FIRE RETARDANT ADDITIVES

Safety Data Sheet

MAGNIFIN® H-5; MAGNIFIN®H-7; MAGNIFIN®H-10

Japan-JIS Z 7253:2012
Occupational Safety and Health Act
Globally Harmonized System (GHS)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MAGNIFIN® H-5; MAGNIFIN®H-7; MAGNIFIN®H-10

Chemical Name Magnesium Hydroxide

Pure substance/mixture Substance

Magnesium hydroxide
CAS Number 1309-42-8
Weight-% >=99

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2. HAZARD IDENTIFICATION

Japan GHS Classification
Physical Hazards Not classified

Health Hazard Not classified

Environmental Hazards Not classified

GHS label elements
Symbols/Pictograms None

Signal Word None

Hazard statements Based on available data, the classification criteria are not met

Precautionary Statements
Prevention
Do not handle until all safety precautions have been read and understood
Employ good industrial hygiene practice
Do not breathe dust

Response
IF exposed or concerned: Get medical advice/attention
Wash with plenty of soap and water

Storage Store away from incompatible materials.
Keep in a dry place

Disposal Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Substance

Chemical Name	CAS Number	Japan	Japan GHS Classification	REACH registration number	Weight-%
Magnesium hydroxide	1309-42-8	(1)-386 ENCS; ISHL	Not classified	01-2119488756-18-0000	>=99

4. FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse

IF IN EYES: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Call a physician if irritation develops and persists

If swallowed: Rinse mouth thoroughly with water

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water spray (fog)
Foam
Dry chemical
Carbon dioxide (CO2)

Unsuitable Extinguishing Media Do not use water jetstream

Special hazards arising from the substance or mixture Avoid dust formation

Fire-fighting measures In case of fire and/or explosion do not breathe fumes
Water mist may be used to cool closed containers

Keep unauthorized personnel away

Special Protective Equipment for Firefighters Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment and Precautions for Firefighters
Avoid dust formation
Ensure adequate ventilation
Use personal protection recommended in Section 8
Avoid contact with eyes and skin. Wear suitable personal protection equipment.
Keep unauthorized personnel away

Environmental Precautions
Keep out of drains, sewers, ditches and waterways
Disposal considerations
See section 13 for more information

Methods and material for containment and cleaning up
Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust
Small Spill: Vacuum or sweep material and place in a disposal container Minimize use of water during clean-up
Recommended filter type: High efficiency particulate air filter (HEPA filter)

Other Information Not applicable

7. HANDLING AND STORAGE

Handling

Technical measures
Provide adequate ventilation as well as local exhaustion at critical locations
Ensure adequate ventilation
Use personal protection equipment
See section 8 for more information

Advice on safe handling Minimize dust generation and accumulation

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a cool, well-ventilated place

Hygiene Measures Wash hands thoroughly after handling

Storage

Packaging compatibilities Keep/store only in original container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits Provide adequate ventilation as well as local exhaustion at critical locations

Magnesium hydroxide

Japan TWA: Not established

Engineering Measures Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Respiratory Protection	In case of inadequate ventilation wear respiratory protection
Hand protection	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn
Eye Protection	Wear safety glasses with side shields (or goggles)
Skin and Body Protection	Wear suitable protective clothing. Chemical resistant apron.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice Wash thoroughly after handling Avoid contact with eyes and skin Do not breathe dust

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Physical State	Solid Powder
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	+/- 10 (10% H2O)
Melting point / Freezing point	Not applicable
Melting point / Freezing point	Decomposes at > 320 °C
Initial boiling point and boiling range	Not applicable
Flash Point:	Not applicable. Product/Substance is inorganic.
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	2.4 g/cm3, 20° C
Water Solubility	Insoluble
Solubility in other solvents	No data available
Partition coefficient	Not applicable Product/Substance is inorganic
Autoignition Temperature	Not applicable
Decomposition Temperature	> 320 °C
Kinematic viscosity	Not applicable : Solid
Dynamic viscosity	Not applicable : Solid
Oxidizing Properties	None

Other information: No data available

10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions

Possibility of hazardous reactions	None known
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	None known

11. TOXICOLOGICAL INFORMATION

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

Aspiration hazard Based on available data, the classification criteria are not met.

11.1. Information on toxicological effects

Magnesium hydroxide

Oral LD50	> 2000 mg/kg mg/kg Rat
Inhalation LC50	> 2.1 mg/L 4- hours
Chronic Effects	NOAEL (No observed adverse effect level) >1000 mg/kg bw/day
Serious eye damage/eye irritation	Rabbit : Non-irritant Dust may cause mechanical irritation to eyes
Skin Corrosion/Irritation	in vitro : Non-irritating to the skin Repeated exposure may cause skin dryness or cracking
Reproductive Toxicity	Not classified NOAEL (No observed adverse effect level) 1000 mg/kg bw/day
Specific target organ toxicity - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure	Not classified.

12. ECOLOGICAL INFORMATION

Magnesium hydroxide

96-Hour LC50	776 mg/l Fish
72-Hour EC50	> 100 mg/L Algae
48-Hour EC50	170.86 mg/l Daphnia Magna (Water Flea)

Ecotoxicity	Based on available data, the classification criteria are not met
Persistence and degradability	No data available
Bioaccumulation	No data available.

Mobility in soil No data available

Hazardous to the ozone layer No data available

13. DISPOSAL CONSIDERATIONS

Disposal Dispose of in accordance with federal, state and local regulations

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal

14. TRANSPORT INFORMATION

Mode of Transportation (Road, Water, Air, Rail)

ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATORY INFORMATION

Global Inventories

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	REACH registration number	Australia (AICS)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Magnesium hydroxide	1309-42-8	215-170-3	01-2119488756-18-0000	Y	Y	Y	(1)-386 ENCS; ISHL	KE-22716	Y	Y	Y	Y	A

Legend
X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
TSCA (Toxic Substances Control Act)
DSL (Domestic Substance List)
NDSL (Non-Domestic Substances List)
Japan - ISHL Notifiable Substances
ENCS - Japan Existing and New Chemical Substances

16. OTHER INFORMATION

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Reason for Revision

This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan)

Bibliography

NITE GHS Classified list
Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

Abbreviations and acronyms

International Agency for Research on Cancer (IARC)
International Air Transport Association (IATA)
International Maritime Dangerous Goods (IMDG)
International Uniform Chemical Information Database (IUCLID)
Workplace Hazardous Materials Information System (WHMIS) status and classification
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
DOT (Department of Transportation)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
TWA - Time-Weighted Average
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
PPE - Personal Protection Equipment
NIOSH - National Institute for Occupational Safety and Health
TDG (Transport of Dangerous Goods) Canada
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
Reportable Quantity (RQ) (RQ/% in mixture)
STEL - Short Term Exposure Limit
TLV® - Threshold Limit Value
Derived No Effect Level (DNEL)
SVHC: Substances of Very High Concern for Authorization:
Land transport (ADR/RID)
Biochemical oxygen demand (BOD)
Chemical oxygen demand (COD)
ICAO (air)
(IMDG) International Maritime Dangerous Goods
Positive Pressure Self-Contained Breathing Apparatus (SCBA)
Predicted No Effect Concentration (PNEC)
Globally Harmonized System (GHS)

Disclaimer

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End of Safety Data Sheet