



AquataPoxy® A-6 Series

Technical Data Sheet

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Selection & Specification Data

Description

AquataPoxy® A-6 and A-6 Thick are solvent-free, 100% solids, corrosion-resistant epoxy coatings that can be applied to dry or damp surfaces. Formulated for broad range corrosion protection and certified safe for potable water. AquataPoxy A-6 is moisture tolerant and may be used to patch concrete and steel structures underwater. A-6 will set up, adhere, and cure underwater. The adhesion will be determined by the cleanliness and profile of the substrate to which it is being applied. A-6 is not designed to stop active leaks.

Typical Uses

Formulated for use on surfaces where corrosion and water resistance is needed, including:

- Potable water structures
- Secondary containment
- Tanks, reservoirs and basins
- General maintenance
- Water mains, distribution and transmission lines

Color & Stability (Limitations)

The standard Part A Resin is white; the Part B Curing Agent is brown. When mixed, A-6 is an off-white color. Other ANSI/NSF 61 colors available are black, blue and gray. Green, tan, and other non-certified colors are available. While the physical properties may not be affected, epoxy coatings will fade or chalk with exposure to UV light or mercury vapor light.

Theoretical Coverage Rates

The theoretical coverage is 1604 sq. ft. per gallon at 1 mil dft. Actual surface coverage will depend on the substrate porosity and roughness of the substrate. Depending on the substrate type and profile, a maximum of 10 mils of A-6 or 80 mils of A-6 Thick per coat is recommended to prevent sagging. Typically recommended thickness for immersion duty is 16-80 mils on metal and 60-120 mils on concrete.

Recommended Dry Film Thickness	(Typical)
Carbon Steel (Atmospheric):	16 - 40 mils DFT
Carbon Steel (Immersion):	20 - 40 mils DFT
Non-Ferrous Metal:	8 - 18 mils DFT
Ductile Iron:	12 - 24+ mils DFT
Concrete:	60 - 120+ mils DFT

Physical Properties (Typical) (Post cured at 225°F for 24 hours)

Description	Method	Result
Tensile Strength	ASTM D 638	6,000 psi
Tensile Elongation	ASTM D 638	1.3%
Compressive Strength	ASTM D 695	10,000 psi
Flexural Strength	ASTM D 790	9,400 psi
Hardness, Shore D	ASTM D 2240	87
Taber Abrasion CS-17 wheel	ASTM D 4060, 1 kg load/1,000 cycles	<40 mg loss
Adhesion, Steel	ASTM D 4541	>2,000 psi
Adhesion, Concrete	ASTM D 7234	Substrate Failure

The value ranges stated in this Technical Data Sheet are based on system processing under controlled laboratory conditions. Equipment configuration and/or field application conditions may produce variances in the final system values.

CERTIFICATIONS

Potable Water: AquataPoxy A-6 and A-6 Thick are certified to the requirements of ANSI/NSF 61 - Drinking Water System Components.

AWWA: AquataPoxy A-6 and A-6 Thick meet the physical and performance requirements of ANSI/AWWA C 210, "Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines".



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Surface Preparation

<p>General</p> <p>Before coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale or deposits. In general, coating performance is proportional to the degree of surface preparation.</p> <p>Steel, Immersion Service</p> <p>Visible deposits of oil, grease, or other contaminants shall be removed according to SSPC-SP 1 Solvent Cleaning followed by SSPC-SP10/NACE No. 2 Near- White Metal Blast Cleaning, resulting in a sharp angular anchor profile of 2.5-5.0 mils.</p> <p>Steel, Atmospheric/Non-Immersion Service</p> <p>Visible deposits of oil, grease, or other contaminants shall be removed according to SSPC-SP 1 followed by SSPC-SP6/NACE No. 3 Commercial Blast Cleaning, resulting in a sharp angular anchor profile of 2.5-4.0 mils.</p> <p>Ductile Iron Pipe, Atmospheric and Immersion Service</p> <p>All oils, small deposits of asphalt paint and grease shall be removed by solvent cleaning (see NAPF 500-03-01). Abrasive blast to meet NAPF 500-03-04.</p>	<p>Concrete and Masonry Surfaces</p> <p>Reference SSPC-SP 13/NACE No. 6 Surface Preparation of Concrete. Minimum surface profile equivalent to ICRI CSP3 to CSP5 in accordance with ICRI Technical Guideline 310.2R-13</p> <table border="1" style="width: 100%;"> <tr> <th colspan="2">Primers (Suggested)</th> </tr> <tr> <td style="width: 70%;">Concrete (optional)</td> <td>Raven 175** Raven 171FS** Raven 155**</td> </tr> <tr> <td>Carbon Steel (blast holding)</td> <td>AquataPoxy 190*</td> </tr> </table> <p>Priming PVC, PE, PP, PS, & HDPE- Contact Raven Tech Service</p> <p>*Do not use this primer if immersion temperatures will exceed 140°F</p> <p>**Penetrating primer for limiting outgassing.</p>	Primers (Suggested)		Concrete (optional)	Raven 175** Raven 171FS** Raven 155**	Carbon Steel (blast holding)	AquataPoxy 190*
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Thinning Instructions and Pot Life

<p>Power Mixing</p> <p>Mix full kits only. Mix each component separately before pouring the Part B into the Part A container. Use a drill with a Jiffy mixer and mix for 3 minutes. Continue mixing for at least another minute before application. Properly mixed material has a uniform color.</p> <p>Thinning</p> <p>Do not reduce.</p>	<p>Pot Life</p> <p>The pot life is 30 minutes at 72°F. Longer pot life is possible by mixing smaller amounts and/or cooling down the part A & B before mixing.</p>
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Application Equipment & Conditions

Spray Application

Optimal proportioning and mixing is achieved with the use of a Raven Lining Systems approved plural-component airless spray system. Raven recommends the use of fixed ratio (1:1), such as, Graco XP 50 or 70 Plural-Component Pump System. Viscon Fluid Heaters and heated hoses are recommended. Carefully monitor, heating devices such as drum blankets or bands to avoid scorching of the material or melting drum liners. Pre-heating containers must not exceed temperatures greater than 150°F.

Recommended spray temperatures

135-145°F for Part A and 150-165°F for Part B. Temperature is dependent on ambient conditions and hose lengths. To equalize viscosities and reduce operating pressure, Part A should be 20°F warmer than Part B during processing.

Brush or Roller

Multiple coats may be required to obtain desired appearance or recommended dry film thickness. Avoid excessive re-brushing over-rolling.

Use a medium bristle brush. Short-nap synthetic cover with phenolic core is recommended.

Application Conditions:

Temperature- 40°F Minimum, 120°F Maximum (Air and Surface). At least 5°F above dew point. Relative Humidity <85% maximum.

NSF / ANSI Standard 61– 2018	
Tank Size	>=50 gallons
Total DFT (Tanks)	125 mils
Pipe Diameter	1"-3" >=6 inches
Number of Coats	1-2
Total DFT (Pipe)	26 mils
Cure to Service	3 Days @ 77°F

Curing & Re-Coat Window

Cure Time

The set time varies with substrate temperature and application thickness. Generally, the coating will be tack-free in ~4 hours at 72°F (22°C) and dry-hard in about 9 hours.

Cure to Service (ANSI/NSF Standard 61)

3 days at 77°F

Recoat Time

This product may be recoated as soon as it becomes tacky but does not transfer to the finger. When applying multiple coats, do not allow more than 12 hours at 72°F (22°C) substrate temperature to pass between coats. Higher temperatures will shorten this window. Before recoating; visually inspect, clean and dry surface thoroughly to remove all contamination, including amine blush or condensation. If the recoat time is missed, abrade and clean surfaces prior to recoating.



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Packaging, Handling, & Storage

Packaging

Available in Quart, 2-Gallon, 10-Gallon, 60-Gallon, and 110 Gallon kits. Kits are supplied in the correct proportions of A & B; the two components must be mixed together before use.

Shelf Life

The product can be stored for one year in factory delivered, unopened containers. Keep away from extreme heat, freezing, and moisture.

Storage Temperature & Humidity

Store in a sheltered area between 50°F (10°C) and 100°F (37°C).

Cleanup & Safety

Cleanup

Cured product may be disposed of without restriction. The un-cured portions should be mixed together and disposed of in a normal manner. Preferred cleaning solvents are MEK, Xylene, or Acetone. "Drip free" containers should be disposed of according to state, local, and federal laws.

Safety

SDS's are available on the website, (www.ravenlining.com) or upon request. Consult the Safety Data Sheet for this product concerning health and safety information before using. Strictly follow all notices on the Safety Data Sheet and container label. If you do not fully understand the notices and procedures provided on the SDS or if you cannot strictly comply with them, do not use this product. Actual safety measures are dependent on application methods and work environment. Keep uncured product away from children at all times.

Warranty

Limited Warranty. Company warrants its goods to be free of manufacturing defects. Goods manufactured by Company will comply with all applicable federal, state and local laws and regulations. Company makes no warranty as to any parts or equipment manufactured by others. Customer shall look solely and only to the manufacturer of such parts or equipment with respect to any warranty claims. Company hereby assigns to Customer the original manufacturer's warranties to all such equipment and parts, to the full extent permitted. THE AFORESAID IS THE EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Limitation of Liability. COMPANY'S LIABILITY FOR DEFECTIVE OR NON-CONFORMING GOODS SHALL BE LIMITED TO, AND SHALL IN NO EVENT EXCEED, THE AMOUNT PAID BY CUSTOMER FOR SUCH DEFECTIVE OR NON-CONFORMING GOODS. UNDER NO CIRCUMSTANCES SHALL COMPANY BE LIABLE FOR ANY SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOST PROFITS. In no event may any claim by Customer arising from or relating to any sale of any goods or services referenced herein be brought more than one year after the date of delivery of such Goods.