



MAGNESIUM-26 METAL (26Mg)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/04/2011

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Supersedes: 04/04/2011

Version: 2.0

MGLM-4321

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : MAGNESIUM-26 METAL (26Mg)
EC Index-No. : 012-001-00-3 (Unlabeled)
EC-No. : 231-104-6 (Unlabeled)
CAS-No. : 7439-95-4 (Unlabeled)
Product code : MGLM-4321
Formula : Mg

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Sol. 1 H228
Self-heat. 1 H251
Water-react. 2 H261

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F+; R12
F; R11
F; R15

Full text of R-phrases: see section 16

GHS-US classification

Flam. Sol. 1 H228
Self-heat. 1 H251
Water-react. 2 H261

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H228 - Flammable solid
H251 - Self-heating; may catch fire
H261 - In contact with water releases flammable gas

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P223 - Do not allow contact with water.
P231+P232 - Handle under inert gas. Protect from moisture
P235+P410 - Keep cool. Protect from sunlight
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P335+P334 - Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H228 - Flammable solid
H251 - Self-heating; may catch fire
H261 - In contact with water releases flammable gas

Precautionary statements (GHS-US) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P223 - Do not allow contact with water.
P231+P232 - Handle under inert gas. Protect from moisture
P235+P410 - Keep cool. Protect from sunlight
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P335+P334 - Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P370+P378 - In case of fire: Use media other than water to extinguish.
P402+P404 - Store in a dry place. Store in a closed container.
P407 - Maintain air gap between stacks/pallets.
P413 - Store bulk masses greater than ...kg/...lbs at temperatures not exceeding ...°C/...°F
P420 - Store away from other materials.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|---------------------------|--------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------|
| MAGNESIUM-26 METAL (26Mg) | (CAS-No.) 7439-95-4 (Unlabeled) (EC-No.) 231-104-6 (Unlabeled) (EC Index-No.) 012-001-00-3 (Unlabeled) | 100 | F+; R12 F; R11 F; R15 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------|--------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------|
| MAGNESIUM-26 METAL (26Mg) | (CAS-No.) 7439-95-4 (Unlabeled) (EC-No.) 231-104-6 (Unlabeled) (EC Index-No.) 012-001-00-3 (Unlabeled) | 100 | Flam. Sol. 1, H228 Self-heat. 1, H251 Water-react. 2, H261 |

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Full text of R- and H- phrases: see section 16

| Name | Product identifier | % | GHS-US classification |
|-------------------------------------------------|---------------------------------|-----|------------------------------------------------------------------|
| MAGNESIUM-26 METAL (26Mg) (Main constituent) | (CAS-No.) 7439-95-4 (Unlabeled) | 100 | Flam. Sol. 1, H228 Self-heat. 1, H251 Water-react. 2, H261 |

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general | : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area. |
| First-aid measures after inhalation | : When symptoms occur: go into open air and ventilate suspected area. If not breathing give artificial respiration. Get medical advice/attention. |
| First-aid measures after skin contact | : Wash with plenty of soap and water. and soap. Get immediate medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. |
| First-aid measures after ingestion | : Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|-----------------------------------------------------------------------|
| Symptoms/effects after inhalation | : May be harmful if inhaled. May cause respiratory irritation. |
| Symptoms/effects after skin contact | : May be harmful in contact with skin. May cause moderate irritation. |
| Symptoms/effects after eye contact | : May cause eye irritation. |
| Symptoms/effects after ingestion | : May be harmful if swallowed. |

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--------------------------------------------------------------------------|
| Suitable extinguishing media | : Dry sand. Dry powder. |
| Unsuitable extinguishing media | : Do not use water jet as an extinguisher, as this will spread the fire. |

5.2. Special hazards arising from the substance or mixture

| | |
|-------------|------------------------------------------------------------------------------------------------|
| Fire hazard | : Flammable solid. Self-heating; may catch fire. In contact with water releases flammable gas. |
|-------------|------------------------------------------------------------------------------------------------|

5.3. Advice for firefighters

| | |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Firefighting instructions | : Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Emergency procedures | : Avoid breathing vapors, mist, gas. Avoid dust formation. Ensure adequate air ventilation. Evacuate unnecessary personnel. |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|----------------------------------------------------------------------------------------------------|
| For containment | : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. |
| Methods for cleaning up | : This material and its container must be disposed of in a safe way, and as per local legislation. |

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Store in a well-ventilated place. Keep container tightly closed.
- Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

- Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



- Materials for protective clothing : Wear suitable protective clothing and gloves.
- Hand protection : Wear suitable protective clothing and gloves.
- Eye protection : Wear eye protection. Chemical goggles or face shield with safety glasses.
- Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Chips
- Molecular mass : 24.31 g/mol (Labeled)
- Color : Metallic silver
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : 648 °C (1198 °F) - lit.
- Freezing point : No data available
- Boiling point : 1090 °C (1,994 °F) - lit.
- Flash point : No data available
- Auto-ignition temperature : 510 °C (950 °F) - The substance or mixture is classified as self heating with the category 1.
- Decomposition temperature : No data available
- Flammability (solid, gas) : May form combustible dust concentrations in air.
- Vapor pressure : 1 hPa at 621 °C (1150 °F)
- Relative vapor density at 20 °C : No data available
- Relative density : 1.74 g/cm³ at 25 °C (77 °F)
- Solubility : No data available
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : No data available

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| | |
|----------------------|---------------------|
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

Reacts violently with water.

10.4. Conditions to avoid

Exposure to moisture.

10.5. Incompatible materials

Acids. Strong oxidizing agents. Acid chlorides. Halogens.

10.6. Hazardous decomposition products

Magnesium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity | : Not classified |
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity – single exposure | : Not classified |
| Specific target organ toxicity – repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Potential Adverse human health effects and symptoms | : Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Chills, Fever, Fatigue, Muscular pain, Joint pain or stiffness, Rash, Anorexia. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Liver - Irregularities - Based on Human Evidence. |
| Symptoms/effects after inhalation | : May be harmful if inhaled. May cause respiratory irritation. |
| Symptoms/effects after skin contact | : May be harmful in contact with skin. May cause moderate irritation. |
| Symptoms/effects after eye contact | : May cause eye irritation. |
| Symptoms/effects after ingestion | : May be harmful if swallowed. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|------------------------------------------------------------------------------------------------------------------------|
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
|-------------------|------------------------------------------------------------------------------------------------------------------------|

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
- Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

- UN-No.(DOT) : 1869
- DOT NA no. UN1869

14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Magnesium
- Class (DOT) : 4.1 - Class 4.1 - Flammable Solid 49 CFR 173.124
- Hazard labels (DOT) : 4.1 - Flammable solid



- Packing group (DOT) : III - Minor Danger
- DOT Special Provisions (49 CFR 172.102) : A1 - Single packaging are not permitted on passenger aircraft.
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 151
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 213
- DOT Packaging Bulk (49 CFR 173.xxx) : 240

14.3. Additional information

- Emergency Response Guide (ERG) Number : 138
- Other information : No supplementary information available.

Overland transport

No additional information available

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Transport by sea

- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- DOT Vessel Stowage Other : 13 - Keep as dry as reasonably practicable,39 - Stow "away from" liquid halogenated hydrocarbons,52 - Stow "separated from" acids,53 - Stow "separated from" alkaline compounds,74 - Stow "separated from" oxidizers,101 - Stow "separated from" iron oxide

Air transport

- DOT Quantity Limitations Passenger aircraft/rail : 25 kg
(49 CFR 173.27)
- DOT Quantity Limitations Cargo aircraft only (49 : 100 kg
CFR 175.75)

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

| MAGNESIUM-26 METAL (26Mg) (7439-95-4 (Unlabeled)) | |
|----------------------------------------------------|------------------------------------------------------------------------------|
| SARA Section 302 Threshold Planning Quantity (TPQ) | Not subject to reporting requirements of the United States SARA Section 302. |
| SARA Section 311/312 Hazard Classes | Fire hazard Reactive hazard Delayed (chronic) health hazard |
| SARA Section 313 - Emission Reporting | Not subject to reporting requirements of the United States SARA Section 313. |

15.2. International regulations

CANADA

| MAGNESIUM-26 METAL (26Mg) (7439-95-4 (Unlabeled)) |
|-------------------------------------------------------|
| Listed on the Canadian DSL (Domestic Substances List) |

15.2.1. National regulations

No additional information available

15.3. US State regulations

| MAGNESIUM-26 METAL (26Mg)(7439-95-4 (Unlabeled)) | |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |
| State or local regulations | U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List |

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

| | |
|----------------|-------------------------------------------------------------------------------------|
| Flam. Sol. 1 | Flammable solids Category 1 |
| Self-heat. 1 | Self-heating substances and mixtures Category 1 |
| Water-react. 2 | Substances and mixtures which in contact with water emit flammable gases Category 2 |

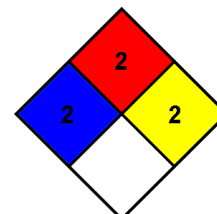
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| | |
|------|--------------------------------------------------------|
| H228 | Flammable solid |
| H251 | Self-heating; may catch fire |
| H261 | In contact with water releases flammable gas |
| R11 | Highly flammable |
| R12 | Extremely flammable |
| R15 | Contact with water liberates extremely flammable gases |
| F | Highly flammable |
| F+ | Extremely flammable |

| | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| NFPA health hazard | : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. |
| NFPA fire hazard | : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. |
| NFPA reactivity | : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures. |



Hazard Rating

| | |
|--------------|-----------------------------------------------------------|
| Health | : 2 Moderate Hazard - Temporary or minor injury may occur |
| Flammability | : 2 Moderate Hazard |
| Physical | : 2 Moderate Hazard |

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product