



INDUSTRIAL COATINGS

(CF-WA)
CHEMFOS® WA

LIQUID IRON PHOSPHATE

PRODUCT DESCRIPTION

CHEMFOS® WA is a liquid iron phosphate concentrate formulated for preparing large steel components for paint. Proper use provides cleaning and phosphate in one operation.

PRODUCT ADVANTAGES

- Completely miscible with water and applied by the common steam gun apparatus or similar equipment.
- Provides an iron phosphate coating weight of 20 to 60 milligrams per square foot.
- **CHEMFOS® WA** is a fully biodegradable product, containing phosphates, accelerator and surfactants

TECHNICAL PROPERTIES

Composition:	Liquid
Appearance:	Clear to Slightly Opalescent
Odor:	Mild
Specific Gravity:	1.074
Pounds per Gallon:	8.95
Flash Point:	N/A
Foaming Tendency:	Low
Recommended Diluent:	Water
Behavior in Hard Water:	Good
Rinsability:	Good
Biodegradable Surfactants:	Yes
Recommended Concentration:	1%-2% by volume
Recommended Temperatures:	160 ⁰ F-212 ⁰ F (steam)
Stability:	Stable
VOC:	None

USE & CONTROL INSTRUCTIONS:

Operating Properties (Typical):

Application:	Steam Gun
Concentration (normal):	1-2% volume
(1:1 reduction at gun head)	2-4% volume
Temperature:	160 ⁰ F-212 ⁰ F

Specific process conditions may warrant operating the above parameters outside of the typical ranges. Please consult your PPG representative.

Charge Instructions:

For each 100 gallons of tank reservoir, add 2 gallons of **CHEMFOS WA** and circulate to mix.

NOTES:

- Different reductions and soil conditions may cause the required concentration of the **CHEMFOS® WA** bath to vary.
- Immediately after treating the part with **CHEMFOS® WA**, a final fresh water rinse should be used prior to painting.

Analysis Procedure:

TITRATION PROCEDURE

Total Acid analysis

For ordering information, please refer to the Reagent Reference list available from your PPG representative.

Equipment needed:

- 25 ml. autoburet **or**
- 50 ml. digital buret
- 25 ml. volumetric pipet
- Pipet bulb
- 250 ml. Erlenmeyer flask

CHEMFOS WA

USE & CONTROL INSTRUCTIONS (continued)

Reagents needed:

- Phenolphthalein indicator
- 0.1 Normal Sodium Hydroxide

Procedure:

CAUTION: DO NOT PIPETTE BY MOUTH!

1. Pipette a 25-ml. sample of the bath into a 250-ml. Erlenmeyer flask
2. Add 4-5 drops of Phenolphthalein Indicator
3. Titrate with 0.1 Normal Sodium Hydroxide until the solution changes from the original bath color to first permanent pink.
4. Each ml. of 0.1 Normal Sodium Hydroxide equals one point of Total Acid.

The concentration is calculated by multiplying the points of Total Acid times the product factor 0.30. This equals the concentration in percent by volume of **CHEMFOS® WA** in solution.

$$\text{Points of Total Acid} \times 0.30 = \text{Percent by volume of CHEMFOS WA}$$

Replenishment chart:

For every percent by volume needed, add 1 gallon of **CHEMFOS WA** per 100 gallons of tank volume.

For every point of Total Acid needed, add 0.33 gallons of **CHEMFOS WA** per 100 gallons of tank volume.

Points of Total Acid	Concentration of CHEMFOS WA in percent by volume	Addition of CHEMFOS WA Per 100 gallons of tank volume
10	3.0%	0
9	2.7%	0
8	2.4%	0
7	2.1%	0
6	1.8%	0.2 gallons
5	1.5%	0.5 gallons
4	1.2%	0.8 gallons
3	0.9%	1.1 gallons
2	0.6%	1.4 gallons
1	0.3%	1.7 gallons
0	0	2.0 gallons

USE & CONTROL INSTRUCTIONS (continued)

Equipment:

Mild steel equipment is satisfactory for use with **CHEMFOS® WA**.

PRECAUTIONS:

Consult the most recent *Material Safety Data Sheets* for health and safety information relating to the handling and storage of this material, and all reagents and indicators used to control this material.

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