

Selection & Specification Data

Generic Type	Amine-adduct cured epoxy
Description	This product is a solvent-free, high performance epoxy coating designed as an internal tank, valve and pipe lining for chemical or other commodity storage. It is a unique blend of resins and curing agents that allow batch mixing for ease of application. Plural component spray equipment is not required. The product is bluish resistant and is typically applied at film thicknesses of 20-35 mils (500-875 microns) or thicker as needed (tank floors). It can handle exposures typically seen in the oil and gas industries; crude oils and fuels including ethanol. It is resistant to NGL condensates, produced water, brines, and industrial process water.
Features	<ul style="list-style-type: none"> • Batch mix formulation; plural equipment not required • High impact resistance • Superior adhesion to steel • Resistance to a broad range of fuels including ethanol • Resistant to hot water up to 150°F/65°C • Excellent abrasion resistance and flexibility • Can be applied down to 35°F/2°C • Can be applied as a single or multi-coat system • Non-blushing with a long recoat window
Color	Standard: Grey (Z700) Special Order: White (0800) or Blue (0100)
Finish	Gloss
Primer	Coating is normally applied direct to metal. May be applied over other primers as recommended by Carboline.
Dry Film Thickness	20.0 - 40.0 mils (508 - 1016 microns) per coat Depends on service and existing condition of the substrate, product is typically applied in a one coat application at the appropriate film thickness depending on the application. Higher film thicknesses (60+ mils/1500+ microns) are used for more aggressive or abrasive conditions or for severely pitted steel (tank bottoms). Maximum vertical film build is 40 mils (1000 microns).
Solids Content	By Volume 98% +/- 2%
Theoretical Coverage Rate	1572 ft ² at 1 mil (39 m ² /l at 25 microns) 79 ft ² at 20 mils (2 m ² /l at 500 microns) 39 ft ² at 40 mils (1.0 m ² /l at 1000 microns) Allow for loss in mixing and application.
VOC Values	As Supplied 19 g/l

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.
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. Power mix each component separately, then combine and power mix until homogenous.
Thinning	Not normally needed but may be thinned up to 5% (6 ounces/gal) with Thinner 76 to reduce viscosity for sprayability or to extend pot life. CLEANUP THINNER: Thinner 2 or 76.
Ratio	1:1 by volume (Part A to Part B)
Pot Life	60 minutes @75°F(24°C) 30 minutes @90°F(32°C) and less at higher temperatures Thinning up to 5% with Thinner 76 extends pot life 20-25%.

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	This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from equipment manufacturers.
Airless Spray	Airless spray equipment capable of 4000 psi (minimum 45:1 airless pump) along with 1/2" diameter material lines are recommended. Tip size should be 0.023-0.029" with a minimum 16-18 inch spray pattern using 3500-3800 psi fluid pressure. A "923" tip is ideal. A wide spray pattern facilitates break up and eliminating fingering resulting in an aesthetic appearance. Plural component equipment may also be used if the material can not be sprayed within the working time of the mixed material.

Phenoline[®] Tank Shield

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	55 °F (13 °C)	35 °F (2 °C)	35 °F (2 °C)	0%
Maximum	90 °F (32 °C)	125 °F (52 °C)	110 °F (43 °C)	85%

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Handle	Immersion Service (Most Chemical Service)
35 °F (2 °C)	48 Hours	7 Days
50 °F (10 °C)	30 Hours	5 Days
75 °F (24 °C)	10 Hours	3 Days
90 °F (32 °C)	5 Hours	24 Hours

Dry to touch is normally 6 hours at 75°F/24°C.

Cure for Service: Cure for service times are dependent on curing conditions and expected immersion exposure. Film hardness (Shore D of 75 or greater) and/or solvent resistance (passes a 25 solvent double-rub* (ex: ethanol or MEK); are good indications that the lining is suitable for immersion service. Typically this can be from 24-72 hours or longer depending on the curing conditions. 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. Maximum recoat time is 30 days.

*No significant color pick-up and some down-glossing is acceptable

Cleanup & Safety

Cleanup	Thinner #2 is recommended for clean up.
Safety	Read and follow all caution statements on this product data sheet and on the MSDS 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. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.

Packaging, Handling & Storage

Shelf Life	12 months
Shipping Weight (Approximate)	12 lbs/gal (5.5 kg/gal)
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Flash Point (Setaflash)	Part A: 166°F (74°C) Part B: 204°F (95°C)
Packaging	Available in 10-gal(37.8-lit) kits.



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