

# Metal Guard<sup>®</sup> 830

**Metal Guard 830** is a non-foaming, water-soluble, corrosion inhibitor that readily forms an effective rust preventative for iron and steel alloys that are packaged and stored indoors. Metal Guard 830 provides excellent short-term rust protection on cast iron and powdered metal substrates

Metal Guard 830 does not contain any inorganic salts; therefore, no powder residues are left on the surface of the metal. The thin film left behind also burns off cleanly in annealing or other high temperature operations.

## Features & Benefits

Effective at low concentrations	Reduces operational cost
Low foam	Can be used in spray wash systems

## Physical Data

Specific gravity	1.02
Solubility in water	Infinite
Appearance and odor	Clear amber liquid
pH (conc.)	8.19

## Typical Applications

- In-process short-term corrosion inhibitor

## Operating Conditions

Metal Guard 830 can be applied by immersion, spray, or flow-coat. Drying can be accelerated by heating the Metal Guard 830 solution or by drying in a heated atmosphere.

Concentration	1% – 10% (volume)
Temperature	Ambient – 160° F (71°C)

### Corrosion Protection Properties

Metal Guard 830 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 830 solutions should be used on parts for in-process protection stored indoors or boxed after the Metal Guard 830 solution has dried.

## Titration Method

1. Pipette a 25 mL sample into a 250 mL Erlenmeyer flask.
2. Add 20 drops of 0.04% Methyl Red indicator.
3. Titrate with 0.1 N Hydrochloric Acid until color changes from yellow to red.
4. Record mL used.

Calculation

$$\text{Concentration} = \text{mL } 0.1 \text{ N HCl} \times 1.01$$

## Test Kit Method

1. Using syringe, measure a 5 mL sample of the bath and dispense into the mixing bottle.
2. Add about 20 mL water and 5 to 10 drops Methyl Orange indicator.
3. Add 0.72 N Hydrochloric Acid dropwise until the solution turns pink.
4. Record the number of drops used.

Calculation

$$\text{Concentration} = \# \text{ Drops } 0.72 \text{ N HCl} \times 0.71$$

## 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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