

## 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 500 microns or thicker and can cure at temperatures down to 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\*
  - Tested and approved to AS/NZS 4020:2018 (refer to "Approvals" section)
  - 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 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

**Colour** | White and Grey

**Finish** | Gloss

**Primer** | Self-priming or Phenoline Tank Shield FP

**Film Build** | 380 - 760 microns dry per coat

**Solid(s) Content** | By Volume 100%

**Theoretical Coverage Rates** | 2.6 m<sup>2</sup>/l at 375 microns dry  
1.3 m<sup>2</sup>/l at 750 microns dry

Allow for loss in mixing and application

**VOC Values** | **As Supplied** : 9 g/l

These are nominal values and may vary with colour

### 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 as described in SSPC-SP 1 (AS 1627.1).
<b>Steel</b>	Cleanliness: Abrasive blast to SSPC-SP 10 (AS 1627.4 Sa 2½) minimum Profile: Minimum 75 micron dense, sharp anchor profile free of peening, as measured by ASTM D4417. 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 Technical Service for more specific recommendations.
<b>Non-Ferrous Metals</b>	Surface profile should be a dense angular 35 - 75 microns and is best achieved through abrasive blasting in accordance with SSPC-SP 16 for atmospheric exposure, or SSPC-SP 17 for immersion environments.
<b>Ductile or Cast Iron</b>	<b>Immersion and Buried Service:</b> Abrasive blast clean per NAPF 500-03-04. <b>Non-Immersion:</b> Remove all oil and grease from surface by Solvent Cleaning per NAPF 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 homogeneous.
<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 24°C. Consult Technical Service for techniques to maximise 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.
<b>Airless Spray</b>	Pump Ratio: 60:1 (min.) LPM Output: 9.5 (min.) Material Hose: 9.5mm 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.

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**Plural Component  
Airless Spray**

Equipment: 1:1 fixed-ratio plural component spray equipment with heated hoppers, in-line heaters, and heated hose bundles  
 Material Hose: 12.7mm (1/2") I.D. (min.)  
 Static Mixers: Two 12.7mm (1/2") x 12-element stainless steel  
 Whip Hose: 9.5mm (3/8") x 0.9-1.8m (3-6 foot) whip hose  
 Tip Size: 0.021"-0.027"  
 Optimal material temp: 37-40°C (100-105°F)  
 See Carboline Application for complete instructions.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	2°C (36°F)	2°C (36°F)	0%
Maximum	32°C (90°F)	52°C (126°F)	43°C (109°F)	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)
2°C (36°F)	74 Hours	7 Days
10°C (50°F)	30 Hours	5 Days
24°C (75°F)	10 Hours	4 Days
32°C (90°F)	5 Hours	24 Hours

Dry to Touch and Dry to Recoat is normally 6 hours at 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) 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 24°C and reduces in half for each additional 9°C 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 colour pick-up and some down-glossing is acceptable

## APPROVALS

**Approvals NZ/AU**

**AS/NZS 4020:2018 Potable Water Approval**

Australian Water Quality Centre: Report ID: 323766

Exposure: 15,000 mm²/L

Approved for DTM applications at 500 microns dry or with use of Phenoline Tank Shield FP as required.

## CLEANUP & SAFETY

**Cleanup** | Altex Thinning Solvent #2 or #76 are recommended for clean up.

# Hydroplate 1100

## PRODUCT DATA SHEET



## CLEANUP & SAFETY

**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** | 16 Litre Kit

**Shelf Life** | Part A: 12 months at 24°C  
Part B: 12 months at 24°C

**Shelf Life** | Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. For products/components exceeding the stated shelf life, contact Technical Services for further advice.

**Storage Temperature & Humidity** | 4-43°C  
0-90% Relative Humidity

**Flash Point (Setaflash)** | Part A: 74°C  
Part B: 95°C

**Shipping Weight (Approximate)** | 16 Litre kit - 24 kg

**Storage** | Store indoors

## WARRANTY

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