

ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
PHOSPHATE SOLUTION, ZINC, INTERNALLY ACCELERATED, INITIAL FILL	WSS-M3B78-A1
PHOSPHATE SOLUTION, ZINC, INTERNALLY ACCELERATED, FEED MATERIAL	WSS-M3B78-A2

1. SCOPE

The materials defined by these specifications are the basic components for the automotive internally accelerated zinc phosphating process, containing essentially zinc phosphate.

2. APPLICATION

These specifications were originally released for internally accelerated phosphate bath materials used in automotive assembly plants.

WSS-M3B78-A1: This specification is used for the initial fill of dip or spray phosphate systems.

WSS-M3B78-A2: This specification is used for feed materials to replenish phosphate systems. Feed materials per this specification contains accelerator components.

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 be the same composition as 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 is anticipated.

Date	Action	Revisions
2003 03 13	Revised	Para 3.0 Inserted; Para 3.1, 3.3, 3.7, 4 Deleted
2000 08 09	Activated	T. Reilly N. Chamberlain

Printed copies are uncontrolled

Page 1 of 2



Documents
Document Sharing Hub

3.5 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 as required in 3.1

3.5.1 Chemical Composition

Zinc (Zn),	Initial Sample +/- 5%
Manganese (Mn),	Initial Sample +/- 5%
Nickel (Ni),	Initial Sample +/- 5%
Phosphate as P ₂ O ₅ ,	Initial Sample +/- 5%
Nitrate as NO ₃ ,	Initial Sample +/- 5%
Fluoride (F),	Initial Sample +/- 5%
Accelerator Component (s)	Initial Sample +/- 5%

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

3.5.2 Density, kg/L at 25 °C (ASTM D 1475)	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.