## Comparison of Regulatory Requirements for FloMag® H Magnesium Hydroxide Slurry vs. Quicklime

<table>
<thead>
<tr>
<th></th>
<th>Magnesium Hydroxide</th>
<th>Quicklime</th>
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</thead>
<tbody>
<tr>
<td><strong>Common Name</strong></td>
<td>Magnesium Hydroxide, Milk of Magnesia, &quot;Mag&quot; Slurry</td>
<td>Calcium Oxide, Quicklime, Dry Lime, Pebble Lime, Unslaked Lime</td>
</tr>
<tr>
<td><strong>Chemical Formula</strong></td>
<td>Mg(OH)₂</td>
<td>CaO</td>
</tr>
<tr>
<td><strong>GHS Signal Word</strong></td>
<td>None Required</td>
<td>Per the National Lime Association (NLA)</td>
</tr>
<tr>
<td><strong>GHS Pictogram</strong></td>
<td>None Required</td>
<td><img src="image" alt="Health Hazard*" /> <img src="image" alt="Corrosive" /> <img src="image" alt="Acute Hazard" /></td>
</tr>
<tr>
<td><strong>NFPA Rating</strong></td>
<td>NFPA Rating 0-0-0</td>
<td>NFPA Rating 3-0-1</td>
</tr>
<tr>
<td><strong>HMIS Ratings &amp; PPE</strong></td>
<td>HMIS Rating 0-0-0-A</td>
<td>HMIS Rating 3-0-1-E</td>
</tr>
<tr>
<td><strong>California Proposition 65 &amp; Carcinogenicity</strong></td>
<td>Not subject to California Proposition 65 warning label requirements.</td>
<td>&quot;Subject to California Proposition 65 warning labeling requirements due to potential presence of crystalline silica (respirable) above instrument detection levels. Crystalline silica is listed by IARC and NTP but not by OSHA. In 1997, IARC determined that “crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans” (Group 1). OSHA requires that products containing &gt;0.1% of a known carcinogen must be labeled. NTP states that “silica, crystalline (respirable)” may reasonably be anticipated to be a carcinogen (1991). Quicklime or hydrated lime itself is not listed by MSHA, OSHA, or IARC as a Group 1 carcinogen to humans.</td>
</tr>
</tbody>
</table>
| **CDC – NIOSH**                | Not Listed          | RTECS Number: EW3100000  
IDLH - Immediate Danger to Life and Health Concentration: 25 mg/m³  
NIOSH Recommended Exposure Limit: 2 mg/m³ TWA |
| **TSCA (40 CFR 710)**          | ID 8137 CAS 1309-42-8 | ID 8150 CAS 1305-78-8 |
Standard 29 CFR 1910.133 (a) (1) – IMIS Substance 0520  
OSHA PEL (TWA) – 15 mg/m³ Total Dust |
| **Canada WIMS**                | WHMIS: Not Listed   | WHMIS Class “D2A” – Materials Causing Other Toxic Effects  
Class “E” Corrosive Materials (listed due to corrosive effect on aluminum)  
Domestic Substance List: Listed |
| **USDOT, RCRA, SARA 311/312, CERCLA RQ, MSHA** | Not Listed          | Not listed except if transported by air. If transported by air then USDOT Title 49CFR Parts 104, 171-180, and 390-397 apply, including special provisions 172.102-IB8, IP3, T1, TP33. Placard Advisory – Consult 172.504 & 172.505 “Corrosive”. |
| **Stability & Reactivity**     | Stable              | Calcium oxide reacts exothermically with water to form calcium hydroxide. Calcium oxide reacts exothermically with acids to form Calcium salts, and may generate heat sufficient to ignite combustible materials in specific instances. Lime is not considered to be an explosion hazard, although reaction with acids or other incompatible materials may rupture containers. Calcium oxide reacts with aluminum and brass in the presence of moisture leading to production of flammable hydrogen gas. Violent or vigorous reaction with fluoridated, brominated, inter-halogenated, nitro-organic, or reactive phosphorus compounds; powdered metals; organic acids; or acids (unless in a controlled process). |
### Special Precautions in case of Fire

None

Keep personnel away from and upwind of fire. Use Carbon Dioxide, Dry Powder, or foam to extinguish the surrounding fire. Do not use extinguishing media containing water. Minimize generation of dust. Do not discharge into drains or the environment. Store spilled materials in sealed plastic or non-aluminum metal containers.

### Special Precautions in case Accidental Release

Prevent entry into sewers and public waters. Avoid accidental discharge into drains and waterways.

This material is expected to be toxic to aquatic life. Acute pH effect. Although this product is used to correct water acidity, an excess of more than 1 g/l may be harmful to aquatic life. pH value of >12 possible.

### Special Slurry Precautions

None

In contrast to the powder itself, the product, when diluted with water, can produce severe skin damage in humans (alkaline burns), especially if prolonged skin contact takes place. Freshly diluted quicklime is very hot, and creates a potential thermal burn hazard.

### ACGIH

Not Listed

ACGIH Threshold Limit Value: 10 mg/m³ TWA Total Dust

### GHS Hazard Statements

None Required

H315: Causes skin irritation
H319: Causes eye irritation
H335: May cause respiratory irritation

### GHS Precautionary Statements

None Required

P261: Avoid breathing dust/fume/gas/mist/vapor/spray
P264: Wash hands thoroughly after handling
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/eye protection/face protection
P302+P352: IF ON SKIN: Wash with plenty of soap and water
P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical advice/attention
P362: Take off contaminated clothing and wash before reuse
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P501: Dispose of contents/container to an approved waste plant

### GHS Risk Phrases

None Required

R37: Irritating to the respiratory system
R38: Irritating to the skin
R41: Risk of serious damage to the eyes

### GHS Safety Phrases

None Required

S25: Avoid contact with eyes
S26: In case of contact with the eyes, rinse immediately with plenty of water
S37: Wear suitable gloves
S39: Wear eye/face protection

### PPE

Safety glasses with side shields.

Respirators: EN 149 category FFP2.
Nitrile impregnated gloves having CE marks.
Tight fitting EN 166 standard goggles. No contact lenses. Individual pocket eyewash.

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Martin Marietta Magnesia Specialties, LLC
8140 Corporate Drive, Suite 220
Baltimore, Maryland 21236 USA
Phone: (800) 648-7400 or (410) 780-5500
Fax: (410) 780-5777
Email: MagChem@martinmarietta.com
www.magnesiaspecialties.com

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