

**PRODUCT DESCRIPTION**

**Polyflex 201** is a high performance, Polyurea membrane. It provides excellent waterproofing, corrosion and abrasion resistance and can be used in a great variety of different climatic conditions. It provides excellent protection and durability in continuous water immersion.

**PRODUCT FEATURES**

- Superior anti-corrosive protection for steel
- Protective membrane on metal, masonry, wooden reservoirs, silos and many kinds of pipes and stone slabs
- Excellent abrasion resistance
- Canadian Food Inspection Agency approbation for accidental food contact.
- Application on geo textile to form ponds, to retain overflow, prevent effluent leakage, water and petroleum product leakage.
- Can be used to repair or replace existing membrane.

**TYPICAL USES**

- Waste water treatment plants
- Waterproofing concrete
- Pulp and paper mills
- Corrosion protection for steel
- Food processing facilities
- Refineries

**TECHNICAL DATA**

<b>Color:</b>	Available in several colors	<b>Flash Point:</b>	> 149°C (300.2°F)
<b>Type of Cure:</b>	2 components	<b>V.O.C.:</b>	None
<b>Binder:</b>	Polyurea	<b><u>Drying times:</u></b>	
<b>Solids by volume:</b>	100 %	<b>Gel Time:</b>	5 - 10 seconds
<b>Solids by Weight:</b>	100 %	<b>Tack Free:</b>	10 - 30 seconds
<b>Theoretical Coverage of 1 mil:</b>	1604 ft <sup>2</sup> / US gallon	<b>To recoat:</b>	12 hours
<b>D.F.T at 25 microns:</b>	149m <sup>2</sup> / 3.78 litres	<b>Hard:</b>	8 hours
<b>Recommended D.F.T.</b>	30 - 100 mils	<b>Catalyst:</b>	201C
	750 - 2500 microns	<b>Ratio:</b>	1:1
<b>Resin viscosity:</b>	550 CPS @ 25°C (77°F)	<b>Shelf life:</b>	1 year
<b>Isocyanate viscosity:</b>	600 CPS @ 25°C (77°F)	<b>Packaging:</b>	18.93 litres (5 US gallons) 205 litres (55 US gallons)

Keep in cool and dry area  
\*revised on September 15,  
2009

## APPLICATION GUIDE

### SURFACE PREPARATION

\*See Polyval's Polyurea Application Guide

### CLEANING INSTRUCTIONS

Cleaning agent: Toluene, Xylene, MEK. To reduce the risk of fire, use glycol ether acetate or any environmentally friendly chlorinated solvent

### APPLICATION PROCESS

Plural component heated pump. In order to obtain the optimum results outlined below system must be capable of applying at a pressure greater than 2,500 PSI at a temperature of 70°C (160°F). Before application, the receiving coat surface must be cleaned of dirt, soluble salts, dust, oils grease, chalking, and contaminants. Normal preparation includes vacuum, blow-off, SSPC-SP-1 "solvent cleaning," or water-wash containing salt solubilizing agents. This product is normally applied over previously primed surfaces. For more details on the surface preparation of the primer, see that specific data sheet. Scuff sanding is required before recoating. Clean in accordance with SSPC-SP-1 "Solvent cleaning" before recoating.

Take care to ensure that proper film thickness is achieved. For more information, consult the Steel Structures Painting Council (SSPC) publication, Good Painting Practice.

### PHYSICAL PROPERTIES

#### Properties under tension:

(ASTM D 412-C) Ultimate Elongation = 400 %  
 (ASTM D 412-C) Tensile Strength = 13.79 N/mm<sup>2</sup> (2000 PSI)  
 (ASTM D 882-97) Modulus of Elasticity = 73.7 MPa

#### Resistance to tearing:

(ASTM D 624-C) Tear strength = 87.7 N/mm (500 PLI)

#### Linear Thermal Expansion:

(ASTM E 381-00) modified Mean coefficient of Linear Expansion (black sample) from -30°C to -40°C = 168 µm/m°C

#### Resistance in compression:

(ASTM D 1621-00) = 2776.6 kPa (10 %)

#### Flexural Secant Modulus at 2 % strain:

(ASTM D790-00) = 165.4 kN/m

#### Resistance to interperate:

Conditions (ASTM G-63) No cracking, peeling or loss of integrity after 2000 hours.

#### Water Permeability:

(NFP D 84-515) 0.0036 perm@1630 micron (65 mils) thick sample

#### Indication of hardness:

(ASTM D 2240) 47 – 53 Shore D

#### Dielectric strength:

(ASTM D-149-97a) = 19.3 KV/mm (490 V/mil)

#### Flexibility at cold temperature:

(ASTM) D-3111 Conditioned at - 40°C (- 40°F) for 24 hours  
 Tested at 23°C (73.4°C) with mandrel ½ inches

#### Slip resistance:

(ASTM F-1679) Overall average COF: > 0.97

#### Cold bending:

(ASTM D 2136-94) accept

#### Impact resistance:

(ASTM D 2794) Direct @ 77°F (25°C): > 160 in-lb (>18 joules)  
 Reverse @ 77°F (25°C): > 160 in-lb (>18 joules)  
 Direct @ -4°F (-20°C): > 120 in-lb (>13.56 joules)  
 Reverse @ -4°F (-20°C): > 100 in-lb (>11.35 joules)

#### Water Absorption

(ASTM D-471) 24 hours at ambient temperature, 1.5 %

**Taber abrasion resistance:**  
 (ASTM D-4060)  
 1000 cycles, 1000g load

Abrasion wheel type	Average weight loss
CS - 10	16.9 mg
CS - 17	22.6 mg
H - 18	307 mg

Chemical Resistance: (ASTM D 543) Immersion for 1 Month	CHEMICAL	ABSORPTION	DIMENSIONAL CHANGE
	3 % sulfuric acid	2.0 %	None
30 % sulfuric acid	1.4 %	None	
10 % sodium hydroxide	1.6 %	None	
50 % sodium hydroxide	0.0 %	None	
Motor Oil	0.16 %	None	
Transmission Oil	0.69 %	None	

See the material safety data sheet and product label for complete safety and precaution requirements.

#### DISCLAIMER:

"The following is made in lieu of all warranties, expressed or implied: Manufacturer's obligation shall be to replace such quantity of the product proven to be defective. The manufacturer shall not be liable for any injury, loss or damage, direct or incidental or consequential, arising out of the use of or the inability to use the product. Before using, the user shall determine the suitability of the product for the intended use and the user assumes all risk and liability whatsoever in connection therewith. All values shown are approximations. Values indicated are for guide purposes only, as actual values can change due to application conditions, application methods, environmental conditions etc. The information contained herein is subject to change without notice. Consult your representative for a current data sheet. The foregoing may not be altered except by an agreement signed by the officers of the manufacturer."

Chemical resistance information is currently being updated according to ASTM standards Please contact your local representative for an update.