Ford Motor Company

ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
PHOSPHATE SOLUTION, ZINC, NICKEL FREE, INITIAL FILL	**WSS-M3B73-A1**
PHOSPHATE SOLUTION, ZINC, NICKEL FREE, FEED MATERIAL	**WSS-M3B73-A3**

1. SCOPE

The materials defined by these specifications are the basic components for the automotive Ni free Zinc phosphating process, containing essentially Zinc Phosphate..

2. APPLICATION

These specifications were originally released for various types of material.

WSS-M3B73-A1: This specification is used for the initial fill of dip or spray phosphate systems.

WSS-M3B73-A3: This specification is used for feed material to replenish phosphate systems.

3. REQUIREMENTS

3.0 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 MASS SPECTROSCOPY

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 MATERIAL COMPATIBILITY

The supplier of this material shall keep abreast of changes in technology of related materials e.g., sealers and adhesives, which may affect the compatibility and performance of this product. The supplier shall notify the appropriate Ford Product Materials Engineering Office in writing when incompatibility in anticipated.

Date	Action	Revisions
2003 03 31	Revised	Para 2 and 3.5.1 revised; Para 3.0 inserted; Para 3.1, 3.3, 3.8, 4 deleted
1998 06 24	Activated	A. Reilly

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3.5 COMPOSITION

Supplier must maintain the following characteristics to a maximum tolerance of plus or minus 10% of the initial sample or as reported with the initial sample. All other essential components must be reported with the inital sample and maintained as part of the Control Plan as required in 3.1.

3.5.1 Chemical Composition

Zinc (Zn),	max. 10 %
Manganese (Mn)	max. 5 %
Phosphate as P_2O_5	max 35 %
Nitrate as NO_3	max 10 %
Fluoride as F	max 5 %

Any other essential components of the formulation must also be noted in the Initial Sample Report.

3.5.2 Density, kg/L at 25 °C (ASTM D 1475)	See Initial Sample +/- 0.03

For liquid material density of the material as supplied, for powder density of an aqueous solution (concentration to be defined by supplier and noted in the Initial Sample Report).

3.6 RESISTANCE PROPERTIES

The material defined by this specification must be used with a phosphate system and in conjunction with the phosphate system must meet the requirements of WSS-M3P1-D.

3.7 COMPATIBILITY

The material must be compatible with all related materials, i.e., electrocoats and topcoats.

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