

GO₂™ for WASTE WATER TREATMENT

GO₂ is effective as both a disinfectant and an oxidant in wastewater treatment. GO₂ has several distinct chemical advantages compared to the traditional use of chlorine in wastewater treatment. GO₂ does not significantly hydrolyze in water, thus it retains biocidal activity over a broad pH range. GO₂ is non-reactive with ammonia and most nitrogen-containing compounds, and thus is effective at lower dose levels than chlorine. It destroys phenols, simple cyanides and sulfides by oxidation. For odor control, GO₂ will oxidize sulfides without the formation of colloidal sulfur. It is also used to oxidize iron and manganese compounds.

DOSAGE REQUIREMENTS

The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a GO₂ residual concentration of up to 5 ppm is sufficient to provide adequate disinfection.

For sulfide odor control, between pH 5-9, a minimum of 5.2 ppm of GO₂ should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8 a dosage of 1.5 ppm GO₂ will oxidize 1ppm phenol; at pH greater than 10, a dosage of 3.3 ppm GO₂ will oxidize 1 ppm phenol.

METHOD OF DOSING

By adding the two components of GO₂ to an appropriate volume of tap water GO₂ 4,000 ppm chlorine dioxide is produced. GO₂ should be applied to the processing system at a point, and in a manner which permits adequate mixing and uniform distribution. The feed point should be well below the water level to prevent volatilization of GO₂. Avoid co-incident feeding of ClO₂ with lime or powdered activated carbon.

GO₂ ANALYSIS

Residual GO₂ chlorine dioxide concentrations must be determined by substantiated methods which are specific for chlorine dioxide. Two suitable methods are published in Standard Methods for the Examination of Water and Wastewater:

4500- ClO ₂ D	DPD-Glycine	Method
4500- ClO ₂ E	Amperometric	Method II

PACKAGING SIZES

GO₂ is available in packages of 100L, 200L, 500L and 1,000L of 0.4% ClO₂ solution. If higher volumes are required, bulk containers can also be arranged upon request.



GO₂™ APPLICATION BRIEF



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