PRETREATMENT SOLUTION, ZIRCONIUM OXIDE, INITIAL FILL **WSS-M3B82-A1**

PRETREATMENT SOLUTION, ZIRCONIUM OXIDE, FEED MATERIAL **WSS-M3B82-A2**

PRETREATMENT SOLUTION, ZIRCONIUM OXIDE, ADJUSTMENT MATERIAL **WSS-M3B82-A3**

1. SCOPE

The materials defined within these specifications are the basic components for the automotive pretreatment system using zirconium oxide. These materials shall provide good paint adhesion to the metal surface with adequate durability and corrosion resistance.

2. APPLICATION

These specifications were originally released for zirconium oxide pretreatment bath materials used in automotive assembly plants. It is intended for use over such substrates as cold rolled steel, galvanized, galvannealed and aluminum parts.

WSS-M3B82-A1 – Zirconium Oxide Pretreatment Solution, Initial Fill is the bath at the point of initial make-up prior to production vehicles being processed.

WSS-M3B82-A2 – Zirconium Oxide Pretreatment Solution, Feed Material are the individual replenisher packages to maintain the pretreatment bath during production.

WSS-M3B82-A3 – Zirconium Oxide Pretreatment Solution, Adjustment Material are materials used to adjust the bath properties such as pH and cation contamination reduction.

3. REQUIREMENTS

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2 COMPOSITION

Supplier must maintain the following characteristics to a maximum tolerance of plus or minus 5% of the initial sample or as reported with the initial sample. All other essential components must be reported with the initial sample and maintained as part of the Control Plan.

Date	Action	Revisions	Rev. 01
2017 05 31	Revision	Added WSS-M10P13-A and revised, see summary	C. Weller, NA
2009 06 10	Activated	N. B. Chamberlain, T. Honey, J. Richardson, J. Tardiff, NA	

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3.2.1 Initial Fill and Feed Materials with Zirconium Oxide:
(WSS-M3B82-A1 and A2)

3.2.1.1	Zirconium (Atomic Absorption or Inductively Coupled Plasma emission spectrometry)	Initial Sample ± 5%
3.2.1.2	Density, kg/l at 25 °C (ASTM D1475)	Initial Sample ± 0.03 kg/l

3.2.2 Feed Materials and Adjustment Materials:
(WSS-M3B82-A2 and A3)

3.2.2.1	Critical constituents (Atomic Absorption or Inductively Coupled Plasma emission spectrometry)	Initial Sample ± 5%
3.2.2.2	Density, kg/l at 25 °C (ASTM D1475)	Initial Sample ± 0.03 kg/l

3.3 COMPOSITIONAL ANALYSIS

Ford Motor Company, at its option, may conduct mass spectroscopy and/or other analysis of material/parts supplied to this specification. The analyses established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce the same analyses that correspond to the reference standard when tested under the same conditions.

3.4 PHYSICAL PROPERTIES

The coating where applied will be continuous and meet the requirement described in Performance Specification WSS-M10P13-A.

3.5 PREPARATION OF TEST PANELS

Test panels shall be prepared according to the exterior performance specification WSS-M2P180-D. Test substrates are outlined in WSS-M10P13-A.

3.6 RESISTANCE PROPERTIES

Resistance properties panels shall be prepared using standard paint processing parameters according to WSS-M10P13-A.

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.

4.1 Material(s) technical data sheet(s), Design Matrix, Design FMEA, and other material related processing information shall be made available for review prior to qualification testing. Process P-Diagram and plant specific Process FMEA shall be developed before the material can be introduced to a production facility.

Under agreed-upon circumstances, certain previously submitted data may be applied to subsequent data submissions. In this case, the qualification requirements will depend on the degree of changes made to the material. The final test requirements shall be agreed upon between the responsible Materials Engineer and the supplier prior to testing.

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