



CORROSION PREVENTIVE PAINT

WSS-M7C91-B

1. SCOPE

The material defined by this specification is a water-based (latex) paint corrosion preventive compound suitable for post-painting fuel tanks.

2. APPLICATION

This specification was released originally for use in post-painting fuel tank weld seam areas and high draw areas for additional corrosion protection. The material is typically applied to steel that has been zinc-nickel electroplated and coated with an aluminum rich organic coating per WSS-M1A325-B1.

2.1 LIMITATIONS

The liquid form of the material is water based and is sensitive to freezing.

3. REQUIREMENTS

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements for Production Materials (WSS-M99P1111-A).

3.2 PHYSICAL PROPERTIES

3.2.1	Non-volatile Solids, by weight (ASTM D2369)	45% min
	Volatiles (Shall be composed of 70% water min)	Balance
3.2.2	Volatile Organic Content, (VOC) (ASTM D3960)	0.06 – 0.096%
3.2.3	Color	Gray/silver
3.2.4	Flash Point (ASTM D56)	No flash
3.2.5	Stability	
3.2.5.1	Storage Stability	
	Material shall process at the applicators facility after storage for 180 days at 40 °C and still meet the requirements of this specification.	
3.2.5.2	Temperatures Requirements	
	Must be stored and shipped above 0 °C to prevent freezing	
3.2.6	Weight per Volume (ASTM D1475)	1.08-1.32 kg/L

Date	Action	Revisions	Rev. 0
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3.3 PREPARATION OF TEST PANELS

3.3.1 Substrate

The test panels must have the same substrate as the production intent component.
i.e. Al-rich paint over Zn-Ni plated low carbon steel.

3.3.2 Application Procedure

Spray the test compound to a wet film thickness of 0.25 +/- 0.025 mm using an airless spray pump equipped with appropriate size orifice to produce a "flat" (in one plane) spray pattern.

3.3.3 Application Temperature 15 – 30 °C

3.3.4 Drying Time

This material can be air dried or oven forced dried per the coating supplier reiteration depending particular manufacturing plant.

The paint must be sufficiently cured for shipping so there is no loss of paint performance if shipped below 0 °C. Material must be dry in the plant so there is no damage to the paint finish during handling.

3.4 DRY FILM PROPERTIES

3.4.1 Dry paint film thickness must be specified on the part drawing.

3.5 RESISTANCE PROPERTIES

Panels shall be aged for 72 h at 23 +/- 2 °C or 16 h at 43 +/- 2 °C before running adhesion or resistance tests

3.5.1 Chip Resistance 9C max (SAE J400, 0.5 L of gravel, at – 20 °C) No chips > 6mm dia.

3.5.2 Adhesion Grade 1 or better (FLTM BI 106-01, Method B)

3.5.3 Thermal Shock, Removal from Scribe 20 mm max (FLTM BI 107-05, except: steam nozzle 500 mm from panel)

3.5.4 Corrosion Protection Panel or Parts Grade 10 (12 weeks of 00.00-L-467, Rate per ASTM D610)

3.5.5 Corrosion Protection, Vehicle (initial validation only) (12 weeks of 00.00-R-343)

Requirement: Must meet Total Vehicle Corrosion Resistance Trustmark 18-0040

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification. Contact gmfs@ford.com for questions concerning Engineering Material Specifications.