

# THIOGUARD® TST

PREMIER TECHNICAL RESOURCES — TECHNICAL GRADE TREATMENT SYSTEMS FOR ODOR, CORROSION, FOG, BIOLOGICAL, AND BIOSOLIDS PROCESSING

## DID YOU KNOW?

- **THIOGUARD** is one of the few “complete” treatment chemistries available for the wastewater treatment market.
- $Mg^{+2}$  divalent cations aid in settling and dewatering, improving effluent quality for BOD and TSS, and decreasing biosolids handling, dewatering and disposal costs.
- $OH^{-}$  anions provide alkalinity and neutralization for acids produced during biological processes, and optimal pH range and stability.

**THIOGUARD DELIVERS ALL THAT, IN ADDITION TO ODOR AND CORROSION CONTROL!**



THIOGUARD® TST is a non-hazardous application with no required reportable quantities (RQ = None)

## WHAT HAPPENS TO THIOGUARD IN MY SYSTEM?

**Q:** Where does the slurry of suspended municipal grade magnesium hydroxide, or milk of magnesia, go when it is added to a biological wastewater stream?

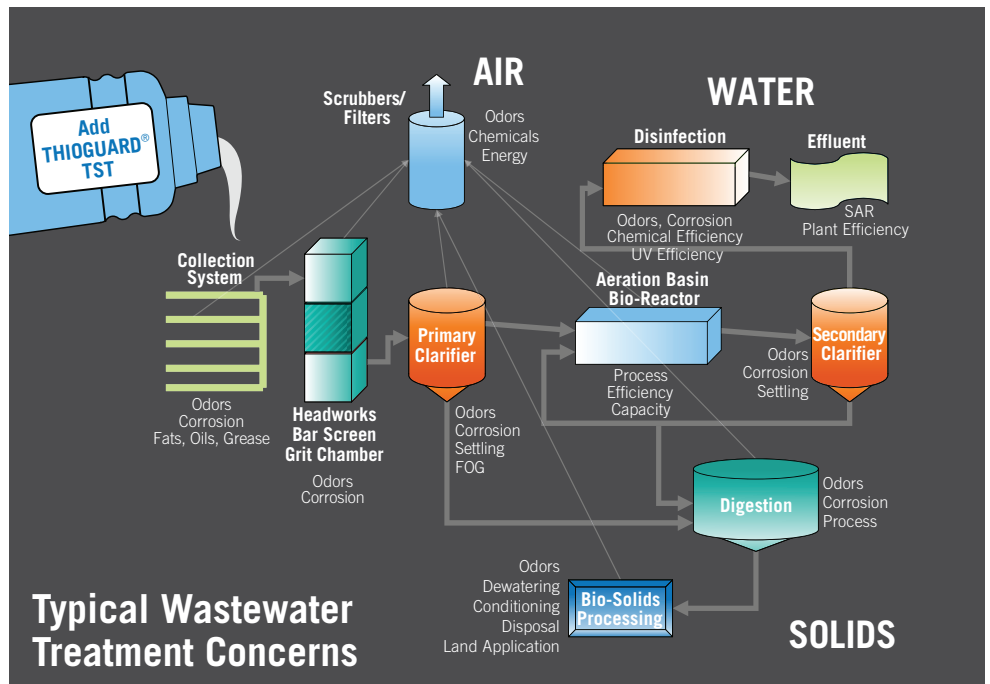
**A:** In short, approximately three quarters of what's added in each gallon of municipal grade magnesium hydroxide becomes water. The major balance becomes soluble salts, with minor organic and inorganic compounds going to biosolids and effluent, the fractions and compositions of which are predicated by the treatment biology and operating conditions.

**Some  $Mg^{+2}$  ends up in the biosolids:**

- 1.) **Intercellular**—From Divalent Cation Bridging.
- 2.) **Intracellular**—Biological uptake, enzymatic catalysis, protein synthesis and structure, and energy regulation, production and transport—chiefly ATP.

Some  $Mg^{+2}$  passes through with the wastewater effluent as soluble magnesium salts ( $Cl^{-}$ ,  $SO_4^{-}$ ,  $HCO_3^{-}$ , etc.). A large fraction of the  $OH^{-}$  neutralizes  $H^{+}$  and ends up as water. A lesser, but not insignificant fraction of  $OH^{-}$  neutralizes  $CO_2$  and ends up as bicarbonate alkalinity.

**THIOGUARD, as a treatment chemistry for odor and corrosion control, supplies cations and anions that are BOTH beneficial to wastewater treatment processes.**



Premier Magnesia, LLC is a global market leader in magnesia-based products and solutions.

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