



# RXSOL

CHEMO PHARMA INTERNATIONAL

## Technical Data Sheet (TDS)

### RXSOL-40-4017-025

Corrosion inhibitor for copper/copper alloy system

Corrosion Inhibitor for Copper or YELLOW systems - copper, bronze, brass, etc - a premium liquid corrosion inhibitor specially developed for the protection of copper and copper-alloy metallurgy including copper, brass and bronze used in recirculating cooling water systems, heat exchangers, condensers, chilled water circuits and industrial water systems.

The product forms a highly adherent and invisible molecular protective layer on metal surfaces that minimizes electrochemical corrosion reactions while maintaining excellent heat transfer efficiency. It effectively protects yellow metals against oxidation, dezincification, pitting and galvanic attack under a wide range of operating conditions.

#### Applications

- Closed loop cooling water systems
- Open recirculating cooling towers
- Chilled water circuits
- Heat exchangers and condensers
- Copper tube heat exchangers
- HVAC systems
- Marine cooling systems
- Industrial process water systems
- Copper, brass and bronze piping systems

#### Mechanism

RXSOL-40-4017 adsorbs onto active metal sites and creates a tenacious protective barrier over copper alloy surfaces. This barrier inhibits anodic and cathodic corrosion reactions by isolating the metal from dissolved oxygen, chlorides and other aggressive species present in the water.

The protective film is self-replenishing and maintains long-term corrosion resistance even under dynamic flow conditions and moderate temperature variations.

#### Dosage

For systems which don't contain aluminium RXSOL-40-4017 should be added to the system at an initial dosage rate of 5 - 10 litres / 1000 litres of system water content (increase to 10 - 15 litres / 1000 litres for systems containing aluminium).

This will passivate metal and should establish the required minimum Molybdate reserve of >33mg/l. Whenever the system is drained or loses a significant quantity of water then the additional RXSOL-40-4017 should be added at the rate of 5 - 10 litres / 1000 litres of water added (increase to 10 - 15 litres / 1000 litres for systems containing aluminium).

Dosage entirely depends on water chemistry, contact your RXSOL representative to guide you.

#### Properties

Characteristic	Specification
Physical State	Liquid
Colour	Pale Yellow to Amber
Density @ 25°C	1.15 - 1.25 g/cm <sup>3</sup>
pH	10.0 - 13.5
Water Solubility	Complete
Stability	Stable under normal storage conditions

#### Advantages

1. Provides excellent protection for copper and copper alloys.
2. Forms a thin molecular protective film without affecting heat transfer.
3. Minimizes pitting and localized corrosion.
4. Controls dezincification in brass components.
5. Effective under both soft and hard water conditions.
6. Compatible with oxidizing and non-oxidizing biocides.
7. Low foaming formulation.
8. Suitable for systems operating over a wide pH range.
9. Reduces maintenance and equipment downtime.
10. Extends service life of heat exchangers and condensers.

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