

Water treatment

Control water chemistry to protect assets and support consistent downstream performance



Water treatment is a cross-cutting function in mining, maintaining stable water conditions across process, recycle, and discharge circuits. Effective chemistry control protects equipment, supports reliable mineral processing, and enables water reuse under increasingly variable conditions.

Performance risk is concentrated here, as instability—such as scaling, dissolved metals, microbial growth, or foam—can propagate downstream, disrupting flotation, thickening, dewatering, and tailings performance.

Function led control of water chemistry

Water treatment chemistry is applied to control how dissolved species, suspended solids, and biological activity behave within mining water systems.

Scale inhibition

Chemistry helps prevent the formation and deposition of carbonate, sulfate, and silica scales that can foul pipelines, heat exchangers, and process equipment.

Metal ion control and removal

Chelation and precipitation chemistry supports control and removal of dissolved metals, enabling water reuse or compliant discharge while protecting assets.

Microbial growth prevention

Biocidal chemistry limits biofilm formation and microbiologically influenced corrosion, supporting system reliability and asset integrity.

Foam prevention and control

Defoaming and antifoaming chemistry destabilizes or prevents foam that can interfere with pumping, level control, tailings water clarification, and downstream separation.

These functions position water treatment chemistry as a system stability enabler, not a standalone treatment step.

Operational outcomes

- Reduced scaling and fouling in water circuits
- Improved control of dissolved metals and contaminants
- More stable process performance
- Greater reliability in water reuse and discharge strategies

How this works in practice

Targeted water chemistry control stabilizes operations, protects assets, and ensures consistent downstream performance.

The case example on page 2 shows how results are delivered in real conditions. Evaluate your water treatment systems and start a discussion at nouryon.com/mining/water-treatment

Core brands:

- Versaflex® and Aquatreat® scale inhibitors
- Dissolvine® scale removers
- Aquamet® precipitants
- Ethylan® foam control agents
- Triameen® biocide

Case Example: Scale control for stable water system performance

Challenge

Scale buildup reduces heat transfer and causes fouling in high-stress water systems.

Solution

Polymer inhibitors prevent and disperse scale formation.

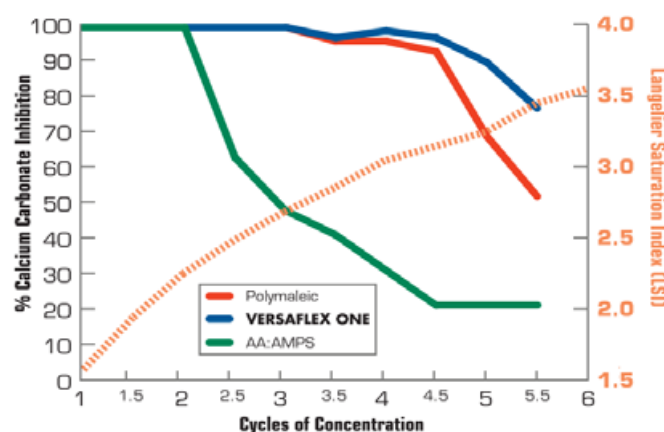
Proven performance

- Effective inhibition under high-temperature conditions
- Reduced deposition vs. standard chemistries

Impact

- Maintained heat transfer in cooling systems
- Reduced fouling and downtime
- Stable operation under variable water chemistry

Control scale to protect performance and reliability.



Calcium Carbonate Inhibition
High Stress/LSI conditions

Review your water treatment solutions – request technical guidance at nouryon.com/mining/water-treatment

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