PPG VERSAFLEX® 252

formerly sold as Full Metal Jacket (FMJ) and VERSAFLEX® VF502

DESCRIPTION

Two-component, fast set, rapid curing, flexible, hybrid polyurea spray coating

PRINCIPAL CHARACTERISTICS

- Fast set
- Fast return to service
- Excellent adhesion to steel
- Tough, flexible, and impact resistant
- Remains flexible at lower temperatures
- Dry temperature resistance from -40°F (-40°C) to 250°F (210°C)
- Extremely tough monolithic membrane is created at a minimum thickness of 20 mils (25 µm)
- Insensitive to atmospheric moisture during application
- TYPICAL USES:
- Used where a seamless, flexible system is essential
- Pick-up truck spray-in bed liners
- Automotive service areas
- Industrial and commercial interior
- Not recommended for direct contact with extremely high or low pH chemicals

COLOR AND GLOSS LEVEL

- Black, Tan, Light Gray, Red, Blue

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	8.7 lb/US gal (1.0 kg/l)
Volume solids	100 ± 2%
VOC (Supplied)	EPA Method 24: 0.0 lb/US gal (0.0 g/l)
Recommended dry film thickness	60.0 - 100.0 mils (1524 - 2540 µm) per coat
Theoretical spreading rate	16 ft^2/US gal for 100.0 mils (0.4 m^2/l for 2540 µm)
Dry to touch	4 seconds
Overcoating Interval	Maximum: 3 hours

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Truck bed surface

- Remove the majority of the clear coat, exposing the painted surface; material will bond to paint.
- Use the following (or equivalent): DA air sander with 60-80 grit paper; electric 4" grinder with 36 grit alum oxide pad; or 80 grit nylon filament cup brush
- At perimeter, near Fiber Line tape: hand sand to edge of filament line with 120-180 grit paper
- The surface must be properly prepared, dry, clean and free of any contamination
- Blow off all prepped surface with compressed air

Steel (atmospheric/non-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-6 cleanliness or higher. Achieve a surface profile of 3.0 mils (76 µm) or higher
- Ensure surface is dust free after blasting

Non-ferrous metals

- Abrasive blast in accordance with SSPC SP-16 guidelines
- Abrasive blast with non-metallic abrasive

Wood

- The surface must be properly prepared, dry, clean and free of any contamination
- The use of primers on porous surfaces is recommended to reduce the chance of pin holing

SYSTEM SPECIFICATION

- Primers for Carbon Steel: PPG AQUATAPOXY® 190 Primer, PPG VERSAFLEX® 901 Primer
- Primers for non-ferrous metals: PPG VERSAFLEX® 901 Primer
- Primers for wood/fiberglass: PPG VERSAFLEX® 920 Primer
- Tie-Coat: PPG RAVEN® 161 Primer
- Recommended DFT for Concrete: 80-100 mils (2.0-2.5 mm)
- Recommended DFT for Steel (Carbon): 60-80 mils (1.5-2.0 mm)
- Recommended DFT for High Abrasion Service: 60-80 mils (1.5-2.0 mm)

INSTRUCTIONS FOR USE

- Application requires use of a heated plural component pump with impingement gun.
- Pump must be specifically designed for fast-set polyurea application, and capable of maintaining the specified temperature and dynamic pressure during application.

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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)
- Mixer diameter should be 1/3 of the diameter of the container
- 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
- Mix for at least 30 minutes prior to processing
- Properly mixed material will be a uniform color without light or dark spots
- For recommended application instructions, see working procedure

Application

- Apply in a uniform manner to desired thickness
- Application thickness is determined by spray gun configuration and speed of application

Airless spray – Plural component

- Material requires heated plural component spray set-up with impingement gun
- Material supply capacity should be 4 times the material output of the selected spray gun configuration
- Heated hoses are recommended
- Processing equipment should be capable of maintaining set temperatures and pressure at rest and during operation

ADDITIONAL DATA

Physical data of cured material	
Characteristic	**Value**
Tensile Strength (ASTM D638)	2,814 psi (19.4 MPa)
Tensile Elongation (ASTM D638)	146%
Tear Strength (Die C, ASTM D624)	276 pli (48.3 N/mm)
Hardness, Shore D (ASTM D2240)	55
100% Modulus (ASTM D638)	2328

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.

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Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
60.0 mils (1524 µm)	27 ft^2/US gal (0.7 m^2/l)
80.0 mils (2032 µm)	20 ft^2/US gal (0.5 m^2/l)
100.0 mils (2540 µm)	16 ft^2/US gal (0.4 m^2/l)

Additional drying/curing details		
Substrate temperature	**Tack free time**	**Gel time**
72°F (22°C)	3 - 4 seconds	2 - 3 seconds

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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