

Paint Prep II System

Paint Prep II System, a solution of Paint Prep II M and Paint Prep II A, produces a chromate phosphate coating on aluminum. This coating serves as an excellent base for paint giving maximum corrosion resistant and superior properties.

Features & Benefits

Meets AAMA Specifications 603 and 605	Up to 3000 hours salt spray
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Operating Conditions

Appearance	Paint Prep II M clear red liquid Paint Prep II A clear liquid
Density	Paint Prep II M 12 lbs./ Gal Paint Prep II A 9 lbs./ Gal
pH	1% solution deionized water 2.3

Methods of application	Spray or immersion
Concentration	Paint prep II M 2 – 3.5 by vol Paint prep II A 0.21b – 0.41 by vol 100°F – 130°F
Temperature	80°F – 130°F
Time	15 sec – 5 min
Equipment materials	Stainless or plastic liner. Fiberglass not acceptable

Cleaning is very important to obtaining a coating, which will give maximum performance.

Paint Prep II System coating are green to iridescent in color – the greener the heavier the coating. A light green to iridescent coating is usually desirable.

Titration Method

Paint Prep II M

EQUIPMENT NEEDED

5 mL Pipette
250 mL Erlenmeyer Flask
50 mL burette

CHEMICALS NEEDED

50 % Sulfuric Acid Solution
Potassium Iodide Crystals
20 %w/w Thyodene Starch Solution
0.1 N Sodium Thiosulfate Solution

1. Place a 5 mL small in a 250 mL flask. Add 50 mL water and 10 mL of 50% sulfuric acid.
2. Add a small amount of potassium iodide crystals. Add a small amount of starch indicator solution.
3. Titrate with 0.1N sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) until the color changes from dark blue to clear light blue.
4. Record mL 0.1 N Sodium Thiosulfate Solution used to reach endpoint.
5. Calculate %v/v Paint Prep II M as follows:

$$\text{Paint Prep II M (\%v/v)} = 0.3 \times \text{mL 0.1N Sodium Thiosulfate Used}$$

Paint Prep II A

EQUIPMENT NEEDED

1. Jenco 6209 specification/pH meter
2. 100 mL Graduated Cylinder (plastic)
3. 250 mL Beaker (plastic)
4. Fluoride and reference electrodes or combination electrode.

CHEMICALS NEEDED

1. Sodium acetate buffer solution pH = 5.40
2. 50 ppm Fluoride (F) standard
3. 5000 ppm F standard

Meter standardization

Insert the fluoride electrode(s) in the “A” standard (50 ppm F). Press down “Standard I” allowing time for three beeps. The meter should give a reading of 0.9 to 1.0. Push “hold” and remove the electrode(s) from “A” standard. Rinse and blot the electrode dry with tissue. Insert the electrode “B” standard (5000 ppm F) and press “Standard II.” Allow the meter to stabilize. This should give a reading of 100.0 \pm 0.5. Push “hold” and rise.

Preparing your sample for testing

Take a 10 mL sample of the Paint Prep II System bath in the plastic graduated cylinder. Add sodium acetate buffer 5.4 to the 100 mL mark.

Pour this sample into the 250 mL beaker.

Insert the electrode in the prepared bath sample, press “Hold”, allow the meter to stabilize and take the meter reading.

Calculation

$$\text{Meter Reading} \times 10 = \text{ppm F in the Paint Prep II System bath.}$$

A new bath should have between 440-860 ppm of fluoride. A 1gallon add of Paint Prep II A per 1000 gallons of solution will raise the concentration of fluoride 200 ppm.

Sodium Acetate Buffer:

140 g/L anhydrous sodium acetate

18 g/L acetic acid (glacial)

Adjust pH to 5.40 with acetic acid.

Waste Disposal

The **Aquapure** team will be able to provide the proper disposal method.



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