[1. Chemical product and company identification]

Chemical substance name: Product name: Company name: Address:

Associated department: Telephone number: Emergency contact number: FAX number: Recommended use:

[2. Hazards identification]

- 1. GHS classification
 - a. Physical hazards
 - Substances and mixture which, in contact with water, emit flammable gases:
 - b. Health hazards

Acute toxicity (oral): Acute toxicity (dermal): Acute toxicity (gases): Acute toxicity (vapors): Acute toxicity (dusts and mists): Skin corrosion/irritation: Serious eye damage / eye irritation: Respiratory sensitization: Skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard:

c. Environmental hazards Acute aquatic hazard: Chronic aquatic hazard: Hazardous to the ozone layer:

2. Label elements

Signal words: Hazard pictogram: Hazard statement H316: H320: Magnesium stearate Daiwax IMN Dainichi Chemical Industry Co., Ltd. 7-3-4, Nakaishikiri-cho, Higashiosaka-shi, Osaka-fu, 579-8014, Japan Technical department +81-72-985-1851 +81-72-985-1851 +81-72-987-0170 Additives for resin

Not applicable

Classification not possible Classification not possible Not classified Not classified Classification not possible Category 3 Category 2B Classification not possible Classification not possible

Classification not possible Classification not possible Classification not possible

Warning Not available

Causes mild skin irritation. Causes eye irritation.

Precautionary statement	
Prevention	
P264:	Wash eyes thoroughly after handling.
Response	
P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313:	If eye irritation persists: Get medical advice/attention.
P332+P313:	If skin irritation occurs: Get medical advice/attention.
[3. Composition/Information on ingredients]	

Substance/Mixture:	Substance
Chemical substance name:	Magnesium stearate (Fatty acids, C16-C18, magnesium
CAS number:	557-04-0(91031-63-9)
ENCS number:	(2)-611
EINECS number:	209-150-3

[4. First-aid measures]

IN EACH CASES OF FOLLOWING EMERGENCIES, VICTIMS SHOULD BE TREATED BY PARTICULAR FIRST-AID MEASURES AS FOLLOW

In eyes:	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical advice.
On skin: Inhalation:	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical advice, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse. If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical advice.
Ingestion: [5. Fire-fighting measures]	If large amount is swallowed, get medical advice.
Suitable Extinguishing media:	Water spray, foam-extinguisher, powder-extinguisher and dry chemical
Inappropriate extinguishing media:	Straight stream water
Flammable properties:	Hazardous fume containing COX and NOX might be formed during combustion.
Special protective actions for fire-fighters:	Fire-fighters should wear an appropriate respiratory apparatus and protective clothes for chemical.

[6. Accidental release measures]

Personal precautions: Methods and materials for containment and cleaning up: Environmental precautions:	Use proper protective equipment as indicated in Section 8. Avoid direct contact with the spilled or leaked material. Avoid inhaling this product in the air (Powder dust). Evacuate the area if large amount of product is leaked. Ventileate the area if necessary. Rake spills with a broom and collect it in appropriate container. Store the container in a cool and dry place until it disposes. Ventilate the area where this product was released. Avoid flowing out to the rivers, household drains and other environment.
[7. Handling and storage]	
Handling: Storage:	Refer to Section 8. Wash hands carefully after handling this product. Prohibit open flames while handling this product. Use dust explosion-proof electrical equipment and light fixtures. Avoid diffusion of this product to the air. Do not eat, drink or smoke while handling this product. Store this product in well-ventilated, dry and cool place. Please make sure that the storage is not close to open flames, sparks and heat. Please make sure that the container of this product is tightly closed when store this product. Please use antistatic containers.
[8. Exposure controls/Personal protection]	
Component Exposure Limit ACGIH:	10mg/m ³ TLV-TWA (Stearates)
Engineering controls: Ventilation:	Eye washer and safety shower should be placed in storages where this product is stored and in buildings where this product is handled.
ventilation:	Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.
Personal protective equipment Hands: Eyes: Skin and Body: Respiratory:	Wear appropriate protective gloves. Wear appropriate safety glasses. Wear appropriate protective clothes. Wear air-purifying respirator with a tight-fitting facepiece and a high-efficiency particular filter.

[9. Physical and chemical properties]

Appearance: Odor: Odor threshold: pH: Melting point and freezing point: Initial boiling point and boiling range: Flash point (Open cup): Evaporation rate (Butyl acetate =1): Flammability (solids, gas): Explosive limits: Vapor pressure: Vapor density (Air =1): Specific gravity or density:

Solubility:

Partition coefficient: n-octanol/water: Decomposition temperature: Viscosity:

[10. Stability and reactivity]

Reactivity: Chemical stability: Conditions to avoid:

Incompatible materials: Hazardous decomposition product:

Possibility of hazardous reactions:

[11. Toxicological information]

Acute toxicity (Oral): Acute toxicity (Dermal): Acute toxicity (Gases): Acute toxicity (Vapors): Acute toxicity (Dusts and mists): Skin corrosion/irritation:

Serious eye damage / Eye irritation:

Respiratory sensitization: Skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Component analysis - LD50/LC50: White solid (powder) No data available No data available 120 - 160° C No data available >200^{\circ}C (>392^{\circ}F) No data available No data available

Poorly soluble in water

No data available No data available No data available

Not in particular. Stable in general condition. Slightly flammable, avoid high temperature. High concentration dispersion in air might result in powder explosion. Not in particular. This product will form hazardous fume of magnesium oxide, carbon oxide, and nitrogen oxide on heating or burning. No data available

No data available No data available Not classified Not classified No data available Based on NITE (2006), there is a possibility of skin irritation to human, therefore classified as "Category 3". Based on NITE (2006), there is a possibility of eye irritation to human, therefore classified as "Category 2B". No data available No data available

Inhalation (Dust)

Acute exposure:

Inhalation of dust may cause mild irritation.

Excessive amounts may produce coughing and difficult breathing.

Chronic exposure:

Excessive inhalation may cause a progressive chemical pneumonitis.

[12. Ecological information]

Ecotoxicity

Aquatic ecotoxicity:	No data available
Terrestrial ecotoxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Hazardous to the ozone layer:	No data available

[13. Disposal considerations]

Do NOT dump this product in the environment or in the household waste. Before disposal or incineration, contents of this product should be neutralized or stabilized if it's possible.

Obey local/regional/national/international regulations about the disposal or the incineration of this product (both contents and containers).

[14. Transport information]

UN number:	Not Applicable on UN classification
US DOT:	No classification assigned
TDG:	No classification assigned
ADR:	No classification assigned
RID:	No classification assigned
IATA:	No classification assigned
ICAO:	No classification assigned
IMDG:	No classification assigned
Marine pollutant:	Not applicable
Particular safety measures for transportation:	Avoid damage to the container while loading this product.
	Do not put heavy objects on top of this product.
	Load carefully to prevent the collapse of cargo.

Avoid direct sunlight to this product during transport.

[15. Regulatory information]

Inventory information

Inventory Name	Magne	esium stearate	
	Status	Registry Number	
AICS (Australia):	Present	—	
DSL (Canada):	Present	_	
IECSC (China):	Present	30034	
EINECS (EU):	Present	209-150-3	
ENCS (Japan):	Present	(2)-611	
KECL (Korea):	Present	KE-26390	
INSQ (Mexico):	Present	_	
NZIoC (New Zealand):	Present	—	
PICCS (Philippines):	Present	_	
TCSI (Taiwan):	Present	_	
Inventory (Turkey):	Present	EC No. 209-150-3	
TSCA (U.S.A.):	Present	_	

[16. Other Information]

References

- 1 ChemADVISOR, Inc. (2014). *Magnesium stearate* [Data file]. Retrieved from LOLI database.
- 2 ChemADVISOR, Inc. (2014). *Fatty acids, C16-18, magnesium salts* [Data file]. Retrieved from LOLI database.
- 3 IUCLID. (2000). Dataset for *fatty acids*, *C16-18*, *magnesium salts* [Data file].
- 4 National Institute of Technology and Evaluation (NITE). (2006). *Magnesium stearate* [Data file].
- 5 National Institute of Technology and Evaluation (NITE). (2006). *Classification result e(ID801-900)* [Data file]. Retrieved from http://www.safe.nite.go.jp/english/files/ghs_xls/classification_result_e(ID801-900).xls.
- 6 United Nations. (2013). *Globally Harmonized System of Classification and Labelling of Chemicals* (*GHS*) (5th ed.). (The Japanese GHS Inter-ministerial Committee, Trans.). Tokyo: The Chemical Daily Co., Ltd..

Key/ Legend

ACGIH - American Conference of Governmental Industrial Hygienists AICS - Australia Inventory of Chemical Substances ADR - European Road Transport CAS - Chemical Abstracts Service °C - degree Celsius DSL - Domestic Substances List EINECS - European Inventory of Existing Commercial Chemical Substances (European Union) ENCS - Existing and New Chemical Substances (Japan) GHS - Globally Harmonized System of Classification and Labelling of Chemicals HPV - High Production Volume HS code - Harmonized System code IATA - International Air Transport Association ICAO - International Civil Aviation Organization IECSC - Inventory of Existing Chemical Substances (China) IMDG - International Maritime Dangerous Goods INSQ - National Inventory of Chemical Substances (Mexico) IUCLID - International Uniform Chemical Information Database KECL - Korea Existing Chemicals Inventory NITE - National Institute of Technology and Evaluation LD50 - Lethal Dose, 50% or Median Lethal Dose LOLI - List Of ListsTM-ChemADVISOR's Regulatory Database NZIoC - New Zealand Inventory of Chemicals PICCS - Philippines Inventory of Chemicals and Chemical Substances RTECS - Registry of Toxic Effects of Chemical Substances® RID - European Rail Transport STOT - Specific Target Organ Toxicity TDG - Transportation of Dangerous Goods TLV - Threshold Limit Value TSCA - Toxic Substances Control Act (U.S.A.) TWA - Time Weighted Average UN - United Nations US DOT - United States Department of Transportation

Manufacture disclaimer

All information given in this SDS is based on the data which is considered to be accurate, but the information do not guarantee enough safety. All chemical material may have an unknown hazard to human and conditions of methods of handling, storage, use and disposal of the product are beyond suppliers' control; therefore all risks and consequences of use the product are on users' responsibilities and users need to set appropriate safety measures for special use.

In addition, all classification in this SDS was written in accordance with the GHS classification of the fifth revised edition. However, GHS mentioned that countries are free to determine which of the building blocks will be applied in different parts of label elements and building blocks. Therefore, many countries set own requirements of label elements and building blocks. In the cases of export from Japan or use in other countries, SDSs and labels are needed, which are in accordance with the local laws and regulations of exporting countries or user countries. Please contact supplier beforehand for checking SDSs and labels are suitable for the local laws and regulations.