Product Bulletin
Product Name: Metal Guard 870
Product Code: 2508070
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Metal Guard® 870

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.

Features & Benefits

Does not contain Sodium Nitrite	Can be used following acidic operations
Excellent short-term in-process rust protection	Prevents rust on high value parts between process steps
Easily soluble in water	Easily removed with a mild alkaline cleaner
Used at low concentrations	Cost effective over large applications

Physical Data

Specific gravity	1.05
Vapor pressure	< water
Percentage of volatility by volume	None
Vapor density (air=1)	Same as water
Evaporation rate (ether=1)	Same as water
Solubility in water	Compete
Percentage of volatility by volume	Yellow solution, slight ammonia odor

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 – 25% (volume)
Temperatures	Ambient – 160°F

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 Method

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.

Calculation

Concentration = mL 0.5 N HCl x 0.17

Test Kit Method

1. Fill sample bottle 1/3 full of water.
2. Using a 10 mL graduated cylinder, transfer 10 mL of solution to sample bottle.
3. Add 5 drops Bromocresol Green indicator.
4. Add 0.72 N Hydrochloric Acid solution dropwise while mixing the solution until the color changes to a pale yellow.

Calculation

Concentration = # Drops 0.72 N HCl x 0.1

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.

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