Product Bulletin
Product Name: Metal Guard 820
Product Code: 2508020
Revision Date: December 20, 2023

Metal Guard® 820

Metal Guard 820 is a water-soluble alkaline liquid concentrate specifically formulated to provide temporary rust protection of steel indoors. It leaves a dry, invisible, non-oily film that will not hinder subsequent operations. Metal Guard 820 solutions can be used as a final dip in tumbling or soak operations to prevent possible oxidation of steel parts. Being a water solution, it does not present a fire hazard, nor does it present a toxicity problem.

Features & Benefits

Excellent short-term in-process rust protection	Prevents rust on high value
Easily soluble in water	Easily removed with a mild alkaline cleaner
Used at low concentrations	Cost effective over large applications

Physical Data

Specific gravity	1.11
Vapor pressure	< 17.5 @ 20°C
Solubility in water	Infinite
Appearance and odor	Clear, red liquid

Operating Conditions

Metal Guard 820 is commonly used at 1% to 3% (volume) with water and at temperatures ranging from ambient to 180°F. Higher temperatures facilitate faster drying and speed up production, while higher concentrations provide greater protection against oxidation. Solution replenishment is non-hazardous, whether added to a hot or cold bath.

Equipment

Tanks may be made of mild steel, Polypropylene, or stainless steel with provision for heating the bath, if required. It is not necessary to exhaust the solution.

Titration Method

1. Measure a 100 mL sample into a 250 mL Erlenmeyer flask from a graduated cylinder.
2. Add 6 to 8 drops Bromocresol Purple indicator and mix.
3. Titrate with 0.5 N Hydrochloric Acid until the color changes from purple to yellow.
   Note: Yellow color must persist for at least 30 seconds.
4. Record mL of used.

Calculation

Concentration = mL 0.5 N HCl x 0.62

Test Kit Method

1. Measure a 25 mL sample using graduated cylinder. Pour sample into mixing bottle.
2. Add 5 drops Bromocresol Purple indicator and mix.
3. Add 0.72 N Hydrochloric Acid dropwise while mixing solution until the color changes from purple to yellow.
   Note: Yellow color must persist for at least 30 seconds.
4. Record number of drops used.

Calculation

Concentration = # Drops 0.72 N HCl x 0.17

Caution

Metal Guard 820 is a water solution of chemicals; thus, it does not present a fire hazard, however, it is an alkaline product and must be handled accordingly. Wear rubber gloves and chemical goggles when handling Metal Guard 820.

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For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com

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