Hydroplate 1100

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Hybrid novolac amine epoxy
Description	This product is a proprietary high performance epoxy coating designed as an internal tank, valve, fitting, and pipe lining for the water and wastewater markets. It has a unique blend of resins and curing agents that allow batch mixing, eliminating the need for plural component spray equipment. This blush-resistant lining is typically applied at film thicknesses of 20 mils (500 microns) or thicker and can cure at temperatures down to 35°F (2°C). It is resistant to potable water, raw water, industrial process water, wastewater, and sewage. This product is ideal for water storage, municipal wastewater, and water treatment facilities.
Features	• Certified by UL to meet NSF/ANSI/CAN 61 and NSF/ANSI/CAN 600* • Conforms to multiple AWWA D102 ICS 3 • Batch mix formulation, single-leg airless spray • High impact resistance • Superior adhesion properties • 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 extended recoat window • Fast return to service for potable water application *Valid when manufactured at a certified location.
Typical Uses	Steel and concrete potable water storage tanks, water treatment facilities, atmospheric and immersed steel and concrete in corrosive wastewater environments, water transmission pipe, ductile iron pipe, water fittings, valves, and other appurtenances
Color	White (N800), Blue (N100)
Finish	Gloss
Primer	Self-priming or Phenoline Tank Shield FP
Dry Film Thickness	15 - 30 mils (381 - 762 microns) per coat
Solids Content	By Volume 100%
Theoretical Coverage Rate	1604 ft²/gal at 1.0 mils (39.4 m²/l at 25 microns) 107 ft²/gal at 15.0 mils (2.6 m²/l at 375 microns) 53 ft²/gal at 30.0 mils (1.3 m²/l at 750 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 9 g/l These are nominal values and may vary with color.

UL Potable Water	Tank	Pipe	Valves, Fittings	Dry Film Thickness	Cure to Service
Certification Rating	≥ 500 gallons	≥ 12 inches	≥ 4 inches	1-2 coats < 50 mils	4 days

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 shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the appropriate ICRI CSP 3-5. This product can tolerate SSD (saturated surface dry) surfaces. Consult Carboline Technical Service for more specific recommendations.
Non-Ferrous Metals	Surface profile should be a dense angular 1.5 - 3 mils and is best achieved through abrasive blasting in accordance with SSPC-SP16 for atmospheric exposure, or SSPC-SP17 for immersion environments.
Ductile or Cast Iron	**Immersion and Buried Service:** Abrasive blast clean per NAPF 500-03-04. **Non-Immersion:** Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

MIXING & THINNING

Mixing	This product may be batch mixed and applied using standard airless spray equipment. IMPORTANT: Power mix each component separately, then combine and power mix until homogenous. Component Details for Colors: Blue (N100): The Part A is blue (N910) and the Part B is white (N800) White (N800): The Part A is clear (N000) and the Part B is white (N800)
Thinning	Thinning not normally required.
Ratio	1:1 by volume (Part A to Part B)
Pot Life	30 minutes at 75°F (24°C). Consult Carboline Technical Service for techniques to maximize pot life.

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.

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.

Airless Spray	Pump Ratio: 60:1 (min.) GPM Output: 2.5 (min.) Material Hose: 3/8” I.D. (min.) Tip Size: 0.021”-0.027” Output PSI: 6000 - 7000 Filter Size: 60 mesh PTFE packings are recommended and available from the pump manufacturer. A wider tip fan size facilitates break up and reduces fingering.
Plural Component Airless Spray	Fixed-ratio (1:1 by volume) plural component equipment may also be used if the material cannot be sprayed within the pot life of the mixed material. Plural spray rig shall have heated hoppers, heated hoses to a mixer manifold through (at least two) static mixers to a 15-25 ft. 3/8" I.D. whip hose. Pre-mix the separate components prior to adding or incorporating into plural component equipment to break the gel. Do not heat material above 110°F (43°C).

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%

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 Handle	Immersion Service (Most Chemical Service)
35°F (2°C)	74 Hours	7 Days
50°F (10°C)	30 Hours	5 Days
75°F (24°C)	10 Hours	4 Days
90°F (32°C)	5 Hours	24 Hours

Dry to Touch and Dry to Recoat 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. **Potable water applications require 4 days at 75°F prior to service.** Film hardness (Shore D of 75 or greater) and/or solvent resistance (passes a 25 MEK solvent double-rubs*)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.
Maximum recoat time is 30 days at 75°F (24°C) and reduces in half for each additional 15°F increase of surface temperature. 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.
*No significant color pick-up and some down-glossing is acceptable

TESTING / CERTIFICATION / LISTING

Potable Water Certifications	**Potable Water Use Limitations @ 75°F (24°C):** *Meets drinking water criteria of NSF/ANSI/CAN 600* Max DFT: 50 mils (1270 microns) # Coats: 1 to 2 Tank Rating: >500 gal (1892.71 Liters) Pipe Rating: 12" or larger (30.48 cm) Valve Rating: 4" or larger (10.16 cm) Thinning: N/A 4 Day Cure Required before service Approved Colors: N800 (White), N100 (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.

PACKAGING, HANDLING & STORAGE

Packaging	10 Gal (37.8 L) Kit 4 Gal (15.1 L) Kit
Shelf Life	Part A: 12 months at 75 °F (24°C) Part B: 12 months at 75 °F (24°C)
Storage Temperature & Humidity	40-110 °F (4-43 °C) 0-90% Relative Humidity
Shipping Weight (Approximate)	12 lbs/gal (5.5 kg/gal)
Flash Point (Setaflash)	Part A: 166 °F (74 °C) Part B: 204 °F (95 °C)

WARRANTY

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