

Ferrate VI

ADVANCED WATER TREATMENT OXIDIZER

On-Site Generation of Ferrate VI.

Cleaner Water.
Cleaner Future.

Ferrate VI (FeO_4^{2-}) is a powerful, eco-friendly oxidant that effectively removes hydrogen sulfide (H_2S) from wastewater by oxidizing it to sulfate. It works across all pH ranges, acts as a coagulant, and kills sulfide-producing bacteria—making it a comprehensive odor and corrosion control solution.



FERRATE(VI)
 FeO_4^{2-}
IRON(VI)
OXYANION

The Ferrate VI® Process

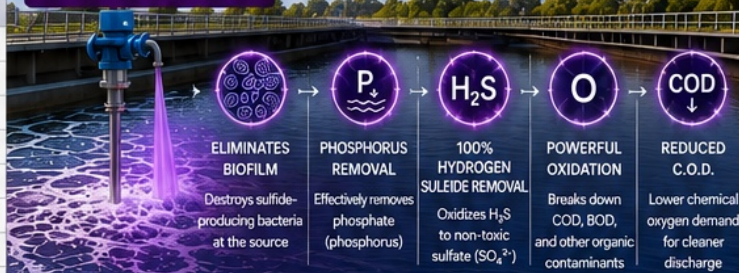
- ✓ Rapid sulfide removal
- ✓ Works across all pH ranges
- ✓ Dual function: oxidation + coagulation
- ✓ Produces non-toxic iron (Fe^{3+}) solids that act as a natural coagulant



REDOX POWER COMPARISON (HIGHER IS BETTER)

OXIDANT	REDOX POTENTIAL (VOLTS)
Ferrate VI (FeO_4^{2-})	2.20
Ozone	2.08
Hydrogen Peroxide	1.78
Permanganate	1.68
Hypochlorite	1.48
Perchlorate	1.39
Chlorine	1.36
Dissolved Oxygen	1.23
Chlorine Dioxide	0.95

FERRATE VI DISPENSING



MULTI-FUNCTIONAL TREATMENT. SUPERIOR RESULTS.



Multi-Functional Treatment

Acts simultaneously as a strong disinfectant, oxidant, and coagulant, reducing process steps and improving efficiency.



Superior Disinfection

Effectively kills bacteria, viruses, and antibiotic-resistant E. coli, often outperforming chlorine at lower doses.



Removal of Contaminants of Emerging Concern (CECs)

Highly effective at breaking down micropollutants, such as pharmaceuticals, endocrine disruptors, and personal care products.



Heavy Metal Removal

Capable of oxidizing and precipitating toxic heavy metals like cadmium (Cd) and lead.



Green Byproduct

Reduces to ferric hydroxide ($\text{Fe}(\text{OH})_3$), a non-toxic sludge that acts as a flocculant, preventing the formation of harmful or carcinogenic byproducts (DBPs) common with chlorine.



Nutrient & Odor Control

Effectively removes phosphate (phosphorus) and reduces odor-causing compounds.



Versatile Application

Suitable for both municipal wastewater reclamation and decentralized, on-site systems for remote or industrial locations.

On-site generation eliminates bulk chemical deliveries and improves safety.



STRONGEST OXIDIZER

Higher oxidation potential than ozone or chlorine



DISINFECTS

Powerful disinfectant for superior pathogen control



COAGULATES SLUDGE

Improves settling and reduces sludge volume



ELIMINATES HYDROGEN SULFIDE

Dramatically reduces H_2S and related odors



ODOR & CORROSION CONTROL

Protects infrastructure and extends asset life



GREEN CHEMISTRY

Environmentally friendly with non-toxic byproducts



SafeGuard™ H_2O
by ams

A Water Quality Company

ENGINEERED FOR
WASTEWATER TREATMENT PLANTS,
LIFT STATIONS, AND SEWER SYSTEMS



RELIABLE
PERFORMANCE



LOWER
OPERATING COSTS



IMPROVED
COMPLIANCE



SUSTAINABLE
SOLUTION

OCPE

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SafeGuard™ H2O

by

ams

Ferrate VI

ADVANCED WATER TREATMENT OXIDIZER

THE STRONGEST OXIDIZER.

COMPLETELY ELIMINATES HYDROGEN SULFIDE.

COMPACT & SAFE SOLUTION
On-site generation of Ferrate VI requires minimal space and eliminates hazardous storage.

THE STRONGEST OXIDIZER.
Completely eliminates hydrogen sulfide for cleaner water and a cleaner future.

GREEN CHEMISTRY
Environmentally friendly with non-toxic byproducts.

DISINFECTS
Powerful disinfectant for superior pathogen control.

COAGULATES SLUDGE
Improves settling and reduces sludge volume.

ODOR & CORROSION CONTROL
Protects infrastructure and extends asset life.

FERRATE VI
CLEANER WATER. CLEANER FUTURE.

Brought to you by

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ON-SITE GENERATION WINS.
Compact. Safe. Smarter.

1 ON-SITE GENERATION SYSTEM

- ✓ Smaller Footprint
- ✓ Less Hazards
- ✓ Lower Costs
- ✓ On-Demand Generation
- ✓ Greater Operational Control

VS

2 TRADITIONAL REDOX CHEMICAL SYSTEMS

- ✗ Large Footprint
- ✗ Higher Hazard Exposure
- ✗ Bulk Chemical Deliveries
- ✗ Higher Costs
- ✗ More Handling
- ✗ Complex Infrastructure

HIGHER COSTS
Bulk chemical purchase, storage & handling

SAFETY RISKS
Hazardous chemicals. Exposure concerns.

LARGER FOOTPRINT
Requires more space and infrastructure.

RELIABLE PERFORMANCE

LOWER OPERATING COSTS

IMPROVED COMPLIANCE

SUSTAINABLE SOLUTION

A Water Quality Company

FERRATE(VI)
 FeO_4^{2-}
IRON(VI)
OXYANION



Ferrate VI

ADVANCED WATER TREATMENT OXIDIZER

STRONGER OXIDATION. BETTER RESULTS.

POWERFUL
pH
INDEPENDENT
PERFORMANCE



STRONGEST OXIDIZER

Higher oxidation potential than ozone or chlorine in acidic conditions



DISINFECTS

Powerful disinfectant for superior pathogen control



COAGULATES SLUDGE

Improves settling and reduces sludge volume



ELIMINATES HYDROGEN SULFIDE

Dramatically reduces H_2S and related odors



POWERFUL ODOR & CORROSION CONTROL

Protects infrastructure and extends asset life



GREEN CHEMISTRY

Environmentally friendly. Breaks down into harmless byproducts



ONE CHEMICAL. MULTIPLE BENEFITS.



TREAT, PROTECT, PERFORM.



SAFER CHEMISTRY. CLEANER FUTURE.

ENGINEERED FOR

WATER & WASTEWATER TREATMENT PLANTS, LIFT STATIONS, AND SEWER SYSTEMS



TREATS CONTAMINANTS



CONTROLS ODORS



PREVENTS CORROSION



ENHANCES CLARITY



PROTECTS INFRASTRUCTURE

PACKAGING:

- ✓ On-Site generation eliminates bulk chemical deliveries.
- ✓ Streamlines chemical inventories absorbing replaces hazardous, corrosive chemicals.
- ✓ Total replacement for iron salts/hydrogen peroxide Redox chemistries.

ON-SITE GENERATION. SMARTER. SAFER. MORE SUSTAINABLE.

Ferrate(VI) is the next generation in advanced oxidation, delivering unmatched performance for today's water and wastewater challenges.

OCPE
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