



# TECHNICAL DATA

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## GEOTHANE<sup>®</sup> 5020 MODIFIED POLYURETHANE ELASTOMER

### Product Description

A 100% solids, fast-set, two component modified polyurethane elastomer. It forms a tough, monolithic, seamless, highly elastomeric membrane with excellent water and chemical resistance. Applied using heated plural component spray equipment.

### Features

- Fast curing for increased productivity.
- 200% elongation allows bridging of normal shrinkage cracks in concrete.
- Unlimited film build in one multi-pass coat.
- Good resistance to UV degradation.
- Can be used over Geotextile fabric.

### Recommended Uses

As a primary or secondary containment lining on concrete, steel or geotextile fabric surfaces to contain leaks and spills of wastewater, fuels, and a variety of chemicals. It is excellent as a landfill cap or environmental cover to control leaching and wind or weather erosion. It is also excellent as a repair or upgrade material for existing pond liners and torn or failed seams in plastic sheet linings.

### Primers

**Steel:** FUTURA-BOND 610 HS.  
**Concrete:** FUTURA-BOND 415.  
**Other:** Contact ITW Futura Coatings for recommendations.

### Typical Properties

<b>Solids by Volume</b>	100%
<b>Volatile Organic Compounds</b>	0.0 lb/gal (0.0 g/l)
<b>Theoretical Coverage</b>	1604 ft <sup>2</sup> @ 1 mil (3.8 m <sup>2</sup> @ 1 mm)
<b>Recommend DFT</b>	20 – 150 mils (0.5 – 3.8 mm)
<b>Number of Coats</b>	1 or 2
<b>Mix Ratio</b> (by volume)	1”A” : 1”B”
<b>Flash Point</b> (PMCC)	>200°F (93°C)
<b>Shelf Life</b> @ 60-90°F (16-32°C)	9 months
<b>Color</b>	Black & Tan

### Specification Data

<b>Elongation</b> – ASTM D 412-06	161% ± 10%
<b>Abrasion Resistance</b> ASTM 4060-01 CS17 – 1000 grams / 1000 cycles H-10 – 1000 grams / 1000 cycles H-18 – 1000 grams / 1000 cycles	12 mg loss ± 5% 15 mg loss ± 5% 262 mg loss ± 5%
<b>Tensile Strength</b> ASTM D 412-06	1,753 psi ± 10%
<b>Tear Resistance</b> ASTM D 470-06 ASTM D 624-00 Die “C”	34 pli ± 10% 220 pli ± 10%
<b>Hardness</b> – ASTM D 2240-95	86 Shore “A” ± 5% 46 Shore “D” ± 5%
<b>Permeability</b> – ASTM E 96	0.05 perms
<b>100% Modulus</b> ASTM D 412-06	1,251 psi ± 10%

### Ordering Information

<b>Packaging:</b>	110 gal kits
<b>Shipping Weight:</b>	10.6 lb/gal (4.9 kg/gal)

# APPLICATION INFORMATION GEOTHANE 5020

**Surface Preparation**

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

**Steel:** Apply over clean, dry, properly applied FUTURA-BOND 415 HS or other recommended primer.

**Concrete:** Apply over clean, dry, properly applied FUTURA-BOND 415 or other recommended primer. Note: Rough concrete may require surfacing with FUTURA-BOND 320 Gel prior to the application of the FUTURA-BOND 415.

**Geotextile:** Apply on the “sized” side of recommended fabrics only.

**Plastic Sheet Liners / FRP / Other:** Contact ITW Futura Coatings for specific surface preparation and primer recommendations.

**Mixing**

Power mix the “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
60°F (15°C)	20 – 30 seconds

**Application Conditions**

	Normal	Minimum	Maximum
<b>Material*</b>	135-150°F (57-65°C)	135°F (57°C)	170°F (77°C)
<b>Surface</b>	75-90°F (24-32°C)	45°F (7°C)	110°F (43°C)
<b>Ambient</b>	75-90°F (24-32°C)	45°F (7°C)	110°F (43°C)
<b>Humidity</b>	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.

**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.

	<b><u>Surface Temperature</u></b>		
	50-69°F (10-21°C)	70-89°F (21-32°C)	90-110°F (32-43°C)
<b>Surface dry</b>	20 minutes	9 -10 minutes	5 minutes
<b>Hard Film</b>	40 minutes	20 minutes	15 minutes
<b>Recoat (min)</b>	30 minutes	15 minutes	10 minutes
<b>Recoat (max)</b>	20 hours	12 hours	5 hours
<b>Full cure</b>	4 days	50 hours	36 hours

- If the material has exceeded its maximum recoat time by less than 24 hours wipe with MEK and recoat within 10 minutes.
- If the maximum recoat time has been exceeded by more than 24 hours consult ITW Futura Coatings for recommended recoat procedures.

**Clean Up**

Consult ITW Futura Coatings “Plural Component Equipment Guide” 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).

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

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