

PPG VERSAFLEX® 234

formerly sold as SPI PTU chemical resistant polyurea

DESCRIPTION

Flexible, chemical resistant, 100% solids polyurea designed for use in harsh chemical environments.

PRINCIPAL CHARACTERISTICS

- Fast return to service
- Especially resistant to hydrocarbon exposure
- Excellent adhesion, flexibility, and chemical resistance.
- 100% solids
- Self priming in many applications
- Can be applied horizontally, vertically and overhead
- Used where a seamless, flexible system is essential
- TYPICAL USES:
- Pipelines and tanks
- Primary or secondary containment applications
- Oil and gas containment and transportation
- Chemical containment and transportation
- Pulp and paper mills

COLOR AND GLOSS LEVEL

- Sand, Medium Grey, Black
- Semi-gloss

Note:

- Color changes can occur under UV-exposure without negative impact on the product performance

BASIC DATA AT 77°F (25°C)

Data for mixed product	
Number of components	Two
Mass density	9.6 lb/US gal (1.15 kg/l)
Volume solids	100 ± 2%
VOC (Supplied)	EPA Method 24: 0.0 lb/US gal (0.0 g/l)
Recommended dry film thickness	80.0 mils (2,000 µm)
Theoretical spreading rate	20 ft²/US gal for 80.0 mils (0.5 m²/l for 2000 µm)
Dry to touch	10 seconds
Overcoating Interval	Minimum: Coating should no longer leave residue when touched with a gloved finger Maximum: 6 hours
Curing time	72 hours
Full cure after	72 hours

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Data for mixed product

Shelf life

Part A: at least 6 months when stored cool and dry
Part B: at least 6 months when stored cool and dry

Notes:

- If overcoat time is exceeded, abrade and clean surface before recoating. Then treat with PPG VERSAFLEX® 960, or a solvent such as MEK, to promote adhesion.
- Curing time reflects ready for service time
- Full cure after reflects maximum hardness and chemical resistance at 77°F (25°C)
- Warmer temperatures will reduce the overcoating window. Contact your PPG Technical Representative for assistance.
- Material should be stored in dry conditions, out of direct sunlight, and in unopened original factory containers, at temperatures above 60°F (16°C) and below 90°F (32°C)
- Contact PPG Technical Services to determine whether this product will meet your chemical resistance requirements.
- See ADDITIONAL DATA - Additional drying/curing details

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Ambient temperature during application and curing should be above 40°F (5°C)
- Substrate temperature during application and curing should be above 40°F (5°C)
- Substrate temperature during application and curing should be at least 5°F (3°C) above dew point and rising before application of coating materials.
- For immersion service, it is recommended to test for soluble salts. Contact your PPG Technical Services representative for recommendations on allowable salt content.

Concrete / Masonry

- All surfaces must be sound, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint, and other foreign substances
- Prepare in accordance with SSPC-SP13 guidelines to achieve a surface profile equivalent to CSP 4 to CSP 5 in accordance with ICRI 310.2R-2013
- Moisture vapor transmission should not exceed 3 lbs./1000 sq. ft. per 24 hr period
- Moisture content should not exceed 5%
- Prime with a recommended primer

Steel (immersion service)

- Remove all surface contaminants, oil and grease in accordance with SSPC SP-1
- Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher. Achieve a surface profile of 3.0 – 5.0 mils (75 – 125 µm)

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Non-ferrous metals

- Abrasive blast in accordance with SSPC SP-17 guidelines or higher. Achieve a surface profile of 3.0 mils (76 µm).
- Abrasive blast with non-metallic abrasive
- A primer is not typically needed. Where required, contact PPG Tech Services for recommendations.

SYSTEM SPECIFICATION

Chemical Resistances

- Skydrol Hydraulic Fluid
- Diesel Fuel
- Gasoline
- Jet Fuel

Notes:

- A more complete list of chemical resistances is available by request from PPG PMC Technical Services
- Immersion samples were "free film" (6 sides exposed)
- All tests performed at room temperature

Primer

- Primers for concrete/masonry: PPG RAVEN® 175 Primer or PPG VERSAFLEX® 920 Primer

INSTRUCTIONS FOR USE

- Installation requires heated plural component set-up with direct impingement application equipment that is capable of maintaining 2,500 psi (17 MPa) dynamic spray pressure

Mixing ratio by volume: 1:1 (Part A to Part B)

- Prior to mixing, the temperature of Part A and Part B should each be at least 70°F (21°C)
 - Part B component must be thoroughly agitated prior to use
 - Mix Part B using three-tier, collapsible blade power mixer through the center bung hole
 - Properly mixed material will be a uniform color without light or dark spots
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Airless spray – Plural component

- Product should be applied in multi-directional (north-south, east-west) motion to ensure proper coating thickness
- Heated hoses are required

Recommended thinner

No thinner should be added

Notes:

- Primary heater temperatures should be maintained at 160-170°F (71-77°C)
- Heated hose temperature: 160-170°F (71-77°C)
- Contact your PPG technical services representative for equipment and set-up recommendations

ADDITIONAL DATA

Viscosity at 77°F (25°C)

- A-Side: 650 +/- 50 cP
- B-Side: 750 +/- 50 cP

Physical data of cured material	
Characteristic	Value
Tensile Strength (ASTM D638)	3,000 psi (21 mPa)
Tensile Elongation (ASTM D638)	100%
Hardness, Shore D (ASTM D2240)	65
Mandrel Elongation (ASTM D522)	Passed @ 1" (2.5 cm) & -40°F (-40°C)

Note:

- The value ranges stated in this Product Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

Additional drying/curing details		
Substrate temperature	Gel time	Tack free time
77°F (25°C)	4 seconds	10 seconds

DISCLAIMER

- For industrial or professional use only
- This product is specifically suitable for use on the substrates mentioned in this document. For application on any other substrates, please always contact your distributor or PPG representative for specific instructions and in order to make sure that the product performance can be maintained.

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SAFETY PRECAUTIONS

- Contains isocyanate. All safety precautions must be followed including proper skin protection and breathing protection
- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

WARRANTY

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AVAILABILITY OF PACKAGING

Packaging

- 110-gallon kits (two 55-gallon drums filled by weight, volume is closely approximated)