Product Bulletin
Product Name: Metal Guard® 830 HTF
Product Code: 2508031
Revision Date: November 1, 2024

Metal Guard® 830 HTF

Metal Guard® 830 HTF is a water-soluble, hot test fluid designed to provide superior corrosion protection for internal engine surfaces. Metal Guard® 830 HTF has proven to be safe for use on all engine surfaces per ASTM D-1384 and ASTM D-4340 parameters. Metal Guard® 830 HTF is compatible with elastomer engine seals per ASTM D-471 specifications. Furthermore, Metal Guard® 830 HTF is compatible with both OAT and conventional engine coolants, such as DDC Powercool Plus and Shell HD Phosphate Free Fully Formulated Conventional Coolant.

Metal Guard® 830 HTF does not contain any inorganic salts; therefore, no powder residues are left on the surface of the metal.

Features & Benefits

- Compatible with engine coolants.
- Safe for use on soft metals such as aluminum, brass and copper.
- Safe on solder surfaces.
- Compatible with elastomers.
- Provides an excellent corrosion protection for engine storage.
- Excellent short-term rust protection on cast iron and powdered metal substrates.
- Effective at low concentrations.

Typical Applications

- Corrosion inhibitor additive for high temperature test fluids.
- Corrosion inhibitor for in-house engine storage.

Physical Data

Specific gravity	1.024
Solubility in water	infinite
Appearance and odor	clear liquid
pH concentrate	8.36

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Operating Conditions

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

Concentrations	1 to 10% (volume), Nominal (5% by vol)
Temperatures	ambient to 160° F (71°C)

Corrosion Protection Properties

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

Control Procedures

Titration Procedure:

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 0.1N HCl until color changes from yellow to red.

1.25 x mls 0.1N HCl used = % (volume) Metal Guard® 830 HTF

Dropper Bottle Procedure:

1. Take a 5-ml sample of the bath using a graduated cylinder and put it into the 125-ml flask.
2. Add about 50 ml water and 3 drops methyl orange indicator.
3. Add 0.72 N HCl solution drop-wise until the solution turns pink.

Drops of 0.72 N HCl solution x 0.83 = % (volume) Metal Guard® 830 HT

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.

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.

Our People. Your Problem Solvers.

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

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