

PRODUCT DATA SHEET

PRODUCT NAME: RTW-180

TYPE: Advanced Corrosion and Scale Inhibitor For Open Recirculating Cooling Water Systems

PRODUCT DESCRIPTION:

RTW-180 is a high-performance phosphate-phosphonate-polymer blend designed to control corrosion and scale in open recirculating cooling water systems. This product is ideally suited for applications with high fouling or corrosion risk, and where environmental restrictions prohibit the use of traditional heavy-metal-based inhibitors.

APPLICATIONS:

RTW-180 is used for:

- Open and closed recirculating cooling systems
 - Once-through cooling systems
 - Desalination pre-treatment and post-treatment loops
 - Phosphoric acid and fertilizer plants
 - Large evaporative cooling towers (evaporation rate > 50 m³/h)
 - Other industrial water systems prone to scaling, fouling, and corrosion
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KEY FEATURES:

- Synergistic blend of organic and inorganic phosphate-based corrosion and scale inhibitors
 - Contains advanced synthetic polymers and specific sequestering agents
 - Effective over a broad pH range
 - Inhibits calcium carbonate scaling, calcium phosphate sludge, and iron fouling
 - Provides both anodic and cathodic corrosion protection
 - Does not contain chromate, zinc, borate, or other heavy metals
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TECHNICAL BACKGROUND:

1. Polyphosphates:

Polyphosphates act as cathodic inhibitors forming a protective film on metal surfaces and help prevent scale by stabilizing dissolved minerals even at low concentrations.

2. Yellow Metal Inhibitors (Azoles):

Azoles form a chemical bond with copper surfaces through the oxide layer, creating a durable protective film. This prevents copper corrosion and plating on steel, reducing the risk of galvanic corrosion.

3. Synthetic Polymers:

Polymers disrupt crystal lattice growth, preventing dense and adherent scale formation. The inclusion of complex copolymers improves crystal distortion, dispersancy, and sludge control.

4. Phosphonates:

Organic phosphorous compounds like phosphonates enhance metal surface protection and scale inhibition by interacting with calcium ions and forming surface films.

RECOMMENDED DOSAGE & FEEDING:

Typical dosage: 50-100 ppm in system circulating water. Dosage depends on operating conditions and system characteristics.

FEEDING METHOD:

- Feed continuously as received or in diluted form
- Add to the cooling water line, cooling tower basin, or spray pond
- The product is normally used when the LSI is higher than 0

STORAGE & SAFETY

Store in a cool, dry place, avoid direct sunlight, avoid contact with skin, eyes, and clothing. Use appropriate personal protective equipment.

PACKAGING

Polyethylene drums of 25 or 220 liters, containers of 1000 liters.