So Clean Solutions

Live Green

Iron Phos #2

Iron Phos #2 is a liquid concentrate for cleaning and phosphating iron and aluminum in one operation. It is highly buffered to maintain pH in the 4.8 – 5.5 range.

An amorphous iron phosphate coating is produced that will be gray to blue iridescent in color and have coating thickness of from 40 to 80 mg/sq foot.

Iron Phos #2 is generally used in pressure spray washing machines, but can also be used in simple dip operations. Selected wetting agents provide added cleaning strength.

Iron Phos #2 is a mildly acidic, clear liquid concentrate that mixes readily in water and is completely safe for workers to handle. Fast acting surfactants speed cleaning of the metal surface and provide for a uniform coating finish.

EQUIPMENT: Only regular mild steel tanks and fittings are required. Special expensive acid-resistant equipment is not needed with Iron Phos #2.

OPERATING CONDITIONS: Iron Phos #2 is designed for use in three-stage pressure spray washing machines and for best results should be used in this manner:

Iron Phos #2	2 to 6% by volume in water
Operating temperature	140 to 160 ^{o}F.
Time	30 seconds to 3 minutes.
pH	4.8 - 5.5.

The second stage is a cold water rinse. The third stage is a brief rinse in a seal rinse solution. Parts should be dried immediately following the third stage by conventional methods.

For immersion applications, if parts are heavily coated with soils, rust inhibitors or lubricants, then precleaning of the work should be performed to insure proper phosphating and to prevent against contamination of the iron phosphating solution.

Make up of the operating solution

Iron Phos #2	4 to 6% by volume of in water
Operating temperature	160 to 180^{o} F.
Time of immersion	2 to 5 minutes with agitation of the work or solution
pH	4.8 to 5.5.

After treating, follow with conventional cold water rinse, then seal rinse and dry

MAINTENANCE AND CONTROL: During operating, the pH and concentration of the treating solution should be maintained through periodic additions of **Iron Phos #2**. Maintain the pH of the solution between 4.8 and 5.5. The concentration can be checked by simple titration:

1. Add a 30 ml sample of **Iron Phos #2** solution into a 250 ml beaker.
2. Add 3 to 4 drops of phenolphthalein indicator.
3. Titrate with 1.0N sodium hydroxide to a pink end point.

Calculation: mls 1.0 N Sodium hydroxide x 1.1 = % by vol. Iron Phos #2.

IRON PHOS #2

CONCENTRATION BY TEST KIT

1. Add 3 mls of solution to be tested to empty dropper bottle, use a small graduated syringe.
2. Add 2 drops of phenolphthalein indicator.
3. Add 1.0N sodium hydroxide dropwise until permanent pink color change. Swirl bottle gently between each drop addition.
4. Use the number of drops of 1.0N sodium hydroxide to determine the concentration on the chart below.

DROPS OF 1.0 N SODIUM HYDROXIDE	% OF Iron Phos #2
3	1
5	2
7	3
9	4
11	5
14	6

Read Material Safety Data Sheet before using this product.

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