



Better Chemistry. Better Business.

Metal Guard® 870

Product Code: 2508070
Revised Date: 03/11/2009

Metal Guard® 870

DESCRIPTION

Metal Guard® 870 is a water-soluble, liquid and concentrated rust preventative specifically formulated to provide temporary rust protection of steel indoors. It leaves a dry, invisible, non-oily film that also provides mild cleaning. **Metal Guard® 870** is well suited for protecting ferrous metals against rust during an "in-process" operation or in vibratory finishing applications. Since it is an aqueous solution, it does not present a fire hazard nor does it present a toxicity problem. **THIS PRODUCT DOES NOT CONTAIN NITRITES.**

FEATURES AND BENEFITS

- Does not contain Sodium Nitrite
- Excellent short-term rust protection
- Effective at low concentrations
- Thin protective "dry-to-touch" film
- Water soluble

TYPICAL APPLICATIONS

- In-process short-term protection
- Vibratory finishing applications

PHYSICAL DATA

Specific gravity 1.05
 Vapor pressure less than water
 Percentage of volatility by volume none
 Vapor density (air =1) same as water
 Evaporation rate (ether =1) same as water
 Solubility in water complete
 Appearance and odor yellow solution, slight ammonia odor



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OPERATING CONDITIONS

Metal Guard[®] 870 is commonly used in an immersion application. Drying can be accelerated by heating the **Metal Guard[®] 870** solution or by drying in a heated atmosphere.

Concentrations..... 1 to 25% (volume)

Temperatures..... ambient to 160° F (71°C)

CHEMICAL CONTROL

Metal Guard[®] 870 can be controlled chemically, but this is usually not necessary since the solution has such wide operating parameters that additions may be made without chemical control and /or the bath may be made up more frequently because of its low cost.

TITRATION PROCEDURE

1. Using a 100 ml graduated cylinder, obtain a 100 ml sample of the Metal Guard 870 solution.
2. Transfer solution to a 250 ml Erlenmeyer flask.
3. Add 5 drops Bromocresol Green Indicator.
4. Titrate with 0.5 N hydrochloric acid to a pale yellow endpoint.

$$\text{Milliliters } 0.5 \text{ N HCl} \times 0.17 = \% \text{ by volume Metal Guard}^{\text{®}} 870$$

TEST KIT PROCEDURE

1. Fill sample bottle 1/3 full with water.
2. Using a 10 ml graduated cylinder, transfer 10 mls of solution to sample bottle.
3. Add 5 drops Bromocresol Green Indicator.
4. Add N-94 test kit solution dropwise while mixing the solution until the color changes to a pale yellow.

$$\text{Drops of N-94 solution} \times 0.1 = \% \text{ by volume Metal Guard } 870$$



Product Bulletin

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CAUTION

Metal Guard® 870 is a mildly alkaline liquid. Avoid skin, eye and oral contact. Wear protective clothing, gloves and goggles when handling the product. Flush exposed areas immediately with clean cold water.

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.