

## FCA1400 Corrosion and Scale Inhibitor

FCA1400 is a circulating cooling water treatment formulation produced in strict compliance with 《DL/T 806-2013》 Category A low-phosphorus standards, specifically designed for high-parameter operational environments in the power industry. Centered on eco-friendly low-phosphorus technology, it delivers reliable protection for critical equipment such as condensers and heat exchangers while significantly reducing phosphorus discharge load. This solution empowers thermal and nuclear power plants to achieve synergistic goals of water stability, equipment safety, and green operations — providing robust technical support for sustainable energy system development.

### Product Features

- ❖ Precision Low-Phosphorus Control: Total phosphorus maintained at 2.0–4.0% (as  $PO_4^{3-}$ ), strictly adhering to Category A limits to mitigate eutrophication risks in discharge water.
- ❖ High-Concentration Efficiency: Solid content  $\geq 32.0\%$ ; delivers equivalent protection at lower dosage, reducing storage, transportation, and operational costs.
- ❖ Power-Industry Optimized Performance: Formulated for high-heat-load and high-cycle conditions; exceptional resilience to water quality fluctuations ensures uninterrupted unit operation.
- ❖ Comprehensive Metal Protection: Azole components provide targeted defense for copper alloys while inhibiting corrosion on carbon steel, stainless steel, and aluminum; eliminates galvanic corrosion risks.
- ❖ Seamless Chemical Compatibility: Compatible with oxidizing/non-oxidizing biocides without precipitation or antagonism, streamlining water treatment management.
- ❖ Smart & Safe Application: Liquid formulation integrates effortlessly with automated dosing systems; low-toxicity profile aligns with power industry HSE standards.

### Physicochemical Properties

The following represent typical properties of FCA1400 for reference only and are not guaranteed supply specifications.

Refer to official technical documentation for certified data.

Item	Index
Appearance	Light yellow to reddish-brown transparent liquid
pH (1% aqueous solution)	3.0±1.5
Density (20°C) (g/cm <sup>3</sup> )	> 1.15
Solid Content (%)	$\geq 32.0$
Total Phosphates (as $PO_4^{3-}$ ) (%)	2.0–4.0



Orthophosphate (as $\text{PO}_4^{3-}$ ) (%)	$\leq 0.5$
Phosphite (as $\text{PO}_4^{3-}$ ) (%)	$\leq 1.0$

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

## Dosage Instructions

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- ❖ Application Scope: Designed for high-hardness, high-alkalinity, high-pH circulating cooling water systems in power plants (e.g., thermal/nuclear condensers, air-cooled systems); also suitable for metallurgy, refining, and chemical 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 ( $\text{Ca}^{2+}$ ,  $\text{HCO}_3^-$ ,  $\text{Cl}^-$ , turbidity) and corrosion monitoring. Maintain system pH within 7.0–9.2.

## Packing and Storage

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

## Shelf Life

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12 months.

## Safety and Protection

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