



TECHNICAL DATA

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FUTURA-THANE[®] 5061 PW ELASTOMERIC POLYURETHANE POTABLE WATER TANK LINING

Product Description

A 100% solids, fast set, two component high performance polyurethane elastomer certified per NSF/ANSI Standard 61 for use as a lining in potable water tanks and pipe. It provides a tough, abrasion resistant, elastomeric lining for steel and concrete tanks. Requires plural component, heated application equipment

Features

- NSF/ANSI Standard 61 Certified
- 100% Solids
- Zero VOC.
- Convenient 1:1 mix ratio
- Unlimited film build.
- Outstanding resistance to thermal shock.
- 160% elongation allows bridging of normal shrinkage cracks in concrete.

Recommended Uses

As a lining system for steel or concrete potable water tanks and pipes to comply with NSF/ANSI Standard 61 for pipe > 54" diameter and tanks > 3000 gallons and AWWA C-222 parameters.

Primers

Steel: None required for potable water service, for non-potable water service FUTURA-BOND 610 HS may be used.

Concrete: None required for potable water service, for non-potable water service FUTURA-BOND 415 or CS 2000 may be used.

Other: Contact ITW Futura Coatings for specific recommendations.

Typical Properties

Solids by Volume	100%
Volatile Organic Compounds	0.0 lb/gal (0.0 g/l)
Theoretical Coverage	1604 ft ² @ 1 mil (3.8 m ² @ 1 mm)
Typical DFT	60 mils
Number of Coats	1 or more
Mix Ratio (by volume)	1"A" : 1"B"
Flash Point (PMCC)	>350°F (177°C)
Shelf Life @ 60-90°F (16-32°C)	9 months
Color	Standard Gray & Tan

Specification Data

Elongation – ASTM D 412	160% (min)	
Tensile Strength ASTM D 412	3000 psi	
Abrasion Resistance ASTM C D4060	CS-17	15 mg loss
	H-10	25 mg loss
Adhesion – ASTM D 4541 Steel Concrete	> 2500 psi > than concrete strength	
Permeability ASTM E 96	0.055 perms (0.386 metric perms)	
Water Vapor Transmission - ASTM E 96	0.91 grains/ft ² /hour	
Modulus 100% ASTM D 412	2000 psi	
Die "C" Tear ASTM D 624	400 pli	
Impact – ASTM G14	120 in-lb	
Hardness – ASTM D 2240	93 Shore "A"	
Low Temperature Flexibility ASTM D 522	-20°F (-29°C) Passes 90°, 1/8" mandrel bend	
Tear Resistance ASTM D 1938	600 pli	

Ordering Information

Packaging:	10 gal & 110 gal kits
Shipping Weight:	10 lb/gal (4.5 kg/gal)

APPLICATION INFORMATION

FUTURA-THANE 5061PW

Surface Preparation

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

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

Concrete: Must be cured a minimum of 28 days at 70°F and 50% RH, or equivalent. Remove fins and other protrusions by stoning or grinding. Abrasive blast in accordance with NACE 6, SSPC-SP 13 or ASTM D4258 to open all surface voids and remove all form oils, incompatible curing agents, hardeners, laitance, other foreign materials and produce a angular surface texture similar to that of medium grit sandpaper. Blow or vacuum off abrasive and dust.

Other: Contact ITW Futura Coatings for specific surface preparation and primer recommendations.

Mixing

Power mix "B" component to a uniform consistency, "A" component does not require mixing.

DO NOT BATCH MIX.

Thinning

DO NOT THIN

Pot Life

Material Temperature	Time
75°F (24°C)	<15 seconds

Application Conditions

	Normal	Minimum	Maximum
Material*	135-150°F (57-65°C)	135°F (57°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 70-90°F (21-32°C) 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 Futura Coatings 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 Futura Coatings for specific information.

ITW FUTURA COATINGS, 1685 GALT INDUSTRIAL BLVD., ST LOUIS, MO, (314) 733-1110

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Clean Up

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

Cure Time

These times are based on a 30-50% RH. Excessive film thickness, cooler temperatures or inadequate ventilation will require longer cure times and could result in premature failure.

	<u>Surface Temperature</u>	
<i>ASTM D 1640</i>	60 mils @ 75°F	100 mils @ 75°F
Dry to Touch	< 20 seconds	10 seconds
Hard Film	7 minutes	1 minute
Recoat (min)	10 minutes	5 minutes
Recoat (max)	48 hours	48 hours
Dry Through	< 18 minutes	< 3 minutes
Into Service		
Potable water	48 hours	48 hours
Non-potable water	1 hour	1 hour

- If the maximum recoat time has been exceeded contact ITW Futura Coatings for recommended recoat procedure.
- Holiday testing per NACE RP0188-98 can be started once the cure time shown for "Hard Film" has been achieved.

Repair

- ITW Futura Coatings recommends that repairs or touch-up be completed using **Futura-Thane 5061 PW**.
- **Pipemate PW** is the recommended repair material when plural component spray equipment is not available.
- Contact ITW Futura Coatings for specific information.

Safety Information

- Read the Material Safety Data Sheet (MSDS) 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 fresh air 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)**.