TECHNICAL DATA SHEET

Magnesium Hydroxide Technical

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Magnesium Hydroxide Technical
CAS Number: 1309-42-8
Molecular Formula: H_2MgO_2
Molecular Weight: 58.320 g/mol
Grade: Technical
Purity / Concentration: Not Available
Synonyms: Milk of Magnesia, Magnesium Hydroxide Suspension

PRODUCT OVERVIEW

Magnesium Hydroxide Technical is a high-purity white, odorless powder featuring a 96.5% assay and minimal trace impurities like iron and heavy metals. This versatile inorganic compound is widely utilized across industrial sectors for pH neutralization, flame retardancy, and material reinforcement.

Grade Significance: The Technical grade designation indicates that this product is manufactured to provide consistent industrial performance and chemical reliability for non-food or non-pharma manufacturing processes.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	96.5	92	—	Titration
Arsenic (As)	ppm	0.5	—	3	ICP-OES
Calcium (Ca)	ppm	50	—	200.0	ICP-OES
Heavy Metals (as Pb)	ppm	5	—	10	ICP-OES
Iron (Fe)	ppm	5	—	20	ICP-OES
Chloride (Cl^-)	ppm	15	—	50	Ion Chromatography
Sulfate (SO_4^{2-})	ppm	30	—	100.0	Ion Chromatography
Loss On Ignition	%	31.5	—	33	USP <733>

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White, odorless powder	**Odor**	Odorless
Form	Solid	**Boiling Point**	354°C (669.2°F)
Melting / Freezing Point	350°C (662°F)	**Specific Gravity**	2.36
Solubility	Slightly soluble in water, insoluble in alcohol	**Molecular Formula**	H_2MgO_2
Molecular Weight	58.320 g/mol	**Density (25°C)**	2.36 g/mL

APPLICATIONS

1. **Wastewater Treatment** — Acts as an effective alkaline agent to neutralize acidic wastewater streams and control pH levels efficiently.
2. **Plastics and Polymers** — Functions as a functional filler to enhance the mechanical properties and structural integrity of plastic products.
3. **Fire Safety** — Incorporated into polymer formulations to serve as an effective flame retardant by releasing water vapor upon heating.
4. **Pharmaceuticals** — Utilized as a foundational ingredient in antacid formulations to provide relief from indigestion and stomach acidity.

STORAGE & HANDLING

Magnesium Hydroxide should be stored in a cool, dry, and well-ventilated area to prevent moisture absorption, which can lead to clumping and reduced flowability. Keeping containers tightly sealed ensures the product maintains its technical specifications and chemical integrity during long-term storage.

- Store in a cool, dry place away from moisture and incompatible materials.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles when handling.
- Avoid exposure to strong acids or oxidizing agents.
- Keep containers tightly closed when not in use to prevent contamination.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 55 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 630 of 736 companies

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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