



## TECHNICAL DATA SHEET – PROTEC II PW

Revised: 08/2018

### PRODUCT DESCRIPTION

100% solids, direct to metal, fast-set, two- component urethane certified per ANSI/NSF Standard 61 for use as a lining in potable water tanks and pipes. It provides a very hard, tough surface with outstanding adhesion and impact resistance. Requires plural component, heated application equipment.

### FEATURES

- Complies with NSF/ANSI Standard 61.
- Meets FDA 21CFR 175.300 for food contact.
- Meets AWWA C-222 requirements.
- Zero VOC.
- No taste or odor concerns caused by entrapped solvents.
- Convenient 1:1 mix ratio.
- Unlimited film build with single multi-pass coats.
- Excellent adhesion directly to steel and ductile iron.
- Fast curing for increased productivity and short turnaround times.

### RECOMMENDED USES

As a one or two coat, direct to metal lining system for steel potable water tanks and pipes to comply with NSF/ANSI Standard 61 and AWWA C-222 parameters.

### PRIMERS

**Steel:** None required.

**Other:** Contact ITW Polymers Sealants North America for recommendations.

### TYPICAL PROPERTIES

SOLIDS BY VOLUME	100%
VOLATILE ORGANIC COMPOUNDS	0.0 lb/gal (0 g/l)
THEORETICAL COVERAGE	1604 ft <sup>2</sup> @ 1 mil (3.8 m <sup>2</sup> @ 1 mm)
RECOMMEND DFT (TYPICAL)	15 – 100 mils (0.4 – 1.3 mm)
NUMBER OF COATS	1 or more
MIX RATIO (BY VOLUME)	1 "A": 1 "B"
FLASH POINT (PMCC) MIXED	311°F (168°C)
SHELF LIFE @ 60-90°F (16-32°C)	Part A 12 months Part B 12 months
COLOR	White

### SPECIFICATION DATA

ELONGATION – ASTM D 412	< 10%
ADHESION – ASTM D 4541	> 2500 psi
ABRASION RESISTANCE ASTM D 4060 CS 17 WHEEL, 1000G, 1000 CYCLES	45 mg loss
TENSILE STRENGTH – ASTM D 412	4000 psi
IMPACT RESISTANCE ASTM G 14 – 15 MM BALL	125.4 in-lbs (1447 cm/kg)
HARDNESS – ASTM D 2240	75 Shore "D"
FLEXIBILITY 180° BEND OVER 4" MANDREL 90° BEND OVER 4" MANDREL	Pass – 30 mils @ 75°F Pass – 30 mils @ -40°F
PERMEABILITY – ASTM E 96 (60 MIL DRY FILM THICKNESS)	0.0078 U.S. perms 0.0113 metric perms
ACCELERATED WEATHERING ASTM G 23 – Q/UV, 2500 HRS	No cracking, checking or loss of flexibility; slight chalking.
CATHODIC DISBONDMENT ASTM G 95 – AVERAGE RADIUS	30 days @ 75°F 7 mm 14 days @ 149°F 8 mm

# PROTEC II PW

## POTABLE WATER TANK & PIPE LINING



## ORDERING INFORMATION

PACKAGING	110 gallon kit
SHIPPING WEIGHT	10.5 lb/gal (4.7 kg/gal)

## SURFACE PREPARATION

Remove all oil, grease or other contaminants from the surface to be coated in accordance with SSPC-SP 1.

### STEEL AND CAST IRON:

**IMMERSION AND NON-IMMERSION:** Abrasive blast to a Near White Blast Clean in accordance with SSPC-SP 10 and obtain a 3-4 mil (75-100µ) angular anchor pattern.

**Other:** Contact ITW Polymers Sealants North America, Inc. for specific recommendations.

## MIXING

Power mix “B” component thoroughly. Mixing shall continue until settled pigments are completely re-dispersed. Product shall not be sprayed until the mixing process is completed. The amount of time required for mixing will depend on the type of equipment used, the degree of settling and temperature of the material. Failure to adequately mix the material can result in an off-ratio film. “A” component does not require mixing.

### DO NOT BATCH MIX.

## THINNING: DO NOT THIN

## POT LIFE

MATERIAL TEMPERATURE	TIME
50-100°F (10-38°C)	< 30 seconds

## APPLICATION CONDITIONS

	NORMAL	MINIMUM	MAXIMUM
MATERIAL*	135-150°F (57-65°C)	130°F (54°C)	170°F (77°C)
SURFACE	75-90°F (24-32°C)	45°F (7°C)	120°F (49°C)
AMBIENT	75-90°F (24-32°C)	35°F (2°C)	120°F (49°C)
HUMIDITY	30-50%	0%	85%

\*Materials must be preheated to 75-90°F (24-32°C) min prior to use. Surface temperature must be 5°F (3°C) above the dew point.

## APPLICATION EQUIPMENT

### HEATED PLURAL COMPONENT AIRLESS (ONLY)

Applicator training is required and spray equipment must be approved by ITW Polymers Sealants North America Technical Service.

- 1:1 ratio capable of producing a minimum delivery rate of 1¼ gallons per minute at a tip pressure of 2500-3000 psi.
- Proportioner heaters and heated hose capable of maintaining material temperatures of 135-150°F (57-65°C) at the spray tip.
- Drum heaters capable of maintaining material temperatures of 75- 90°F (24-32°C) during application.

- 2:1 ratio transfer pumps minimum.
- Contact ITW Polymers Sealants North America for specific information.

## CURE TIME

These times are based on a 30-50% RH. Excessive film thickness, cooler temperatures or inadequate ventilation will require longer cure times. – The times below were taken with substrate temperatures at 73°F (23°C), per ASTM D 1640. Please note that these times will change depending on your current ambient and substrate temperatures. In general, times will decrease (dry faster) when temperatures are higher, and vice versa when temperatures are lower.

## SURFACE TEMPERATURE

SYSTEM	DRY TO TOUCH*	DRY HARD*	DRY TO HANDLE	RECOAT WINDOW	FULL CURE
STANDARD SET	3-4 min	13-15 min	20-24 min	4 min - 3 hours	2 days

\*ASTM D 1640 definitions

- If the maximum recoat time has been exceeded contact ITW Polymers Sealants North America for recommended recoat procedure.
- Holiday testing per NACE SP0188-98 can be started once the cure time shown for “Dry Hard” has been achieved.

## CLEAN UP

Use MEK or a 1:1 blend of MEK and Toluol.

## REPAIR

- ITW Polymers Sealants North America that repairs or touch-up be completed using Protec II PW.
- Protec II DR and GW are the recommended repair material when plural component spray equipment is not available.
- Contact ITW Polymers Sealants North America for specific information.

## SAFETY INFORMATION

- Read the Safety Data Sheet (SDS) and container labels for detailed health and safety information.
- Do not apply material in enclosed areas without adequate air exchange and ventilation.
- All application personnel must use respirators or fresh air hoods.
- Wear protective clothing, gloves and eye protection.
- Breathing fumes or contact with the skin may cause severe allergic reactions.
- This product is intended for industrial use by properly trained professional applicators only.

## STORAGE CONDITIONS

- Urethane coatings need to be protected from moisture contamination. Store drums and pails in a dry location at 60-90°F (16-32°C).
- Drums must be kept sealed at all times with a positive feed dry air, nitrogen blanket or desiccant cartridge system.
- Materials must be kept above 50°F (10°C).

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