FCA1200 Corrosion and Scale Inhibitor

FCA1200 is a high-performance composite water treatment formulation applicated specifically for complex circulating cooling water systems in the chemical industry, strictly compliant with《HG/T 2430-2009》Category II standards. Through the integrated synergy of organophosphonate chelation, corrosion-inhibiting film formation, and multi-copolymer dispersion technologies, it establishes a dynamic protective system in high-load water environments containing trace process contaminants (e.g., ammonia, organics), simultaneously mitigating scaling risks and multi-metal corrosion. Successfully deployed across fine chemicals, coal chemical, and petrochemical sectors for critical heat exchange systems, FCA1200 significantly enhances operational reliability, reduces unplanned downtime, and supports enterprises in achieving efficient water utilization and green production goals.

Product Features

- Industry-Specific Formulation: Optimized to withstand common chemical plant water contaminants with strong shock-load resistance and operational stability.
- Dynamic Dual Protection: Scale and corrosion components work synergistically to form an adaptive protective layer on heat transfer surfaces, resilient to water quality fluctuations.
- Multi-Material Compatibility: Safely protects heterogeneous metal systems (carbon steel, copper alloys, stainless steel, aluminum) while preventing galvanic corrosion.
- Smart Chemical Management: Fully compatible with mainstream oxidizing/non-oxidizing biocides without antagonism; simplifies dosing protocols and enables precise control.
- Eco-Compliant Application: Low-toxicity formula (OECD-tested); solid content ≥ 25%; precise dosing minimizes environmental impact.
- Field-Ready Design: Liquid formulation integrates seamlessly with automated dosing systems for efficient on-site management.

Physicochemical Properties

The following represent typical properties of FCA1200 for reference only and are not guaranteed supply specifications. Refer to official technical documentation for certified data.

Item	Index
Appearance	Light yellow transparent liquid
pH (1% aqueous solution)	≤4.5
Density (20°C) (g/cm³)	1.10–1.18

Solid Content (%)	≥25.0
Total Phosphates (as PO_4^{3-}) (%)	≤6.0
Phosphite (as PO_3^{3-}) (%)	≤1.0

*For specialized applications or customized solutions, please contact FFM Inc. directly.

Dosage Instructions

- Application Scope: Designed for high-load circulating cooling water systems in the chemical industry (including scenarios with trace process contaminants); also suitable for power, metallurgy, and refining sectors.
- Dosing Method: Continuous injection via metering pump at return header; recommended dosage: 50–80 mg/L (based on system water volume). Adjust according to water analysis (Ca^{2+}, HCO_3^-, Cl^-) and corrosion monitoring. Maintain system pH within 7.0–9.2.

Packing and Storage

25 kg plastic drums; custom packaging available. Store in a cool, dry, well-ventilated area away from direct sunlight and high temperatures.

Shelf Life

12 months.

Safety and Protection

Weakly acidic liquid. Wear protective gloves, goggles, and workwear during operation. Avoid skin/eye contact. In case of contact, rinse immediately with ample water for ≥15 minutes; seek medical attention if irritation persists.