

Description

Nox-Rust® 1000SF is a water soluble and silica-free powder that prevents corrosion on interior metal surfaces of enclosed systems such as boilers, tanks, turbines, heat exchangers and steam or condensate pipelines. Ideal for extended periods of equipment inactivity, during storage or lay-up, or during and after hydrostatic testing. The VCI powder provides continuous long and short-term corrosion protection for ferrous metals as well as aluminum.

Features



Proven Daubert Cromwell corrosion inhibitor chemistry

- Long-lasting corrosion protection, even in the presence of moisture
- Prevents corrosion on metal surfaces in both vapor and contact phases
- Extends into deep and difficult to reach spaces, voids and recesses.
- Non-toxic, safe and environmentally friendly. Does not contain phosphates, heavy metals, or nitrites
- Easy to use. Replaces hydrocarbon and solvent-based liquids, nitrogen blankets, desiccants and other less dependable or costly preservation alternatives.
- Compatible with Daubert Cromwell VCI papers, films, foam, and emitters.
- Available in 25 lb (11.4 Kg) boxes and 150 lb (68 Kg) drums.

Applications



- Preserve or lay-up boilers, either wet or dry
- Protect internal surfaces of compressors, turbines, engines, tanks, heat exchangers, pipe systems
- Protect steam lines, condensate returns, heating and cooling systems
- Preserve tubes, pipes and vessels
- Clean, dry corrosion protection for metal surfaces during storage and shipment
- Preserve equipment that needs to undergo hydrostatic testing prior to shipping and/or storage

Guidelines for Use



- Typically does not require any special surface preparation prior to equipment shut-down, and does not need to be removed prior to start-up. The system does not need to be re-charged or actively maintained during the lay-up period.
- If the VCI layer is disturbed for any reason, it self-reapplies on the metal before corrosion can begin.
- **Dry Application:** Add 3.3 lbs (1.5 Kg) of Nox-Rust 1000SF dry powder per 140 ft³ (4 m³) of system volume. Loose powder can be sprinkled or dusted into the interior when space and access is available. Fog the dry powder into voids in the system using a low-pressure air hose. This is effective when there are deep recesses or cavities high up in the interior of the system.
- **Wet Application:** When applying as an aqueous solution, use 3.3% Nox-Rust 1000SF by weight of water. Close all external openings to properly contain the VCI. System can be left filled or drained.
- **Hydrostatic Testing:** Add Nox-Rust 1000SF to the hydrostatic test water @2% by weight, i.e., add 1.6 lbs of powder to each 10 gallons of water (water is 8.3 lbs/gal, 10 gal = 83 lb, 2% = 1.6 lb). Use this mixture for hydrostatic testing. Drain as best as possible. It is not necessary to dry the vessel after hydrostatic test, but it should be sealed. Protection should last up to 6 months. For long-term protection, use 5% by weight.



Physical Data

Physical Properties	Typical Values
Appearance	Free-flowing white powder
Solubility	Soluble in water 19.6 g/100 ml at 15°C
pH	6-7 (@1% aqueous solution)
Specific Gravity	1.26 at 25°C
Melting Point	Not Applicable
Flash Point	None
Odor	None to very slight
Protective Properties	
Aluminum	Protection
Steel, AISI 1010**	Protection
Stainless Steel, All Grades	Protection
Cast Iron	Protection
Brass, Red or White	Not suitable for applications with brass. Use Nox-Rust 1010SFG in such applications.
Bronze, including Naval	Not suitable for applications with bronze. Use Nox-Rust 1010SFG in such applications.
Copper	Not suitable for applications with copper. Use Nox-Rust 1010SFG in such applications.
Cadmium and Cadmium Plated	Recommend testing before use.
Chromium and Chromium Plated	Recommend testing before use.
Nickel and Nickel Plated	Recommend testing before use.
Lead or Solder	Recommend testing before use.
Tinplate	Recommend testing before use.

* These results are typical values and are not specifications. If specifications are required, please discuss with your sales representative.

** Protection times are based on proper protection from moisture and other environmental elements.

*** For best results, Daubert Cromwell always recommends testing before use.

Storage

Store sealed, in a dry location, out of direct sunlight in temperatures not to exceed 65°C.

Shelf Life

12 months from date of shipping, when stored in the original, shipping container used by Daubert Cromwell and not in high humidity and not at high temperatures, or stored outside.

Removal

Does not typically need to be removed. There is no build up because the powder is completely water-soluble and there is no silica contribution because the powder is 100% silica-free. However, if removal is desired, a simple cold-water flush, water spray, or air gun is all that is required.

WARRANTY The data, statements and recommendations in this product specification sheet are based on testing, research and other development work, which has been carefully conducted by us, and we believe such data, statements and recommendations will serve as reliable guidelines. Physical properties shown above represent typical values and are not intended for use in writing specifications. However, this product is subject to numerous uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and use. All products manufactured by us are warranted to be first class material and free from defects in material and

workmanship. Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other material and products. We make no warranty, express or implied, as to the suitability of any of our products for any particular use, and we shall not be subject to liability from any damages resulting from their use in operations not under our direct control. This warranty is exclusive of all other warranties, express or implied, and no representative of ours or any other person is authorized to assume for us any other liability in connection with the sale of our products.

JUN19|JAB



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