Metal Guard® 850

Metal Guard 850 is a liquid rust preventative which when mixed with water, readily forms an effective rust preventative for iron and steel fabrications that are packaged and stored indoors. Metal Guard 850 was developed to replace rust preventatives based upon sodium nitrite and nitrite/amine systems.

Features & Benefits

Does not contain sodium nitrite	Addresses environmental concerns
Excellent short-term rust protection	Prevents rust on high value parts between processes
Water soluble	Easily removed with a mild alkaline cleaner
Low foam	Excellent for use in spray washers

Physical Data

Specific gravity	1.12
Percentage of volatility by volume	Negligible
Vapor density (air =1)	Non-volatile
Evaporation rate (n-butyl acetate)	Non-volatile
Solubility in water	Soluble
Appearance and odor	Amber colored liquid
pH (conc)	11.0

Typical Applications

- In-process short-term rust inhibitor
- Can be used as a pre-paint sealer at concentrations less than 1% by volume

Operating Conditions

Metal Guard 850 can be applied by immersion or spray. Solutions of Metal Guard 850 are non-foaming. Drying can be accelerated by heating the Metal Guard 850 solution or by drying in a heated atmosphere.

Concentration	2 – 4% by volume
Temperature	Ambient – 160°F (71°C)

Corrosion Protection Properties

Metal Guard 850 may be classified as a non-severe inhibitor, that is, it should not be used on parts or fabrications that are stored outdoors under exposure to the elements and temperature extremes. Metal Guard 850 solution should be used on parts that are stored indoors or wrapped or boxed after the Metal Guard 850 solution has dried.

Titration Method

1. Using a graduated cylinder, measure 25 mL of solution and place in a 250 Erlenmeyer flask.
2. Add 5 drops Methyl Orange Indicator.
3. Titrate with 0.5 N Hydrochloric Acid to red end point.
4. Record mL used.

Calculation

Concentration = mL of 0.5 N HCl x 0.45

Test Kit Method

1. Using syringe place 2 mL solution in flask and add 50 mL D.I. water.
2. Add 5 drops of Methyl Orange Indicator.
3. Add 0.72 N Hydrochloric Acid solution dropwise to red end point.
4. Record the number of drops used.

Calculation

Concentration = # Drops of 0.72 N HCl X 0.29

Waste Disposal

Discharge to a disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities.

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For more information on this process,
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