HI-MAG pH PRODUCT DATA SHEET

PRODUCT DESCRIPTION

HI-MAG pH is a proprietary, concentrated aqueous suspension of magnesium hydroxide (hydrated lime of magnesia) produced from calcined, high purity, natural magnesite. This product is manufactured at strategical locations using a proprietary blend of dispersants that result in optimum storage stability and reactivity.

PRODUCT APPLICATION

HI-MAG pH provides a highly reactive source of magnesium hydroxide (Mg(OH)2) for use in chemical processing, water treatment, and wastewater treatment applications. **HI-MAG pH** offers a safe, non-hazardous means of effective acid neutralization, coagulation, H2S and heavy metals removal in wastewater and process streams.

CHEMICAL COMPOSITION

COMPONENT	Dry Mg (OH) 2Basis (% TYPICAL (%)
Magnesium Hydroxide	>95.8%
Calcium Hydroxide	> 1.6%
Ferric Oxide	> 1.09%
Manganese Oxide	> .09%
Silica	> 1.09%

PHYSICAL PROPERTIES

Median Particle Size	9 micron
<u>Density</u>	<u> 12.5 lbs/gal (1.49 kg/L)</u>
Viscosity	<u>300-800 cps</u>
Freezing Point	<u> 0°C (32°F)</u>

PACKAGING & HANDLING

Product should be protected from freezing. Agitated storage is required.

Select a feed pump that is capable of reliable delivery of a slurred material. If the product is to be fed intermittently, periodically provide flushing water in order to minimize the risk of slurry disposition within the pump head or feed lines. **HI-MAG pH** is manufactured in the Pacific Northwest and the Midwest, and is available in packaging from totes to full truckload deliveries.

2023 Helix Municipal.The information contained herein, to the best of our knowledge and belief, is accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by following these suggestions. Nothing contained herein is to be constructed as a recommendation for use in violation of any patents or applicable laws or regulations.



5050 Quarum Drive Suite 700 Dallas, TX 75254

€ 877-444-3549
∰ www.HelixLabs.com

HI-MAG pH Key benefits

Magnesium Hydroxide (Mg(OH)2) is a safe, environmentally-friendly, and cost-effective alternative to the use of Sodium Hydroxide (Caustic Soda, NaOH) for wastewater pH and alkalinity control.

Every 1.0 lb of 50% NaOH can be replaced with 0.60 lbs of 60% Mg (OH) 2 to provide the same number of moles of hydroxide (OH-). This 40% reduction in daily usage rate translates into a dramatic cost savings – for something that is "green" and safe!

COST

SAFETY-

FREEZING

50% NaOH freezes at 60°F, so in winter 25% NaOH is commonly used. 60% Mg(OH)2 freezes at 32°F, just like water, greatly minimizing freeze concerns.

Though Mg(OH)2 is much stronger for supplying OH- buffering, it is dramatically safer for operators to handle and for treating wastewater microorganisms. Mg(OH)2 dissolves only when it encounters acidity, unlike NaOH which immediately releases OH- to burn operator's skin and eyes. This is why the pH can rapidly spike to > 12 if Caustic is overfed, while the overfeed of Mg(OH)2 will safely buffer the pH up to 8 or 9. This "controlled release" trait of Mg (OH)2 is a primary driver for its acceptance as an ideal buffering agent for nitrification and anaerobic digestion processes.

SOLIDS SETTLING

Mg(OH)2 can provide improved solids settling and sludge compaction benefits that NaOH does not. When Mg(OH)2 dissolves, the Mg2+ cation can coagulate suspended solids to improve both microorganism activity and solids removal efficiency – often reducing polymer usage.

-TRIAL EQUIPMENT-

Helix supplies agitated storage tanks (from 175 to 1600 gallons) to allow real-time measurement of cost savings while confirming performance, safety, and feed reliability – allowing a clear understanding about how Mg(OH)2 will improve your overall system before deciding to make a permanent transition. Helix supplies **HI-MAG pH** in full tanker or small volume quantities using dedicated, in-house delivery specialists and equipment.

GREEN

Magnesium is the core element of chlorophyll (what makes plants green), while salinity from Sodium is detrimental, especially for land reuse applications.

Got a question? Want a quote? CALL US AND WE'LL BE HAPPY TO ASSIST! 877-444-3549

