686 S. Adams St.
Kansas City, KS. 66105

AquataPoxy® 90

Technical Data Sheet

Selection & Specification Data

Description

AquataPoxy® 90 is a VOC compliant, high solids, fast curing epoxy coating formulated for use in structures that require NSF/ANSI 61 certification.

Typical Uses

Barrier protection of steel, concrete and other substrates in the storage of treated drinking water. Recommended for use as a surface tolerant primer for epoxy, polyurethane, polyurea, and other UV stable topcoats in atmospheric environments.

Color & Stability

Standard Colors are Off-White, Buff, and Grey. AquataPoxy® 90 is an aromatic epoxy. While the physical properties may not be affected, the epoxy will fade or chalk with exposure to UV light or mercury vapor light. Each individual user should check the product compatibility with their own application requirements prior to use.

Theoretical Coverage Rates

As supplied (87.5% volume solids), the theoretical coverage is 1404 square feet per gallon at 1 mil DFT (un-reduced). Actual surface coverage will depend on substrate porosity and roughness.

Dry Film Thickness

Recommended thickness will vary from 3—26 mils based on service conditions.

Recommended Dry Film Thickness (Typical)

Carbon Steel (Atmospheric):	3—22 mils DFT
Carbon Steel (Immersion):	6—26 mils DFT
Non-Ferrous Metal:	6—22 mils DFT
Ductile Iron:	12—22 mils DFT
Concrete:	16—26 mils DFT
FRP (Medium surface energy materials)	3 –12 mils DFT

Note: Apply at minimum DFT when used as a primer.

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

Description	Method	Result
Adhesion to Steel	ASTM D4541	>2000 psi
Adhesion to Concrete	ASTM D7234	Substrate Failure
Abrasion Resistance, Taber (CS-17 wheels, 1kg, 1000 rev)	ASTM D4060	15 mg lost
Compressive Strength	ASTM D695	>5,300
Tensile Strength	ASTM D638	>3,000
Elongation (%)	ASTM D638	3.2%
Die C Tear	ASTM D624	395 psi / 197 pli
Cathodic Disbondment	ASTM G8	2mm
Water Vapor Perm	ASTM D1653	0.65 metric perms
Processing Properties	**Units**	**Results**
VOC	Calculated	<100 g/L
Volume Solids		87.5%

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 90 is 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”.

AquataPoxy® 90

Technical Data Sheet

Substrate and Surface Preparation

General

Prior to 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.

Steel, Immersion Service: Minimum SSPC SP1 Solvent Cleaning followed by SSPC-SP 10 /NACE No. 2 Near White Blast Cleaning, resulting in an angular blast profile of 2.0-3.0mils.

Steel, Atmospheric/Non-Immersion Service: SSPC-SP 1 Solvent Cleaning followed by SSPC-SP 6/NACE No. 3 Commercial Blast Cleaning, resulting in an angular blast profile of 2.0-3.0 mils.

Ductile Iron Pipe

All oils, small deposits of asphalt paint and grease shall be removed by solvent cleaning (see NAPF 500-03-01). Abrasive blast in accordance with NAPF 500-03-04. Addition information on cleaning ductile iron pipe can be found at www.napf.com

FRP and other medium surface energy substrates

Contact Raven/VersaFlex Technical Services

Concrete and Masonry Surfaces: Minimum surface profile equivalent to ICRI CSP2 to CSP3 in accordance with ICRI Technical Guideline No. 03732. Entire substrate to receive coating must be in sound condition and contaminant-free with This can be achieved by either abrasive blasting (Reference ASTM D4258/ D4259) Brush Blasting or Sweep Blasting, shot blasting, high pressure water cleaning, water jetting, or a combination of methods.

Mixing and Thinning

Components & Mix Ratio

Mix Ratio is 4:1 by volume. Part “A” Resin - Part “B “Curing Agent.

Mixing

Individually power mix both Part A and Part B containers prior to measuring out 4 parts of Part A to 1 part of Part B by volume into a clean disposable pail. Completely mix combined A & B for a minimum of one minute before transferring contents to a clean pail. Continue mixing at least another minute, scraping the sides and bottom, to obtain a thorough mix before application. Properly mixed material will be a uniform color without light or dark spots.

Thinning

Kit Size	Allowable Additional Solvent Amount (Xylene or Acetone)
1 Gal. Kit	Add 3% or 128g or 3.7 oz.
1 Gal. Kit	Add 6% or 222g or 7.5 oz.
5 Gal. Kit	Add 3% or 640g or 18.5 oz.
5 Gal. Kit	Add 6% or 1110g or 37.5 oz.

Note: Do not reduce more than 10%. Do not reduce with MEK.

Pot Life

The pot life is 45 minutes at 72°F (22°C). Pot life can be extended by reducing with the recommended solvents or by cooling down the components prior to mixing.

AquataPoxy® 90

Technical Data Sheet

Application & Equipment

Application Conditions

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

Airless Spray

- **Pump 30:1**
- **Pressure 2800-3000 psi to spray.**
- **GPM Output:** 1.0 (Min.)
- **Tip Size:** .517" to .525"
- **Output PSI:** 500-2000
- **Filter Size:** 60 Mesh Teflon packing are recommended.

Conventional Spray

Pressure pot equipped with dual regulators. 3/8 I.D. minimum material hose. 0.070" I.D. fluid tip and appropriate air cap.

Note: This high solids coating may require adjustments in spray techniques.

Brush/Roller

Use medium bristle brush. Use a short nap synthetic roller cover with a phenolic core. Multiple coats may be required to obtain desired appearance.

Curing Schedule & Recoat Window

Cure Time

Thin film set time varies with substrate temperature and application thickness. Generally, the coating will be tack-free in 3 ½ hours at 72°F (22°C) and dry-hard in about 12 hours.

Recoat Time

This product may be recoated in ~3 hours or as soon as it becomes tack free . When applying multiple coats, do not allow more than 21 days 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.

AquataPoxy® 90

Technical Data Sheet

Packaging, Handling, & Storage

Packaging

AquataPoxy® 90 is sold in the following quantities:

1 Gallon Kit- 4/5 Gallon of "A" - to - 1/5 Gal of "B"

5 Gallon Kit- Four Gallons of "A" - to - One Gallon of "B"

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.