RXSOL

CHEMO PHARMA INTERNATIONAL

Technical Data Sheet (TDS)

RXSOL-81-8171-230
Water Injection Corrosion Inhibitor RXSOL WICI

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Water Injection Corrosion Inhibitor RXSOL WICI is a high-performance, water-soluble corrosion inhibitor designed for continuous injection in water injection systems. It provides excellent protection to carbon steel and alloy systems exposed to aggressive water chemistries, including systems containing oxygen, chlorides, CO2, and trace H2S.

Key Features

• **Film-Forming Corrosion Protection**
Forms a protective monomolecular film on internal metal surfaces that prevents direct contact with corrosive water.
• **Effective in High Salinity Conditions**
Stable and effective in brines, seawater, and high total dissolved solids (TDS) environments common in injection operations.
• **CO2 / O2 Corrosion Inhibition**
Effectively mitigates corrosion induced by dissolved carbon dioxide and oxygen, reducing pitting and under-deposit corrosion.

• **H2S Scavenging Compatibility**
Compatible with H2S scavengers; maintains performance in sour systems containing hydrogen sulfide.

• **Cathodic/Anodic Inhibition Mechanism**
Functions as a mixed-type inhibitor, retarding both anodic metal dissolution and cathodic hydrogen evolution reactions.

• **Synergistic Additive Blend**
Contains phosphonates, amines, and dispersants that act synergistically to boost corrosion inhibition efficiency.

• **Thermal Stability**
Stable up to 120 degree Celcius, ensuring effectiveness in deep well injection systems or elevated temperature surface pipelines.

• **Scale Control Assistance**
Helps control deposition of iron sulfide, iron carbonate, and calcium salts due to its dispersing and chelating agents.

Technical Properties

Parameter	Value
Appearance	Clear amber liquid
pH (neat)	5.0 – 7.5
Specific Gravity @ 25°C	1.05 – 1.15
Solubility	Fully water soluble
Freeze Point	< -10°C
Flash Point	> 65°C

Applications

1. Oilfield water injection systems
2. Water flood secondary recovery systems
3. Pipelines and injection wells
4. Onshore and offshore water handling equipment

• **Compatible with Biocides & Oxygen Scavengers**
No adverse reactions when dosed alongside glutaraldehyde, THPS biocides, or sodium bisulfite scavengers.

• **Non-Emulsifying Nature**
Does not promote emulsion formation with hydrocarbons; ideal for systems with water-oil interfaces.

• **No Interference with Analytical Tests**
Does not interfere with routine produced water or corrosion monitoring analyses like LPR, ER probes, or coupons.

• **Low Foaming Tendency**
Minimizes operational issues in pumping systems or separators.

• **High Film Persistency**
Retains strong adherence to metal surfaces even after water shutdowns or low-flow conditions.

• **Disperses Iron Oxides & Sulfides**
Helps clean existing deposits on pipe walls and prevents re-precipitation by sequestration.

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