

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

PHOSPHATE SOLUTION, ZINC ALKALINE CLEANER

ESK-M5B384-A

1. SCOPE

The material defined by this specification is an alkaline cleaner.

2. APPLICATION

This specification was released originally for material used as an aqueous cleaning solution for bodies in white in dip and spray phosphating equipments.

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

Phosphate as P_2O_5	107.0 - 131.0 g/L
Nitrite as NO_2	6.3 - 12.3 g/L
Wetting Agents	113.0 - 153.0 g/L

3.3 pH-VALUE

(10 g/L solution at 20 °C)

9.4 - 10.4

3.4 TITRATION

12.2 - 14.2 mL

Titrate 10 mL of a 60 g/L dilution with 0.1N sulfuric acid (H_2SO_4).

Indicator: methyl orange

3.5 DENSITY

(ASTM D 1475)

1.31 - 1.37 g/cm³

3.6 SURFACE TENSION

(of a 60 g/L solution)

28 - 38 mN/m

Date	Action	Revisions
2002 08 27	Revised	Updated and renumbered
1989 08 31	SM/EQ 7118 TP	Release

concurrent: J. Schult

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Documents

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4. GENERAL INFORMATION

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

4.1 The phosphate system released by this specification consists of the following materials:

4.1.1	Phosphate Solution, Zinc, Accelerator	ESK-M5B383-A
4.1.2	Phosphate Solution, Zinc, Start Up	ESK-M5B376-A
4.1.3	Phosphate Solution, Zinc, Make Up	ESK-M5B338-A
4.1.4	Phosphate Solution, Zinc, Accelerator	S-M5B4509-A
4.1.5	Phosphate Solution, Zinc, Neutralizing Agent (optional)	S-M5B4508-A
4.1.6	Phosphate Solution, Zinc, Activating Agent	ESK-M5B327-A
4.1.7	Phosphate Solution, Zinc, Sludge Conditioner	SK-M5B9607-A
4.1.8	Phosphate Solution, Zinc, Passivating Solution	ESK-M5B326-A