PPG VERSAFLEX® 819

formerly sold as EPL 9 Slow Set Polyurea

DESCRIPTION

100% solids, slow set polyurea intended for spot repair and patching of existing polyurea coatings

PRINCIPAL CHARACTERISTICS

- 100% solids
- Self-leveling
- May be hand mixed, static mixer processed, or sprayed
- Slower gel time than standard spray-applied polyurea products
- TYPICAL USES:
- Crack filling and repair
- Spot repair of existing coatings
- Hard to reach places not accessible to spray equipment

COLOR AND GLOSS LEVEL

- Black

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	8.8 lb/US gal (1.1 kg/l)
Volume solids	100%
VOC (Supplied)	EPA Method 24: 0.27 lb/US gal (33.0 g/l)
Recommended dry film thickness	60 - 100 mils (1524 to 2540 µm)
Theoretical spreading rate	27 ft^2/US gal for 60.0 mils (0.7 m^2/l for 1524 µm) 16 ft^2/US gal for 100.0 mils (0.4 m^2/l for 2540 µm)
Dry to touch	1 hour
Dry to walk on	12 hours
Full cure after	4 days
Shelf life	Part A: at least 12 months when stored cool and dry Part B: at least 12 months when stored cool and dry

Notes:

- 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)
- Full cure after reflects maximum hardness and chemical resistance at 77°F (25°C)
- See ADDITIONAL DATA - Additional drying/curing details

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- All surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint, and other foreign substances
- Product is not recommended for immersion services

Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 40°F (5°C)
- Substrate temperature should be at least 5°F (3°C) above dew point and rising before application of coating materials.

Previously coated surface

- Remove loose or damaged coating from the area to be repaired using a steel brush or sanding device
- Clean, dry, and abrade the existing coating that the product will be applied over
- For enhanced adhesion, wipe prepared area with PPG VERSAFLEX® 960 surface treatment

Concrete

- Prepare in accordance with SSPC-SP13 guidelines to achieve a surface profile equivalent to CSP 3 to CSP 5 in accordance with ICRI 310.2R-2013

Steel (non-immersion service)

- Remove all rust, dirt, moisture, grease or other contaminants from the surface 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 – 4.0 mils (75 – 100 µm)
- Ensure surface is dust free after blasting

SYSTEM SPECIFICATION

Recommended DFTs

- Recommended DFT for Concrete: 80-100 mils (2.0-2.5 mm)
- Recommended DFT for Steel (Carbon): 80-100 mils (2.0-2.5 mm)

Note:

Service Temperatures

- -40°F to 200°F (-40°C to 93°C)

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Primer

- Primer may be required subject to substrate condition
- Primers for concrete/masonry: PPG RAVEN® 175 Primer or PPG VERSAFLEX® 920 Primer
- Primers for Carbon Steel (optional): PPG AQUATAPOXY® 190 Primer, PPG VERSAFLEX® 901 Primer
- Primer for non-ferrous metals: PPG AQUATAPOXY® 190 Primer*
- Primers for polyurea tie-in: PPG VERSAFLEX® 960 surface treatment

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INSTRUCTIONS FOR USE

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

- Prior to use, the temperature of Part A and Part B should be at least 70°F (21°C) for at least 48 hours
- If pigmented, pre-mix Part B prior to use
- Do not open Part A container until immediately before mixing
- Measure out equal volumes of each components into a single, clean, disposable pail
- Combine Part A and Part B and thoroughly mix the two components of the kit together
- Mix for no longer than two minutes
- Scrape sides during mixing
- Apply immediately after mixing
- Only mix subsets which can be processed within the pot life, due to rapid curing

Notes:

- Product is exothermic. Mixing for longer than is necessary to combine product will produce additional heat and reduce pot life
- Hand mixing recommended; Electric/Power mixing will shorten pot life
- When mixing by hand, do not mix more than one quart of combined product at a time—Only mix as much as can be applied in 3-5 minutes

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Application

- Immediately after mixing, pour the mixture onto the substrate in a figure-eight pattern to allow for even distribution.
- Spread quickly with a notched-type trowel.
- May be applied with a brush
- Product working time is 9 minutes at 77°F (25°C)

Notes:

- Contact Technical Services to discuss application options
- Product is designed to be applied by hand. However, application using high-pressure plural component or low-pressure static mix equipment is possible. Contact PPG technical services for additional information on appropriate set up.

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Pot life

3 minutes at 77°F (25°C)

Notes:

- Listed pot life is for one US quart (946 ml) of material mixed by hand
- Longer pot life is possible by mixing smaller amounts
- Longer pot life is possible by processing material with low-pressure static mix equipment

ADDITIONAL DATA

Viscosity at 77°F (25°C)

- A-Side: 400 +/- 50 cPs
- B-Side: 1,000 +/- 100 cPs

Physical data of cured material	
Characteristic	**Value**
Tensile Strength (ASTM D638)	1,700 psi (12 MPa)
Tensile Elongation (ASTM D638)	330%
Hardness, Shore A (ASTM D2240)	90
Hardness, Shore D (ASTM D2240)	40
100% Modulus (ASTM D412)	800 psi (6 MPa)
300% Modulus (ASTM D412)	1,580 psi (44 MPa)
Taber Abrasion (ASTM D4060, H-18 wheel, 1 kg load, 1,000 cycles)	20.5 mg
Taber Abrasion (ASTM D4060, H-10 wheel, 1 kg load, 1,000 cycles)	33 mg
Taber Abrasion (ASTM D4060, H-22 wheel, 1 kg load, 1,000 cycles)	46.4 mg
Taber Abrasion (ASTM D4060, CS-17 Wheel, 1 kg load, 1,000 cycles)	19.1 mg

Note:

- The value ranges stated in this Product Data Sheet are based on system processing under laboratory conditions. These are typical values and should not be considered product specifications for a specific field application. Equipment configurations and/or field application conditions may produce variances in final system values.

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Additional drying/curing details				
Substrate temperature	**Gel time**	**Tack free time**	**Dry to service**	**Full cure**
77°F (25°C)	9 minutes	1 hours	12 hours	4 days

DISCLAIMER

- For industrial or professional use only

SAFETY PRECAUTIONS

- 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.

REFERENCES

- Information sheet | Explanation of product data sheets

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