THIOGUARD® TST

PREMIER CHEMICALS, LLC

Premier Technical Resources — Magnesia Specialty Chemicals

Odor, Corrosion, Fog, Biological, and Biosolids Treatment

A whole new twist on pH and Alkalinity

Did you know?

- It only takes 0.4 mg/L of caustic soda to raise a water sample to pH 9 and 4.0 mg/L to reach pH 10.
- 0.4 and 4.0 mg/L of Lime raises pH to 9.06 and 10.06 respectively.
- It takes 100+ mg/L of **THIOGUARD®** to raise a water sample to pH 8.8.
- This same 100 mg/L of **THIOGUARD®** has the same neutralizing power as 138 mg/L of caustic soda and 135 mg/L of lime and would be the equivalent of, though significantly more reactive than, adding 172 mg/ L calcium carbonate alkalinity on a $CaCO_3$ basis, assuming 100% bicarbonate conversion…

NOW THAT'S POWER!

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

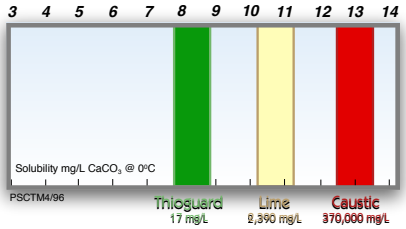
Find us online at:
www.THIOGUARD.com
or contact your local Premier Chemicals Representative

Most wastewater treatment plant operators understand that their wastewater treatment plants function best at some ideal pH…and that a minimum amount of alkalinity is required to keep micro-organisms happy. But too often, the values of pH and alkalinity are incorrectly used interchangeably, and a thorough understanding of each parameter's true relationship to biological stability and optimal performance gets lost in the translation.

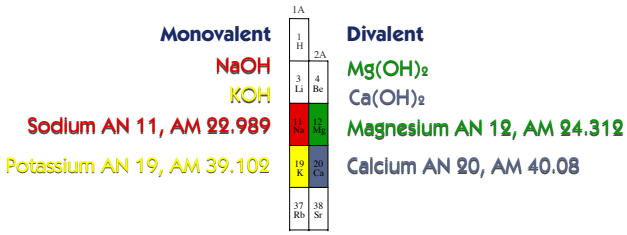
Most often this error in terminology stems from the use of the most common alkaline pH modifiers and alkalinity supplements, caustic soda and lime, where their use may successfully meet pH demands, but fall way short in supplying adequate alkalinity requirements without adversely elevating pH beyond biologically healthy limits. And often times, maintaining pH stability and uniformity across entire treatment basins remains a virtual impossibility.

Enter magnesium hydroxide, more commonly referred to as milk of magnesia, and in the municipal arena is commonly found under the tradename, **THIOGUARD®** TST.

Buffering ranges for Caustic, Lime, and THIOGUARD® - Magnesium Hydroxide

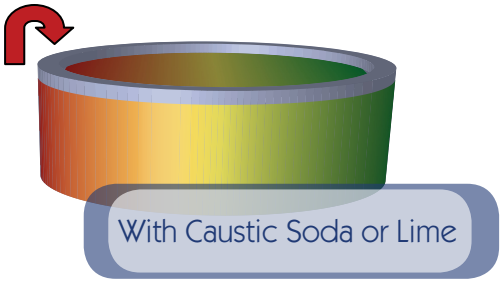


Commercial Sources of Alkalinity (OH^-)
Na, Ca, Mg and K



Compared to caustic soda or lime, **THIOGUARD®** is capable of supplying significantly more alkalinity in a bio-available form to a microbial wastewater system without adversely affecting pH. This creates a more suitable environment for bioremediation of BOD and nutrients like nitrogen and phosphorus.

Moreover, because magnesium supplies a light-weight, divalent cation, unlike the monovalent sodium in caustic, and heavier calcium in lime, **THIOGUARD®** helps to generate a denser, more easily dewatered sludge, with higher % cake solids.



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