Magnesium Peroxide

1. Chemical Product and Supplier Identification

Product Name
Magnesium Peroxide, 35% Min.

Synonyms
Magnesium Dioxide, Magnesium Bioxide

Manufacturer
Shaoxing Biotech Chemical Co Ltd
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Tel: +86 575 82122059

MSDS Number
JHMP-01-02

Effective Date
Mar 15, 2014

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Chemical Formula</th>
<th>CAS No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Peroxide</td>
<td>MgO₂</td>
<td>1335-26-8</td>
<td>35~40</td>
</tr>
<tr>
<td>Magnesium Hydroxide</td>
<td>Mg(OH)₂</td>
<td>1309-170-3</td>
<td>10~15</td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td>MgO</td>
<td>1309-48-4</td>
<td>45~55</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview:
NFPA : H= 0 F= 1 I= 0 S= None
HMIS : H= 0 F= 1 R= 0 PPE = Supplied by User; dependent on local conditions

General Information
- Appearance : powder
- Colour : white
- Odour : odourless

Main effects
- Irritating to eyes, respiratory system and skin.
- Weak oxidizing properties

4. First-aid Measures

Inhalation
- Remove the subject from dusty environment and let him blow his nose.
- If symptoms persist, call a physician.

Eye contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Consult with an ophthalmologist immediately in all cases.

Skin contact
- Remove and wash contaminated clothing before re-use.
Wash off with plenty of water.
If symptoms persist, call a physician.

Ingestion
If swallowed, rinse mouth with water (only if the person is conscious).
Do NOT induce vomiting.

If victim is unconscious but breathing:
Artificial respiration and/or oxygen may be necessary.

5. Fire Fighting Measure

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray

Extinguishing media which shall not be used for safety reasons
None.

Special exposure hazards in a fire
Oxygen released in thermal decomposition may support combustion

Hazardous decomposition products
Oxygen
Hydrogen peroxide

Special protective equipment for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Other information
Keep product and empty container away from heat and sources of ignition.

6. Accidental Release Measures

Personal precautions
Refer to protective measures listed in sections 7 and 8.
Keep away from incompatible products
Keep away from water.

Environmental precautions
Should not be released into the environment.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up
Do not add chemical products.
Pick up and arrange disposal without creating dust.
All receiving equipment should be clean, vented, dry, labelled and made of material that is compatible with the product.
Flush with plenty of water.
Treat recovered material as described in the section "Disposal considerations".

7. Handling and Storage

Handling
Use only in well-ventilated areas.
Clean and dry piping circuits and equipment before any operations.
Never return unused material to storage receptacle.
Containers and equipment used to handle the product should be used exclusively for that product.
Keep away from heat and sources of ignition.

Storage
- Keep in a dry place.
- Keep in a cool, well-ventilated place.
- Keep away from direct sunlight.
- Keep away from heat.
- Keep away from Incompatible products.

Packaging material
- Polyethylene
- Carton + Polyethylene
- Steel + Polyethylene

Other information
- Avoid dust formation.
- Refer to protective measures listed in sections 7 and 8.

8. Exposure Controls/Personal Protection

Exposure Limit Values
- Magnesium peroxide  TWA = 3 mg/m3

Engineering controls
- Ensure adequate ventilation.
- Refer to protective measures listed in sections 7 and 8.
- Apply technical measures to comply with the occupational exposure limits.

Personal protective equipment

Respiratory protection
- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.
- Effective dust mask.

Hand protection
- Wear suitable gloves.
- Suitable material
- PVC
- Neoprene
- Rubber gloves
- Eye protection
- Dust proof goggles, if dusty.

Skin and body protection
- Protective suit

Hygiene measures
- Use only in an area equipped with a safety shower.
- Eye wash bottle with pure water
- Handle in accordance with good industrial hygiene and safety practice for diagnostics.
9. Physical and Chemical Properties

Appearance: White or yellowish powder
Odor: None
Bulk Density: 600~800 g/L
Solubility in water: Slightly soluble
PH, 3% Suspension: Approx. 11
Boiling point/boiling range: not applicable
Flash point: not applicable
Flammability: The product is not flammable.
Explosive properties: Not explosive
Oxidizing properties: Non oxidizer
Vapour pressure: not applicable
Decomposition Temperature: Self-accelerating decomposition with oxygen release starting from 350 °C

10. Stability and Reactivity

Stability

Potential for exothermic hazard
Stable under recommended storage conditions.

Conditions to avoid

Avoid temperatures above 60°C, direct sunlight and contact with sources of heat.
Keep at temperature not exceeding: 350 °C (662 °F)

Materials to avoid

Acids, Heavy metal salts, Reducing agents, Flammable materials
Hazardous decomposition products
Oxygen, Hydrogen peroxide

11. Toxicological Information

Toxicological data

Chronic toxicity

Oral, Repeated exposure, Human experience, NOEL: 800 mg/kg, no observed effect, (Magnesium oxide)
Inhalation, Repeated exposure, rat, NOEL: 3 mg/m3, no observed effect, (Magnesium oxide)
Oral, Repeated exposure, cattle, Target Organs: gastro-intestinal system, NOEL: 1%, irritant effects, (Magnesium oxide)

Remarks

Irritant effects linked to alkaline properties of the product

12. Ecological Information

Ecotoxicity effects

Acute toxicity
Crustaceans, Daphnia magna, EC50, 48 h, 190 mg/l (Magnesium)

Chronic toxicity
Fishes, Salmo gairdneri, LC50, 28 d, 1,355 mg/l (Magnesium)
Crustaceans, Daphnia magna, EC50, Reproduction Test, 21 d, 125 mg/l (Magnesium)
Crustaceans, Daphnia magna, LOEC, Reproduction Test, 21 d, 82 mg/l (Magnesium)
Mobility
Air: not applicable
Water: low solubility and mobility
Soil/sediments: no data available

13. Disposal Considerations
Waste from residues / unused products
▶ Dilute with plenty of water.
▶ Dispose of wastes in an approved waste disposal facility.
▶ Can be landfilled, when in compliance with local regulations.
▶ In accordance with local and national regulations.

Packaging treatment
▶ Empty containers.
▶ Clean container with water.
▶ The empty and clean containers are to be reused in conformity with regulations.
▶ Can be landfilled or incinerated, when in compliance with local regulations.

14. Transport Information
▶ Sea (IMO/IMDG): not regulated
▶ Air (ICAO/IATA): not regulated
It is recommended that ERG Guide number 111 be used for all non-regulated material.

15. Regulatory Information
▶ SARA Section: Yes
▶ SARA (313) Chemicals: No
▶ EPA TSCA Inventory: Appears
▶ Canadian WHMIS Classification: C, D2B
▶ Canadian DSL: Appears
▶ EINECS Inventory: Appears

16. Other Information

Disclaimer
▶ The data in this Material Safety Data Sheet is believed to be correct. However, since conditions of use are outside our control it should not taken as a warranty of representation for which Shaoxing Biotech Chemical Co., Ltd. Assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.