

Technical Data Sheet

CitcoWater.com



CHEMICAL
SOLUTIONS

ODO-SOL - Increasing H₂S Solubility, Decreasing H₂S Odor & Corrosion

Understanding Hydrogen Sulfide

Hydrogen sulfide presents many issues in wastewater treatment today. The issue, however, is not in the wastewater, it's in the air. A serious problem with hydrogen sulfide is corrosion. No one wants corrosion issues affecting community infrastructure. When monitoring corrosion in the wastewater collection system, it's understood that it exists above the water line and never below it, even though hydrogen sulfide exists in both air and water. This can be seen in wet wells, headworks, and on the pipe walls of force mains or in gravity sewer systems.

Corrosion occurs when hydrogen sulfide becomes airborne. Thiobacillus bacteria will consume the hydrogen sulfide and release it as sulfuric acid. In a wet well or headworks, the acid condensate will run down the walls and eat away at the concrete. In a collection system pipe, the sulfuric acid will concentrate as droplets at the crown of the pipe. When replacing a corroded pipe, one will always notice the corrosion is greatest at the crown of the pipe.



Specifications

- Specific gravity: 1.2781
- pH: 12 - 14
- Freezing point: -26
- Bulk density: 10.659354 (lb/gal)



Applications

- Lift Stations
- Industrial pretreatment
- Manholes & Headworks
- Sludge Holding Tanks



Availability

ODO-SOL is available in 5-gallon pails, 55-gallon drums, 330-gallon totes, and bulk quantities.

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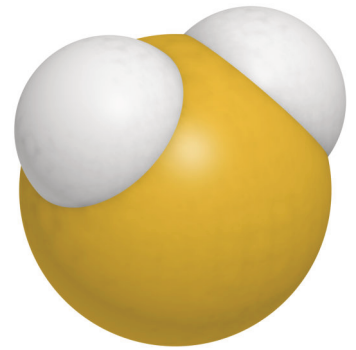
Understanding Hydrogen Sulfide

The hydrogen sulfide issues can be difficult to treat, especially when the retention time of the wastewater in the collection system is days long instead of hours. CITCO Water recognized that with the expansion of the collection system, these issues were increasing as well. This led to the development of ODO-SOL.

The solution is in the name. ODO-SOL keeps hydrogen sulfide ODO_r in SOLution. As long as it remains in solution, the odor will not be emitted, sulfuric acid will not be produced, and corrosion will not occur.

The solubility of hydrogen sulfide varies based on pH and alkalinity. As the pH changes, the ratio of hydrogen sulfide in solution and air changes. ODO-SOL is used to maintain a pH of 8.8 to 9.2 based on the wastewater lab test data of contaminates. At this point, hydrogen sulfide will be 100% soluble and remain in solution, creating a collection system or treatment area that is free of hydrogen sulfide odor or corrosion. CITCO Water's Systems Personnel utilized technology to design a chemical feed system that will monitor wastewater flow, pH of the raw water, and dose the appropriate amount of ODO-SOL to maintain the optimal pH for maximizing hydrogen sulfide solubility.

With every change in wastewater there will be an effect. The one effect a WWTP can see from feeding ODO-SOL in the collection system is an increased alkalinity at their plant. Increased alkalinity is critical and a benefit in the nitrification process of wastewater.



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ODO-SOL

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