

Nedmag Magnesium Hydroxide for pH neutralization

A safer European alternative for industrial neutralization

Industrial processes often generate acidic liquid streams that require neutralization before discharge, reuse or biological treatment. Stable pH conditions are essential to protect equipment, maintain process efficiency and support regulatory compliance.

Nedmag Magnesium Hydroxide is a safe and cost-efficient alternative to traditional alkalis such as caustic soda and lime, particularly for the neutralization of acidic wastewater prior to biological treatment. Its high alkalinity, natural buffering capacity and controlled reaction profile help customers reduce operational risk while maintaining reliable pH control.

Controlled buffering. stable operation. lower risk.

Where caustic soda dissolves immediately and can rapidly increase pH to values above 12, magnesium hydroxide reacts gradually and naturally buffers around pH 9 to 10. This reduces the risk of overdosing and supports more stable operating conditions.

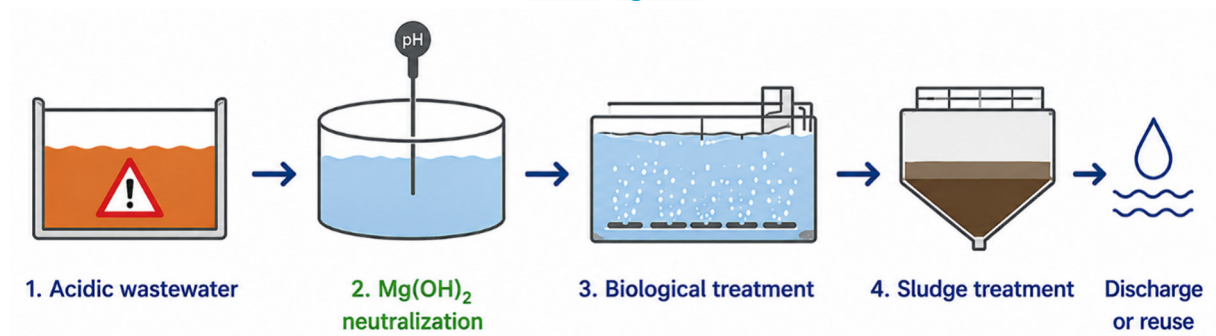
Key benefits:

- Safer to handle and less corrosive than concentrated caustic soda
- Natural buffering effect at pH 9–10
- Lower risk of overdosing
- Approximately 30% lower theoretical dosage than 50% caustic soda*
- Approximately 50% lower theoretical dosage lower dosage than 34% milk of lime *
- Improved process stability
- Potential additional benefits in wastewater treatment, including phosphate removal, odour control and metal precipitation

Beyond chemical consumption. lower total operating costs.

The economic value of magnesium hydroxide goes beyond chemical price and consumption alone. Its controlled buffering, safer handling, lower corrosivity and stable pH performance can contribute to lower total operating costs, particularly where neutralization is followed by biological wastewater treatment. Potential downstream benefits can further strengthen the overall process economics.

* Based on theoretical equivalent neutralization capacity by weight of delivered product, comparing 53% $Mg(OH)_2$ suspension with 50% $NaOH$ and 34% $Ca(OH)_2$ suspension



Reliable pH control in biological wastewater treatment

pH neutralization prior to aerobic or anaerobic biological treatment is particularly relevant for industries generating acidic wastewater such as food processing, potato processing, breweries, dairy and pulp and paper. The natural buffering effect of magnesium hydroxide helps maintain stable pH conditions and minimizes the risk of excessive pH increases that can disrupt biological performance.

Proven industrial performance

A cellulose film production site in the United Kingdom has used magnesium hydroxide as its standard alkali for several years, replacing caustic soda for the neutralization of acidic wastewater streams. The wastewater is neutralized before entering a series of aeration tanks, where stable pH conditions support the subsequent biological treatment process.

Results:

- Stable pH control
- Reliable biological performance
- Reduced operational risk
- Safer alternative to caustic soda
- Lower exposure to highly corrosive alkalis

Dosing and operational considerations

Magnesium hydroxide is typically dosed as a stabilized suspension directly into acidic process streams or neutralization tanks. Adequate mixing ensures efficient contact and consistent pH neutralization. The stabilized suspension is easy to handle and suitable for continuous industrial operation.

Fully compliant. Certified. Responsible.

Nedmag Magnesium Hydroxide suspension is produced from high purity magnesium sourced from the European Zechstein deposit in the Netherlands. Production operates under an ISO 9001 and ISO 14001 certified framework and the product is REACH registered, ensuring consistent product quality and reliable European supply.

Choose reliable pH neutralization performance

Choose Nedmag Magnesium Hydroxide when safe handling, stable pH control and operational reliability matter. A European solution for industrial neutralization, delivering predictable performance without unnecessary risk.