



## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Hybrid novolac amine epoxy
<b>Description</b>	<p>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.</p>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Certified by UL to meet NSF/ANSI/CAN 61 and NSF/ANSI/CAN 600*</li> <li>• Conforms to multiple AWWA D102 ICS 3</li> <li>• Batch mix formulation, single-leg airless spray</li> <li>• High impact resistance</li> <li>• Superior adhesion properties</li> <li>• Excellent abrasion resistance and flexibility</li> <li>• Can be applied down to 35 °F (2 °C)</li> <li>• Can be applied as a single or multi-coat system</li> <li>• Non-blushing with a extended recoat window</li> <li>• Fast return to service for potable water application</li> </ul> <p>*Valid when manufactured at a certified location.</p>
<b>Typical Uses</b>	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
<b>Color</b>	White (N800), Blue (N100)
<b>Finish</b>	Gloss
<b>Primer</b>	Self-priming or Phenoline Tank Shield FP
<b>Dry Film Thickness</b>	15 - 30 mils (381 - 762 microns) per coat
<b>Solids Content</b>	By Volume 100%
<b>Theoretical Coverage Rate</b>	<p>1604 ft<sup>2</sup>/gal at 1.0 mils (39.4 m<sup>2</sup>/l at 25 microns)            107 ft<sup>2</sup>/gal at 15.0 mils (2.6 m<sup>2</sup>/l at 375 microns)            53 ft<sup>2</sup>/gal at 30.0 mils (1.3 m<sup>2</sup>/l at 750 microns)            Allow for loss in mixing and application.</p>
<b>VOC Values</b>	<p><b>As Supplied</b> : 9 g/l</p> <p>These are nominal values and may vary with color.</p>

### Potable Water Certifications

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

# Hydroplate 1100

## PRODUCT DATA SHEET



### 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>	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.
<b>Concrete</b>	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.
<b>Non-Ferrous Metals</b>	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.
<b>Ductile or Cast Iron</b>	<b>Immersion and Buried Service:</b> Abrasive blast clean per NAF 500-03-04. <b>Non-Immersion:</b> Remove all oil and grease from surface by Solvent Cleaning per NAF 500-03-01.

### MIXING & THINNING

<b>Mixing</b>	This product may be batch mixed and applied using standard airless spray equipment. <b>IMPORTANT:</b> 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)
<b>Thinning</b>	Thinning not normally required.
<b>Ratio</b>	1:1 by volume (Part A to Part B)
<b>Pot Life</b>	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.

<b>General</b>	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.
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## 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>Airless Spray</b>	<p>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.</p> <p>A wider tip fan size facilitates break up and reduces fingering.</p>
<b>Plural Component Airless Spray</b>	<p>Equipment: 1:1 fixed-ratio plural component spray equipment with heated hoppers, in-line heaters, and heated hose bundles          Material Hose: 1/2" I.D. (min.)          Static Mixers: Two 1/2" x 12-element stainless steel          Whip Hose: 3/8" x 3-6 foot whip hose          Tip Size: 0.021"-0.027"          Optimal material temp: 100-105°F          See Carboline Application for complete instructions.</p>

## 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. **Refer to Carboline's certified product listing on UL's Product iQ website ([info.carboline.com/potable](http://info.carboline.com/potable)) for details on cure, maximum DFT, and other requirements.** 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

# Hydroplate 1100

## PRODUCT DATA SHEET



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### CLEANUP & SAFETY

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**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.

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### PACKAGING, HANDLING & STORAGE

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**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

**Storage** | Store indoors

**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)

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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.