

Magnesium hydroxide: (Mg (OH) ₂)

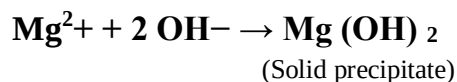
Molecular weight: 58.31 g/mol

Properties:

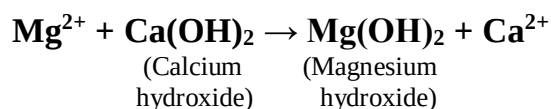
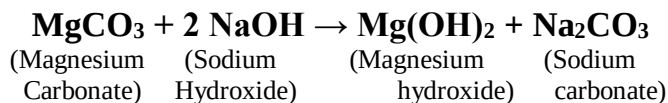
- **Appearance:** White amorphous powder
- **Odor:** Odorless
- **Taste:** Tasteless
- **Density:** 2.34 g/cm³
- **Melting point:** 350⁰C
- **Solubility:** Insoluble in water
- **Refractive index:** 1.55

Preparation:

Combining a solution of many magnesium salts with basic water induces precipitation of solid Mg (OH) ₂



On a commercial scale, Mg(OH)₂ is produced by treating seawater with lime [Ca(OH)₂]

**Laboratory Preparation:****Uses:**

- Used as weak antacid and laxative.
- Most commonly used antacids combine aluminum hydroxide and magnesium hydroxide. The combination decreases the adverse effects of diarrhea (with magnesium products) and constipation (with aluminum products).

Side effects:

- Antacids with magnesium are contraindicated in renal disease because hypomagnesaemia may result
- Those with high sugar content are contraindicated in diabetes mellitus.

Milk of Magnesia :

- ❖ Milk of Magnesia is a suspension of Magnesium Hydroxide.
- ❖ As per USP Monographs; Milk of Magnesia, Double-Strength Milk of Magnesia, and Triple-Strength Milk of Magnesia contain not less than 90.0% and not more than 115.0%

of the labeled amount of $\text{Mg}(\text{OH})_2$, the labeled amount being 80 mg, 160 mg, and 240 mg of $\text{Mg}(\text{OH})_2$ per mL

Packaging and storage: Preserve in tight containers, preferably at a temperature not exceeding 35°C . Avoid freezing.

Labeling:

- ❖ Double- or Triple-Strength Milk of Magnesia is so labeled, or may be labeled as 2× or 3× Concentrated Milk of Magnesia, respectively.
- ❖ “SHAKE WELL BEFORE USED”

Uses:

- Milk of Magnesia is used for a short time to treat occasional constipation, it is used as Laxative.
- Milk of Magnesia is also used to treat symptoms caused by too much stomach acid such as heartburn, upset stomach or indigestion