



AMALGAM-60

Product Description

AMALGAM-60 is a proprietary, concentrated aqueous suspension of magnesium hydroxide (hydrated lime of magnesia) produced from calcined, high purity, natural magnesite. This product is manufactured in Washington state using a proprietary blend of dispersants that result in optimum storage stability and reactivity.

Product Application

AMALGAM-60 provides a highly reactive source of magnesium hydroxide ($Mg(OH)_2$) for use in chemical processing, water treatment, and wastewater treatment applications. AMALGAM-60 offers a safe, non-hazardous means of effective acid neutralization, coagulation, H_2S and heavy metals removal in wastewater and process streams.

Chemical Composition

Component	Dry $Mg(OH)_2$ Basis (%)
	Typical (%)
Magnesium Hydroxide	>95.8%
Calcium Hydroxide	<1.6%
Ferric Oxide	<1.09%
Manganese Oxide	<0.09%
Silica	<1.09%

Physical Properties

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

Packaging and Handling

Product should be protected from freezing.


Agitated storage is required.


Select a feed pump that is capable of reliable delivery of a slurried material.

If the product is to be fed intermittently, periodically provide flushing water in order to minimize the risk of slurry deposition within the pump head or feed lines.

AMALGAM-60 is manufactured in the Pacific Northwest and the Midwest, and is available in packaging from totes to full truckload deliveries.

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The information contained herein is, to the best of our knowledge and belief, 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 construed as a recommendation for use in violation of any patents or applicable laws or regulations.

AMALGAM-60 | 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.

Cost

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!

Safety

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.

Green

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

Freezing

50% $NaOH$ freezes at $60^\circ F$, so in winter 25% $NaOH$ is commonly used. 60% $Mg(OH)_2$ freezes at $32^\circ F$, just like water, greatly minimizing freeze concerns.

Solids Settling

$Mg(OH)_2$ can provide improved solids settling and sludge compaction benefits that $NaOH$ does not. When $Mg(OH)_2$ dissolves, the Mg^{2+} cation can coagulate suspended solids to improve both microorganism activity and solids removal efficiency – often reducing polymer usage.

Trial Equipment

IER 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. IER supplies AMALGAM-60 in full tanker or small volume quantities using dedicated, in-house delivery specialists and equipment.

Got a question? Want a quote?
CALL US AND WE’LL BE HAPPY TO HELP!

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