**GO₂™ for WASTEWATER 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- ClO₂ D  DPD-Glycine  Method
- 4500- ClO₂ 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.