



Pro-Flex™ Polyurea Coating

16336A • 16337B • 16702

Technical Data Sheet

March, 2011

3M Part No.(s)	3M Part Descriptor(s)
16336A	3M™ Pro-Flex™ - Part A Drum
16337B	3M™ Pro-Flex™ - Part B Black Drum
16702	3M™ Pro-Flex™ - Part B Gray Drum

Product Description

3M™ Pro-Flex™ system is a two component aromatic polyurea designed for various industrial and manufacturing applications. This product creates a water-proof seal and is extremely flexible, giving it high impact resistance. Due to the high elongation and flexibility, this polyurea product has a high COF (Coefficient of Friction) that creates a great nonskid surface. The product cures rapidly and can be top-coated with an appropriate long-term UV color stable coating within a few minutes, if needed.

Features, Advantages, Benefits

Features	Advantages	Benefits
• High flexibility/high elongation	• High impact resistant	• No cracking or warping
• Great nonskid coating	• High coefficient of friction	• High traction
• Waterproof	• Used for containment and secondary containment	• Protects against rust and rot
• Fast cure	• Light foot traffic within 15 minutes	• Speeds production process versus paint
• Sound dampening	• Reduces sound pollution	• Noise safe environment

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

	Part A	Part B
Color - Visual	Light Yellow	Black, Sandstone
Viscosity @ 75°F (24°C) Brookfield Viscometer	1500 - 3000 cps	200 - 700 cps
Specific Gravity - ASTM D1475-98	1.10 - 1.30 g/cc	1.00 - 1.20 g/cc

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Product Uses

- Protective coating/lining for floors, walls, roofs.
- Textured, nonskid heavy duty coating for heavy traffic/load areas.
- Protects concrete, masonry, metal and other substrates from corrosion, erosion and harsh weather.
- Heavy duty, permanently elastic coating for marine docks, pillars, decks and engine compartments.
- Carpet replacement.
- Nonskid, abrasion resistant floor coating for utility vehicles, buses, furniture vans, RV's, animal carriers, boats, trailers, trucks, barns, etc.
- Anti-skid coating for commercial or on-site storage facilities.
- Liner for containment and secondary fuel containment.
- Retrofit/rehabilitation of old structures, buildings, etc.
- Sound dampening properties.

Typical Performance Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Polymer Properties	Values	Test Method
Hardness	90 Shore A	ASTM D2240
Density	1.023 g/cc	DIN 53479
Percent Solids	100% solid	Lab
Tensile	3089 psi	ASTM D412
Elongation	575%	ASTM D412
Tear	500 pli	ASTM D624C
Taber Abrasion	75 mg/1000 rev.	ASTM D3389
Elcometer Adhesion	>1200 psi Sandblasted Steel - Glue Failure >800 psi Concrete - Substrate Failure	ASTM D4541
COF Coefficient of Friction	Smooth Surface 2.01 - Rough Surface 1.89 on James Machine with Leather	ASTM D1894
COF Coefficient of Friction	Smooth Surface .083 - Rough Surface 1.89 on James Machine with Leather	ASTM D2047
Impact Resistance	176 in-lb Passed	ASTM D2794
Mandrel Bend	2mm Passed	ASTM D522
Modulus 300%	830 psi	ASTM D412
Modulus 400%	1050 psi	ASTM D412
Modulus 500%	1650 psi	ASTM D412

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Typical Performance Properties *(continued)*

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Recommended Process Conditions	Limits
Part A	1.00 pbv
Part B	1.00 pbv
Component Feed	0.5 gal/min
Pre-heater Temperature	160°F (71°C)
Hose Temperature	160°F (71°C)
Dispense Pressure	1800 - 2200 psi

Typical Reaction Characteristics when Sprayed	Result @ 77°F (25°C)
Gel Time	8 to 12 seconds
Tack Free Time	10 minutes
Handling Time	20 to 30 minutes
Light Duty Use	2 hours
Full Service Use	24 hours

Cleaning

Mixers, spray gun, etc. can all be easily cleaned with solvent (acetone) while product is in the uncured state. In the case that material is allowed to dry on a tool, scraping and soaking in solvent may be necessary to remove the material.

Directions for Use

1. Follow the Graco E-30 reactor spray equipment start-up procedure.
2. Make sure surface is free from dirt, dust, oil or other contaminants. Clean with acetone or other quality wax and grease remover.
3. Wire tape and mask.
4. Sand surface with coarse sand paper (36 to 80 grit) and re-clean surface or use 3M™ Metal Prime or 3M™ Lexa-Prime™ (polyurea primers) to eliminate sanding. Allow primer to cure per directions.
5. Test spray surface for compatibility.
6. Spray first coat and apply second coat in the opposite direction (cross-hatch technique). Typical thickness per coat is 20 to 30 mils. 3M™ Pro-Flex™ Polyurea coating reaches handling strength in only in 20 to 30 minutes

Applications

Typical use is for a nonskid coating, sound dampening, waterproofing or erosion protection for wood, fiberglass, concrete, metal & aluminum.

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Storage and Handling

Keep containers sealed tightly to eliminate any moisture contamination. Do not introduce water into the liquid components. Use desiccant drier cartridges or blanket with nitrogen when in use. Part B must be agitated before use. Refer to MSDS for additional handling and disposal requirements.

Storage Conditions	3M™ Pro-Flex™ Part B	3M™ Pro-Flex™ Part A (ISO)
Storage Temperature	55-77°F (15-25°C)	55-77°F (15-25°C)
Storage Stability / Shelf Life ⁽¹⁾	12 months	12 months

(1) Data referred to original sealed drums stored in a dry place at the recommended temperature.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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For Additional Health and Safety Information



Automotive Aftermarket Division

3M Center, Building 223-6N-01
St. Paul, MN 55144-1000
1-877-666-2277 (1-877-MMM-CARS)
www.3M.com/automotive

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