



Better Chemistry. **Better Business.**

Mi-Phos™ 22PW EX

Product Code: 2201001
Revised Date: 02/5/2018

Mi-Phos™ 22PW EX Heavy Duty Cleaner And Iron Phosphate

Mi-Phos™ 22PW EX is a liquid concentrate which, when mixed with water and operated at a temperature of 90-175°F., will clean and produce a phosphate coating on steel and some alloys of zinc and aluminum.

The coating provides a tenacious bond and undercoat for paint finishes.

Mi-Phos™ 22PW EX can also be used on zinc plate, aluminum and terne plate as a cleaner, smut remover and as a preparation for painting.

Mi-Phos™ 22PW EX is made up at a concentration of 3% to 5% by volume with water and operated at a temperature of 90-175°F.

Mi-Phos™ 22PW EX will normally clean and phosphate in one step. However, for removing extremely heavy oils and greases, pre-cleaning is recommended to extend the production life of the **Mi-Phos™ 22PW EX** solution.

Mi-Phos™ 22PW EX for Use in Power Washers and Steam Generators

Mi-Phos™ 22PW EX is formulated with low foaming ingredients required for use in power washer and steam spray equipment.

Mi-Phos™ 22PW EX is used at a concentration of 3% to 5% in power washers.

When portable spray equipment is used for large assemblies, the **Mi-Phos™ 22PW EX** concentrate can be fed directly into the siphone line, eliminating pre-mixing. Concentrations of 2% to 6% are recommended for these applications, depending on the steam pressure available and the square footage production requirements.

TEST KIT PROCEDURE

1. Fill test bottle ¼ full with water
2. Add 5 mls **Mi-Phos™ 22PW EX** solution to the bottle using the 5 ml syringe
3. Add 5-10 drops of Phenolphthalein indicator.
4. Add 0.72 N Sodium Hydroxide dropwise until the solution turns from colorless to pink
5. Record number of drops 0.72 N Sodium Hydroxide used.

$$\% \text{ (volume)} = 0.56 \times \text{Number Drops } 0.72 \text{ N Sodium Hydroxide}$$



Product Bulletin

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TITRATION PROCEDURE

1. Pipette 10 ml sample of **Mi-Phos™ 22PW EX** solution into a 250 ml Erlenmeyer flask and dilute with 50 mls of water
2. Add 3 to 5 drops of Phenolphthalein indicator to solution and titrate with 0.1 N Sodium Hydroxide until the solution becomes slightly pink.
3. Record mls 0.1 N Sodium Hydroxide used
% volume = 1.11 x MLS 0.1 N Sodium Hydroxide Used

The pH of the **Mi-Phos™ 22PW EX** solution will range from 3.5 to 4.6. The pH should be checked using pH papers or pH meter.

If the pH of the **Mi-Phos™ 22PW EX** solution should fall below 3.5, use sodium carbonate to raise the pH. If the solution's pH is higher than 4.6, add phosphoric acid or **Mi-Phos™ 22PW EX** to lower the pH.

Tests of the required addition to raise or lower the pH should be made on a 1 gallon sample.

EQUIPMENT

Acid resistant polypropylene, PVC, plastic coated, rubber-lined or stainless steel baskets, hooks, barrels or tanks must be used with the **Mi-Phos™** solution.

CAUTION - CONTAINS ACID...MAY BURN SKIN AND EYES..DO NOT TAKE INTERNALLY

Do not get in eyes, on skin or clothing. Wear eye protection (glasses, goggles or face shield), protective gloves and rubber apron when mixing solutions and while working with the solutions.

Avoid contact of **Mi-Phos™ 22PW EX** concentrate and solutions with alkaline materials. Do not mix **Mi-Phos™ 22PW EX** with any other chemicals or solutions.

In case of accidental contact with skin or eyes, immediately flush freely with water for at least fifteen minutes. Obtain medical attention.

WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.