

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

PHOSPHATE SOLUTION, ZINC, MAKE UP

ESK-M5B338-A

1. SCOPE

The material defined by this specification is an aqueous solution containing essentially zinc phosphate.

2. APPLICATION

This specification was originally released for Make Up material in dip and spray phosphate equipment. The materials are used in combination with the materials listed in clauses 4.1 and 4.2.

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 CHEMICAL COMPOSITION

Zinc as Zn:	8.0 +/- 1.0 %
Manganese as Mn:	1.9 +/- 0.3 %
Nickel as Ni:	0.7 +/- 0.3 %
Phosphate as P2O5:	27.0 +/- 3.0 %
Nitrate as NO3:	3.3 +/- 0.5 %

3.3 TITRATION

36.0 +/- 4.0 mL

Titrate 10 mL of a 6 % solution by weight with 0.1 m sodium hydroxide.
Indicator: Phenolphthalein

3.4 DENSITY AT 20 °C (ASTM D1475)

see Initial Sample +/- 0.05 g/mL

Date	Action	Revisions
2002 07 24	Revised	Removed ESK-M5B338-A2, Updated & Renumbered B. Xu
1995 01 24	EP00E10480072000	Complete revise, version -A2 added K Wolters
1987 12 18	SM-EQ 1579 TP	Released

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Page 1 of 2



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3.5 PERFORMANCE

Phosphating systems consisting of ESK-M5B338-A in combination with the materials listed under 4.1 and 4.2 must meet all requirements of Performance Specification WSK-M3P1-C.

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification.

The phosphate systems released by this specification consist of the following materials:

4.1 SPRAY PHOSPHATE SYSTEM

4.1.1	Phosphate Solution, Zinc, Alkaline Cleaner	ESK-M5B340-A or SKM-5B9599-A
4.1.2	Phosphate Solution, Zinc, Start Up	ESK-M5B337-A
4.1.3	Phosphate Solution, Zinc, Accelerator	S-M5B4509-A
4.1.4	Phosphate Solution, Zinc, Passivating Solution	SKM-5B9574-A or ESK-M5B326-A
4.1.5	Phosphate Solution, Zinc, pH-Correction Agent	SKM-5B9574-B
4.1.6	Phosphate Solution, Zinc, Activating Agent	ESK-M5B327-A

4.2 DIP PHOSPHATE SYSTEM

4.2.1	Phosphate Solution, Zinc, Alkaline Cleaner	SK-M5B9604-A
4.2.2	Phosphate Solution, Zinc, Cleaner Additive	SK-M5B9608-A
4.2.3	Phosphate Solution, Zinc, Start Up	ESK-M5B376-A
4.2.4	Phosphate Solution, Zinc, Activator	ESK-M5B327-A
4.2.5	Phosphate Solution, Zinc, Accelerator	S-M5B4509-A
4.2.6	Phosphate Solution, Zinc, Passivating Solution	ESK-M5B326-A
4.2.7	Phosphate Solution, Zinc, Sludge Conditioner	SK-M5B9607-A