Visit our new online portal to view pricing and easily order EVAPOL-RUST® and other industrial products.

www.sprayequipmentrepair.com
Chelation Effect

Chelation is a type of bonding of molecules to metal ions. It involves the formation or presence of two or more coordinate bonds between a polydentate (multi-bonded) ligand and a central atom. These are generally organic compounds.

If I’m losing you, I’ll bring it right back. You’re likely already familiar with chelating agents and their ability to transport iron. Hemoglobin in your blood transfers iron by chelation. Hemoglobin is composed of a protein matrix that holds four porphyrin rings called “Hemes”- Chelating agents that bind to iron.

The EVAPO-RUST® chelating agent specifically binds with the iron in iron-oxide, but it is not strong enough to remove iron from steel. It will not react with any other common metals or metal oxides (copper, aluminum, nickel, etc.).

How It Works

**Step 1:** Iron is extracted from iron oxide by selective chelation.

**Step 2:** Iron is removed from chelating agent by a sulfur compound to form a ferric sulfate complex that remains soluble.

**Step 3:** The chelating agent is now free to extract an additional iron from iron oxide, and the process continues with diminishing rate as the sulfur compounds are used up.

Notes

**Detergents:** EVAPRUST® contains detergents to penetrate oils and dirt; however, surface contamination slows down the process and shortens its effective life.

**Long-Term Storage:** EVAPRUST® has an indefinite shelf life, but once it has been opened, it should be stored open to atmosphere in order to discourage anaerobic bacteria because it is biodegradable.

**Degradation:** One gallon of EVAPRUST® will remove 1/2 pound of pure dry rust. This equates to approximately 300 pounds of moderately rusted steel.

**Containers:** Can be purchased in 1 quart, 1 gallon, 3.5 gallon, 5 gallon, and 55 gallon drums.

**Ideal Conditions:** Ideal temperature is 120°F, but at room temperature parts with moderate rust can be de-rusted in as little as 30–60 minutes. Heat and agitation significantly increase rate of rust removal. Ultrasonic can cut removal time by 75–80%.

Properties & Attributes

» pH - Neutral to slightly acidic (6.1-7.0)
» Non-flammable
» Non-toxic
» Non-corrosive
» No Volatile Organic Compounds
» Effective at Standard Temperature and Pressure
» Will not affect plastic, PVC, Viton and most paints
» Biodegradable
» Water-soluble
» Safe on skin
» Indefinite shelf life

Additional information including Material Safety Data and Technical Data sheets can be seen and downloaded at sprayequipmentrepair.com