Weldphos Fe

Weldphos Fe is a uniquely balanced liquid iron phosphate, which produces an iridescent blue phosphate finish on steel. Weldphos Fe is formulated as an active corrosion inhibiting paint-bonding phosphate coating on ferrous metals. Weldphos Fe comprises of accelerators, detergents, and phos acids that clean and produce corrosion resistant coatings on steel substrates. Weldphos Fe can also be used on zinc surfaces to achieve excellent adhesion.

Features/Benefits

- Improves impact resistance and flexibility of applied paint films.
- Prevents the under-rusting of paints if the paint film is chipped or scored.
- Best suited for high pressure-hot water or steam generator iron phosphorizing applications.
- Wide operating pH range (3.5 – 5.5), which reduces pH control requirements.
- Cleans and phosphates in one step.
- Superior surfactant system, which cleans faster, resulting in faster coating deposition.
- Operates as low as 48 ºC (120 ºF); but can be operated as high as 100 ºC (212 ºF), if the higher temperature is required to aid cleaning.
- Can be controlled by pH or by acid analysis.
- Economical single step system.
- Liquid material for ease of use.

Equipment

Steel tanks and heating coils are satisfactory. Electric immersion heaters should be stainless steel (preferably 316 SS).

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Spray Application

Concentration	0.75 to 1 % by volume Weldphos Fe
Temperature	48 to 100 ºC (120 to 212 ºF)
Time	seconds to 2 minutes
Spray Pressure	15 to 30 psi

Analysis of Weldphos Fe – Burette Titration Method

Apparatus: 50 mL Volumetric Pipette, Type A
50 mL Burette, Class A
250 mL Erlenmeyer Flask

Reagents: 1 % (w/v) Phenolphthalein Indicator solution
0.1N Sodium Hydroxide (NaOH)

Procedure:

1. Pipette a 50 mL sample of Weldphos Fe solution into a 250 mL Erlenmeyer flask.
2. Add 3 – 5 drops of Phenolphthalein Indicator solution.
3. Titrate with 0.1N NaOH to a pink endpoint.
4. Calculation:

   mL of 0.1N NaOH Titrated x 0.175 = % by volume Weldphos Fe

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Analysis of Weldphos Fe – Dropping Bottle Method

Apparatus: 10 mL Graduated Cylinder
250 mL Erlenmeyer Flask
125 mL Dropping Bottle

Reagents: 1 % (w/v) Phenolphthalein Indicator solution
1N Sodium Hydroxide (NaOH)

Procedure:

1. Measure a 10 mL sample of Weldphos Fe solution with a 10 mL graduated cylinder and add to a 250ml Erlenmeyer flask.
2. Add 3 – 5 drops of Phenolphthalein Indicator solution.
3. Add dropwise 1N NaOH from a dropping bottle while counting the drops and swirling the solution.
4. Stop adding the drops when the colour changes to pink.
5. Calculation:

   drops of 1N NaOH x 0.2 = % by volume Weldphos Fe

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READ THE MSDS BEFORE USING THIS PRODUCT