



TECHNICAL DATA

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FUTURA-THANE[®] 527 FLEXIBLE URETHANE

Product Description

100% solids, fast set, hydrocarbon modified flexible urethane. It offers outstanding water and chemical resistance, extreme levels of toughness and excellent low temperature impact resistance. Has excellent adhesion to steel and cast iron, and is used without a primer. Requires plural component, heated application equipment.

Features

- Direct to Metal (DTM)
- Fast curing for increased productivity and short turn around times.
- Zero VOC
- Low temperature cure.
- Extremely high toughness and impact resistance, including low temperature impact.
- Broad range of chemical resistance.

Recommended Uses

Ideal choice for the protection of underground tanks, pipelines and other steel surfaces. Also for immersion in water, wastewater and saltwater, including piling, tank linings and pipe linings.

Underground Steel Tanks: Combines the physical properties and chemical resistance required for external corrosion protection of buried tanks. Underwriters Laboratories qualify it for standard UL-1746 Part I and Part II and the Steel Tank Institute for STI-P₃ and ACT-100 tanks.

Primers

Steel: None.

Other: Contact ITW Devcon Futura Coatings for recommendations.

Typical Properties

Solids by Volume	99% ±1	
Volatile Organic Compounds	0.0 lb/gal (0 g/l)	
Theoretical Coverage	1604 ft ² @ 1 mil (3.8 m ² @ 1 mm)	
Recommend DFT	15 – 125mils (0.4 – 3.1 mm)	
Number of Coats	1 or 2	
Mix Ratio (by volume)	1”A” : 1”B”	
Flash Point (PMCC)	175°F (79°C)	
Shelf Life @ 60-90°F (16-32°C)	Part A	6 months
	Part B	9 months
Color	Standard	Black

Specification Data

Elongation – ASTM D 412	< 10%	
Adhesion – ASTM D 4541	1500 psi	
Tensile Strength ASTM D 412	4100 psi	
Abrasion Resistance ASTM C 501	H 10	65 mg loss
Hardness – ASTM D 2240	85 Shore “D”	
Permeability – ASTM E 96	0.01 perms	
Tear Strength ASTM D 624	300 pli (53 kn/m)	
Flexibility 180° Bend over 3/8” mandrel	Passes	
Accelerated Weathering ASTM D 822 – Atlas carbon arc ASTM G 23 – Q/UV	No cracking, checking or loss of flexibility; will chalk if not topcoated.	
Temperature Resistance ASTM D 573 - Dry	Continuous	225°F (107°C)

Ordering Information

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

APPLICATION INFORMATION FUTURA-THANE 527

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:

STI-P₃, ACT-100 Tanks and Non-Immersion: Abrasive blast to a Commercial Blast in accordance with SSPC-SP 6 and obtain a 2-4 mil (50-100 μ) angular anchor pattern.

Immersion: Abrasive blast to a Near-White Metal Blast in accordance with SSPC-SP 10 and obtain a 2-4 mil (50-100 μ) angular anchor pattern.

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

Mixing

Power mix Part B separately and thoroughly for 15 to 20 minutes to a uniform consistency. **DO NOT BATCH MIX.**

Thinning

DO NOT THIN

Pot Life

Material Temperature	Time
75°F (24°C)	< 30 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)	110°F (43°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 Devcon Futura Coatings Technical Service.

- 1:1 ratio capable of producing a minimum delivery rate of 1¼ gallons per minute at a tip pressure of 2600-3000 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 Devcon Futura Coatings 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 and could result in premature failure.

	<u>Surface Temperature</u>		
	50-69°F (10-21°C)	70-89°F (21-32°C)	90-110°F (32-43°C)
Surface dry	10-20 minutes	7-15 minutes	4-12 minutes
Hard Film	30-45 minutes	20-25 minutes	15-20 minutes
Recoat (min)	10 minutes	10 minutes	10 minutes
Recoat (max)	2 hours	1 hour	30 minutes
Full cure	7 days	5-7 days	3-5 days

- If the maximum recoat time has been exceeded contact ITW Devcon Futura Coatings for recommended recoat procedure.

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.**

Clean Up

Consult ITW Devcon Futura Coatings "Plural Component Equipment Guide" for specific information.

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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