

THIOGUARD® TST

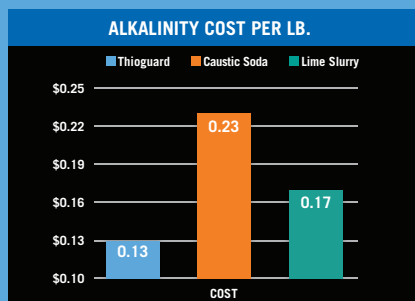
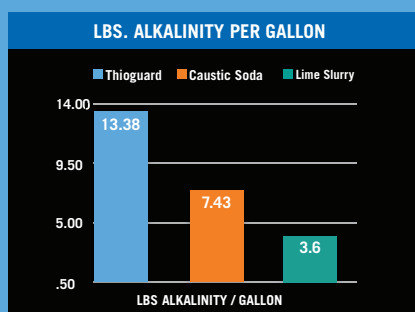
A DIVISION OF
PREMIER
MAGNESIA, LLC

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

DID YOU KNOW?

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 CaCO₃ basis, assuming 100% bicarbonate conversion...

NOW THAT'S POWER!



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

A WHOLE NEW TWIST ON PH AND ALKALINITY

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 microorganisms 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. Their use may successfully meet pH demands, but they fall way short in supplying adequate alkalinity requirements without adversely elevating pH beyond biologically healthy limits. Often maintaining pH stability and uniformity across entire treatment basins remains a virtual impossibility.

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

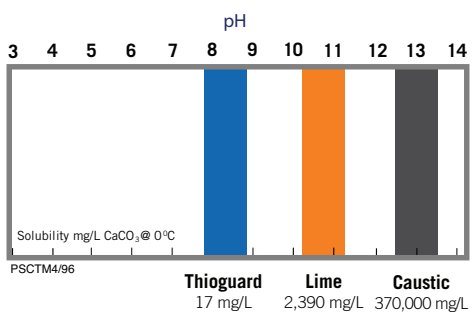
Compared to caustic soda or lime, **THIOGUARD®** is capable of supplying significantly more alkalinity in a bio-available form to a microbial wastewater system without adversely affecting pH. This creates a more suitable environment for bioremediation of BOD and nutrients like nitrogen and phosphorus.

Moreover, because municipal grade 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.

Commercial Sources of Alkalinity (OH⁻): Na, Ca, Mg and K

MONOVALENT	1A	2A	DIVALENT
NaOH	1 H		Mg(OH) ₂
KOH	3 Li	4 Be	Ca(OH) ₂
Sodium AN 11, AM 22.989	11 Na	12 Mg	Magnesium AN 12, AM 24.312
Potassium AN 19, AM 39.102	19 K	20 Ca	Calcium AN 20, AM 40.08
	37 Rb	38 Sr	

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



THIOGUARD.COM
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OWNED, MINED AND PRODUCED IN THE USA

ISO 9002:1994

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