

ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
PHOSPHATE SOLUTION, ZINC, PASSIVATING SOLUTION, INORGANIC, CHROME FREE	ESK-M5B394-A1
PHOSPHATE SOLUTION, ZINC, PASSIVATING SOLUTION, pH REGULATION	ESK-M5B394-A2

1. SCOPE

The materials defined by these specifications are a chrome-free inorganic passivating system.

2. APPLICATION

These specifications were released originally for materials used as a passivating solution for dip or spray zinc phosphate operations.

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 ESK-M5B394-A1

3.2.1 Chemical Composition

Fluoride as F 11.1 +/- 0.9 %

Zirconium as Zr 8.9 +/- 0.7 %

3.2.2 Density at 20 °C 1.21 +/- 0.03 g/mL

3.2.3 Titration 15.5 +/- 1.9 mL

Titrate 5 mL of a 60 g/L solution with 0.1 N Sodium Hydroxide (NaOH) until color changes from clear to rosy red.

Indicator Phenolphthalein

Date	Action	Revisions
2002 08 28	Revised	Updated and renumbered
1992-04-01	EP00E10176266000	Release CD

Printed copies are uncontrolled

3.3 ESK-M5B394-A2

3.3.1 Chemical Composition

Ammonium as NH_3 1.8 +/- 0.1 %

3.3.2 Density at 20 °C

0.99 +/- 0.03 g/mL

3.3.3 Titration

6.0 +/- 0.5 mL

Titrate 10 mL of a 60 g/L solution with 0.1 M Sulfuric Acid (H_2SO_4).

Indicator Phenolphthalein

4. GENERAL INFORMATION

The information below is provided for clarification and assistance in meeting the requirements of these specifications.

The materials defined by these specifications must be used with the following phosphate systems.

4.1 SPRAY PHOSPHATE SYSTEM:

4.1.1 Phosphate Solution, Zinc, Activating Agent ESK-M5B327-A

4.1.2 Phosphate Solution, Zinc, Start Up ESK-M5B337-A

4.1.3 Phosphate Solution, Zinc, Make Up ESK-M5B338-A

4.1.4 Phosphate Solution, Zinc, Alkaline Cleaner ESK-M5B340-A
or SK-M5B9599-A

4.1.5 Phosphate Solution, Zinc, Accelerator S-M5B4509-A

4.1.6 Phosphate Solution, Zinc, Sludge Conditioner SK-M5B9607-A

4.2 DIP PHOSPHATE SYSTEM

4.2.1 Phosphate Solution, Zinc, Activator ESK-M5B327-A

4.2.2 Phosphate Solution, Zinc, Make Up ESK-M5B338-A

4.2.3 Phosphate Solution, Zinc, Alkaline Cleaner ESK-M5B340-A

4.2.4 Phosphate Solution, Zinc, Start Up ESK-M5B376-A

4.2.5 Phosphate Solution, Zinc, Accelerator S-M5B4509-A

4.2.6 Phosphate Solution, Zinc, Sludge Conditioner SK-M5B9607-A