



## Solvent-free, high build epoxy series capable of increasing your asset's service life in highly corrosive environments.

### ★ PRODUCT DESCRIPTION

A 100% solids, high-build protective epoxy coating designed to protect substrates from corrosive environments in wastewater and industrial service.

#### FEATURE / BENEFITS

**APPLICATION TO DRY OR DAMP (SSD) CONCRETE**

**HIGH BUILD IN A SINGLE COAT (UP TO 500 MILS)**

**100% VOLUME SOLIDS**

**ZERO VOLATILE ORGANIC COMPOUNDS (VOC) AND STYRENE FREE**

**EXCELLENT CHEMICAL RESISTANCE FOR WASTEWATER AND STORMWATER STRUCTURES**

**HIGH PHYSICAL PROPERTIES**

**OUTSTANDING ADHESION TO PREPARED SUBSTRATES**

### ★ SPRAY EQUIPMENT REQUIREMENTS

- Fixed ratio plural component pump system, such as Graco XP 50 or 70 in either standard or high flow configuration, is acceptable. Warren's 301 epoxies are **2:1 ratio by volume**. The pump lowers shall be configured to spray the mixed product on ratio.
- 5:1 transfer pumps feed into the pumps which feed into the pump lowers with adequate material.
- Adequate solvent flush system to clean out hoses after spray completion in a 23:1 or greater pump ratio.
- **Fluid-Heated Hopper Tank:** A large tank capable of heating part A-side (base) material up to 180°F or smaller heated hopper-style tank utilizing in-line viscosity-reducing heaters.
- **Material Heating (Recommended):** A-side (base) requires 160-185°F in the tank/hopper. Measure with an infrared thermometer. B-side (activator) should be at 80-90°F to match the viscosity of the A-side to ensure a proper mix ratio.
- A maximum of 50-foot, 3/8-inch hose from the block attached to the spray equipment can be used for close applications. Otherwise, a heated spray line bundle with a fluid jacketed or electrically heated is required.
- Airless spray gun, Graco Flex or XTR type are recommended.
- Airless spray tips (reversible). The recommended size is 535-545 or 635-645 with tip guard.
- Blanket or band heaters sized for containers.

### ★ SURFACE PREPARATION GUIDELINES

**Concrete:** SSPC-13/NACE No. 6 with a clean substrate profile greater than CSP 4-6 per ICRI No. 310.2R-2013.

**Steel:** SSPC-SP 10/NACE No. 2 Near White Blast Cleaning. A minimum angular profile of 3-5 mils.

**Ductile or Cast-Iron:** NAPF 500-03, solvent, hand tool, power tool, and/or abrasive blast to remove all oil, grease, asphalt, cement or other loosely adherent deleterious contaminants and achieve a minimum angular surface profile of 3- 5. Tightly adherent annealing oxide can remain.

**Pipe Rehabilitation:** Contact your Warren Technical Service.

**Surface Conditioner (optional):** **Warren 301-SC**, applied in two coats at ~ five mils per coat to reduce outgassing, pinholes, and blisters. Wet film thickness cannot be measured because the material is designed to penetrate the substrate. Warren's 301-SC can be reduced with Acetone up to 50%. Contact Warren Technical Service for other substrates.

### ⌚ TYPICAL APPLICATIONS

- Manholes
- Lift Stations
- Wet Wells
- Headworks
- Clarifiers
- Digesters
- Channels
- Tanks

### ⌚ COVERAGE RATES (THEORETICAL WITHOUT LOSS)

**80 mils** = 20.05 sq. ft. per gallon

**125 mils** = 12.8 sq. ft. per gallon

**250 mils** = 6.4 sq. ft. per gallon

**500 mils** = 3.2 sq. ft. per gallon

Do not thin or reduce 301-14 series.

### RECOAT WINDOW

The maximum recoat window is one hour at 70°F. If the maximum recoat time is missed, the coating must be solvent-cleaned and abraded to a dull and dry surface before an additional coat can be applied.

## TECHNICAL DATA

\*Contact Warren Technical Services for more information.

Color	Cured Film	Off-White
VOC	Method 24	Zero
Tensile Strength	ASTM D638	7,915 psi
Flexural Strength	ASTM D790	11,986 psi
Compressive Strength	ASTM D695	10,712 psi
Tensile Elongation	ASTM D790	7%
Hardness	ASTM D2240	87.7
Abrasion Resistance	ASTM D4060	29.95
Immersion Temperature*	Maximum Municipal Wastewater	160°F
Adhesion — Concrete	ASTM D7234	Substrate Failure
Adhesion — Steel	ASTM D4541	>2,000 psi
Chemical Resistance	L.A. County Sanitation District Coating Evaluation (Redner)	Passed
	SSPWC Section 210-2.3 Chemical Resistance Test (Greenbook)	Passed
	Severe Wastewater Analysis Testing (SWAT)	Passed
Pot-Life	Spray Hand-Mix	~2 minutes at tip ~25 minutes at 70°F
Return-to-Service (Wastewater Immersion)	60°F - 70°F	4 - 6 hours
<u>Environmental Conditions</u>		
Ambient Surface		40°F - 110°F 40°F- 100°F
Relative Humidity		<90%
Clean-Up		Acetone
Aquatic Safe	EPA 2007.0	100% Survival
Relative Humidity	Concrete Steel	<90% <85%
Moisture Testing	Not Required	Can apply in SSD conditions
Packaging		150-gal. Kit in 50-gal. Drums

## STORAGE AND SHELF-LIFE

The shelf life is one year from the date of shipment. Materials should be kept dry, protected from weather, stored under cover, and between 33°F and 120°F. Do not store near flame or heat.

## HEALTH AND SAFETY

Always read associated Safety Data Sheets (SDS) before working with any product. SDS can be requested by calling our office at **508-947-8539** or emailing us at [info@warrenenviro.com](mailto:info@warrenenviro.com).

## VENTILATION

Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.

## COLOR AND STABILITY (LIMITATIONS)

The Part A resin is white, and the Part B curing agent is amber. When mixed, the product is off-white. Discolorations and yellowing can and will occur upon exposure to UV (exterior applications). Discoloration or down-glossing does not affect performance. Contact Warren Technical Service for UV-stable topcoat recommendations.

## QC REPAIR AND RECOMMENDATIONS

Contact Warren Technical Services.

## DISCLAIMERS

Always read associated Safety Data Sheets (SDS) before working with any product. SDS can be requested by calling our office at **508.947.8539** or emailing us at [info@warrenenviro.com](mailto:info@warrenenviro.com). All values reported within this document are typical values and are reported as a means of reference. Individual testing should be done to determine actual results, tested in specific conditions. If you witness unethical or incorrect practices related to the use or application of any Warren Environmental product, please contact us immediately at **508.947.8539**.

**Warranty:** Warren typically offers a one year warranty. Additional information will be provided upon request.