1. Identification

Product Name: Magnesium Powder
Cat No.: M7-100
Synonyms: Magnesium Metal
Recommended Use: Laboratory chemicals.
Uses advised against: Food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA:
800-424-9300
CHEMTREC®, Outside the USA:
001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Substances/mixtures which, in contact with water, emit flammable gases | Category 1 |
| Pyrophoric solids | Category 1 |

Label Elements

Signal Word
Danger

Hazard Statements
In contact with water releases flammable gases which may ignite spontaneously
Catches fire spontaneously if exposed to air
Precautionary Statements

Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Do not allow contact with air
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from any possible contact with water, because of violent reaction and possible flash fire
Handle under inert gas. Protect from moisture

Skin
Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages

Fire
In case of fire: Use fire-fighting equipment on basis class D for extinction

Storage
Store under an inert atmosphere
Store in a dry place. Store in a closed container

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

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>7439-95-4</td>
<td>&gt;99</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation
Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects
None reasonably foreseeable.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media
No information available

Flash Point
No information available
Method - No information available

Autoignition Temperature 472.8 °C / 883 °F

Explosion Limits
Upper No data available
Lower No data available

Sensitivity to Mechanical Impact No data available
Sensitivity to Static Discharge No data available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
None known

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
<td>2</td>
<td>W</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. See Section 12 for additional ecological information. Should not be released into the environment.

Environmental Precautions

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling
Wear personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Storage
Keep container tightly closed in a dry and well-ventilated place. Store under an inert atmosphere.

8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Use explosion-proof electrical/ventilating/lighting/equipment. Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Long sleeved clothing.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if
exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Silver</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>651.1 °C / 1204 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>1107.2 °C / 2025 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.74 (H2O=1)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>472.8 °C / 883 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Mg</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>24.305</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

**Reactive Hazard**
Yes

**Stability**
Pyrophoric: Spontaneously flammable in air. Reacts violently with water, liberating highly flammable gases.

**Conditions to Avoid**
Exposure to air. Ignites on contact with oxygen or air.

**Incompatible Materials**
Strong oxidizing agents

**Hazardous Decomposition Products**
None under normal use conditions

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Hazardous Reactions**
None under normal processing.

### 11. Toxicological information

**Acute Toxicity**

**Product Information**
No acute toxicity information is available for this product

**Component Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>&gt;2000 mg/kg ( Rat )</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Toxicologically Synergistic Products**
No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation**
No information available
Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>7439-95-4</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Persistence and Degradability
Insoluble in water

Bioaccumulation/ Accumulation
No information available.

Mobility
Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
- UN-No: UN1418
- Proper Shipping Name: MAGNESIUM, POWDER
- Hazard Class: 4.3
- Subsidiary Hazard Class: 4.2
- Packing Group: II

TDG
- UN-No: UN1418
- Proper Shipping Name: MAGNESIUM ALLOYS, POWDER
- Hazard Class: 4.3
- Subsidiary Hazard Class: 4.2
- Packing Group: II

IATA
- UN-No: UN1418
- Proper Shipping Name: MAGNESIUM ALLOYS POWDER
- Hazard Class: 4.3
- Subsidiary Hazard Class: 4.2
15. Regulatory information

United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>7439-95-4</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
</tbody>
</table>

Legend:

- TSCA - Toxic Substances Control Act, (40 CFR Part 710)
- X - Listed
- '-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>7439-95-4</td>
<td>X</td>
<td>-</td>
<td>231-104-6</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td></td>
<td>KE-22673</td>
</tr>
</tbody>
</table>

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium, powder</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

<table>
<thead>
<tr>
<th>Component</th>
<th>DHS Chemical Facility Anti-Terrorism Standard</th>
</tr>
</thead>
</table>
Magnesium, powder

Theft STQs - 100lb (powder)

Other International Regulations

Mexico - Grade
No information available

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date
19-Aug-2019

Print Date
19-Aug-2019

Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS