and Part B is white.
Thinning	Thinning not normally required. Consult Carboline Technical Service before thinning. CLEANUP THINNER: Thinner 2 or 76.
Ratio	1:1 by volume (Part A to Part B)
Pot Life	40 minutes @75°F(24°C) material temperature and less at higher temperatures. Storage in a cool location will aid with pot life. This product will exotherm (heat up) in large containers and shorten pot life. Mix only what you can apply within the pot life. The 4 gal. kits are packaged for simple and fast mixing with extra space in the A bucket for the B side.

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.

General	Phenoline Tank Shield FP can fill deep and large pits. Sections of tank floor with heavy pitting will require more material than smooth areas and require heavier application. Consider this when estimating usage. A 20 mil wet film average is usually sufficient for pitted tank floors. Weld seams should receive their stripe coat with the lining rather than this primer.
Airless Spray	Airless spray equipment capable of minimum 5000 psi (55:1 ratio or larger). Fluid hose shall be minimum 1/2" I.D. with short 3/8" I.D. whip hose recommended. Airless spray gun shall be rated minimum 6000 psi utilizing reverse-a-clean tips sizes 0.017-0.027". Fixed-ratio (1:1 by volume) plural component equipment may also be used. For severely pitted steel surfaces, the use of a squeegee and/or back-rolling will aid in the complete coverage and treatment of pits. Consult Carboline Technical Service for details.
Roller	Phenoline Tank Shield FP may be poured and spread thin with short nap synthetic core rollers. Pour mixed material in ribbons to minimize placement time and maintain workability.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	55°F (13°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	110°F (43°C)	125°F (52°C)	110°F (43°C)	85%

This product 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.	Dry to Touch	Dry to Handle or Topcoat	Maximum Recoat Time
35°F (2°C)	24 Hours	30 Hours	30 Days
50°F (10°C)	12 Hours	14 Hours	30 Days
75°F (24°C)	6 Hours	7 Hours	30 Days
90°F (32°C)	4 Hours	4 Hours	30 Days

For recoating, if the product has exceeded the maximum recoat time, de-gloss and roughen by light sanding or mechanically abrade the surface and remove dust prior to topcoating.

TESTING / CERTIFICATION / LISTING

Potable Water Certifications	Potable Water Use Limitations @ 75°F (24°C):
	<i>Meets drinking water criteria of NSF/ANSI/CAN 600</i> Max DFT: 30 mils (762 microns) # Coats: 1 Tank Rating: >6,000 gal (1892.71 Liters) Thinning: N/A 4 Day Cure Required before service Approved Colors: 0200 (Brown), Z700 (Grey), 0100 (Blue)

CLEANUP & SAFETY

Cleanup	Thinner 2 or 76 are recommended for clean up.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions.
Ventilation	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.

PACKAGING, HANDLING & STORAGE

Packaging	Available in 10-gal (37.8-lit) and 4-gal (15.1 lit) kits.
Shelf Life	12 months
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Shipping Weight (Approximate)	12 lbs/gal (5.5 kg/gal)

Phenoline[®] Tank Shield FP

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Flash Point (Setaflash) | Part A: 166°F (74°C)
Part B: 204°F (95°C)

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.