Nox-Rust® VCI Powder 1000SF
Nox-Rust VCI Powder 1000SFG



Product Description

Nox-Rust VCI Powder 1000SF and 1000SFG are water soluble and silica-free, volatile corrosion inhibitor (VCI) powders, designed to protect the interior metal surfaces of enclosed systems, such as boilers, tanks, turbines, heat exchangers and steam or condensate pipe lines. This is particularly useful during extended periods of equipment inactivity, during storage or lay-up, or during and after hydrostatic testing. The powders' chemical formulation provides continuous long and short-term corrosion protection for ferrous metals as well as aluminum. This specially engineered VCI prevents corrosion on metal surfaces in both vapor and contact phases. The volatile component is attracted to the metal surface above the water line and forms a molecular barrier against oxidation, so even the most difficult to reach recesses are protected.

Nox-Rust VCI powders can be applied wet or dry using a variety of easy-to-use application methods. Prescribed doses can be introduced into the system in powder form by dusting manually, fogging it into enclosed spaces using a low-pressure air hose, or simply dissolving it into water. It is safe and is environmentally friendly, meaning it does not contain phosphates, heavy metals, or nitrites. It replaces hydrocarbon and solvent-based liquids, nitrogen blankets, desiccants and other less dependable or costly preservation alternatives.

Nox-Rust VCI powders typically do 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 on the metal surface is disturbed for any reason it reapplies instantaneously before corrosion can begin.

Nox-Rust VCI Powder 1000SFG is a finer ground version for applications where a fine powder is needed.

Nox-Rust VCI Powder 1000SF and 1000SFG is not suitable for applications with copper and brass. Use Nox-Rust Powder 1010SFG in such applications.

Typical Properties

Appearance:	Free-flowing white powder.
Solubility:	Soluble in water 19.6g/100 ml at 15°C. (59° F)
pH:	6-7 (@1% aqueous solution)
Specific gravity:	1.26 at 25° C (77° F).
Melting point:	Not applicable
Flash point:	None
Odor:	None to very slight

Packaging and Storage

Nox-Rust VCI powders are available in 25 lb. (11.4 Kg) and 110 lb. (50 Kg) drums.

Store sealed, in a dry location, out of direct sunlight in temperatures not to exceed 65 °C (149° F).

Applications

Nox-Rust VCI powders can be used to:

- 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.

- Preserve equipment that needs to undergo hydrostatic testing prior to shipping and or storage.

Nox-Rust VCI powders can be applied to boilers, heat exchangers, piping and other liquid containment or conveyance systems by fogging the dry powder into voids in the system using a low-pressure air hose. This is particularly effective when there are deep recesses or cavities high up in the interior of the system. Loose powder can be sprinkled or dusted into the interior when space and access is available.

Dry: When using the dry powder, add 3.3 lbs (1.5 Kg) per 140 ft^3 (4 m^3) of system volume. Apply powder by dusting manually, or use a low-pressure air hose to fog the system interior.

Wet: When applying as an aqueous solution, use 0.3% powder by weight of water.

Close all external openings to properly contain the VCI. System can be left filled or drained.

For hydrostatic testing, add powder to the hydrostatic test water @ 2 wt%, i.e., add 1.6 pounds to each 10 gallons of water (water is 8.3lb/gal, 10 gal=83lb, 2wt%=1,6 lb). Use this mixture for hydrostatic testing, drain as best as possible. It is not necessary to dry the vessel after hydrostatic testing, but it should be sealed. This should give protection up to six months. For longer term protection, use 5% by weight.

Removal

Not typically necessary. 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

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