

# BIOXIDE® AE Solution: Alkaline Enhanced Odor and Corrosion Control

BIOXIDE® AE solution is a patented product which uses alkaline enhanced BIOXIDE® solution, to naturally remove dissolved sulfide from the system, treating the root of the problem, not just the symptom.

Unlike pH shift only technologies which temporarily capture sulfide and other reduced sulfur compounds in wastewater, BIOXIDE® AE solution removes the hydrogen sulfide. pH shift only technologies ultimately release, or "shift" these odorous compounds to a new location in the system; typically at a point where the pH level drops due to infiltration or additional flow. BIOXIDE® AE solution, along with a slight increase in alkalinity cost effectively removes the hydrogen sulfide and prevents toxic and corrosive levels in downstream piping and structures.

BIOXIDE® AE Solution Comparison		
Features	BIOXIDE® AE	pH Shift Technologies
H <sub>2</sub> S Reduction	Prevents & Removes	Temporary capture only
Dissolved sulfide removal	Yes	No
Reduction of other sulfide compounds	Yes	Temporary capture only
pH capability	9.0 if needed	8.3 max

Use of BIOXIDE® AE solution has proven to be more cost-effective in many types of wastewater applications with widely varying flows including high levels of industrial discharge.

## Typical Applications

- Gravity Lines
- Force Mains
- Wetwells
- Ponds and Lagoons
- Solids Processing

Proper application of BIOXIDE® AE solution has shown that it cost effectively provides for a beneficial environment for the bacteria which oxidize hydrogen sulfide and other reduced sulfur compounds as part of their metabolic process.

Unlike nitrate products for odor and corrosion control which typically remove hydrogen sulfide in 1-1/2 to 2 hours, BIOXIDE® AE solution has shown to remove atmospheric and dissolved sulfides in under 15 minutes. It also reduces the nitrate demand 20- 50%, in higher retention time processes. This increased reaction rate and removal efficiency is accomplished by increasing the alkalinity in the wastewater system and creating a more efficient bacteria environment.

## Typical Feed Requirements

Treatment is typically dosed into the collection system upstream of the problem facility or sewer line. The process has been documented to reduce hydrogen sulfide to <0.1 mg/L in numerous wastewater collection force mains and gravity/interceptors. Complete sulfide removal and prevention is enhanced with the addition of BIOXIDE® AE solution in applications with very short or extended retention times.

BIOXIDE® AE Solution Formulations	
BIOXIDE® AE 35	35% Single Blend - HMIS Rating of 3-0-1-OX
BIOXIDE® A+	Part of a two tank solution - HMIS Rating of 3-0-1
BIOXIDE® AE 45	45% Single Blend - HMIS Rating of 1-0-0

*Typical properties are listed for information only, and are not to be considered as specification requirements. These items are not analyzed on a routine basis.*



*Siemens Water Technologies North America Service Network*

Siemens Water Technologies offers a variety of solutions to odor, corrosion, and safety problems with both liquid and vapor phase technologies. Additionally, we also offer a range of support services to ensure operational efficiency and cost effectiveness.

A service program is an integral part of a Siemens odor control program and can be provided by the service branches shown above. For an odor control program to meet objectives, it is imperative that the inventory is well monitored, storage and feed systems function properly, pumps are calibrated periodically, dosages are adjusted regularly, and performance is measured and reported. The Siemens team can provide the manpower and technologies to efficiently manage your odor control program and report results with high integrity.

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