

## SAFETY DATA SHEET

Creation Date 17-Jan-2011

Revision Date 28-Mar-2024

Revision Number 5

### 1. Identification

**Product Name** Magnesium powder  
**Cat No. :** 10233  
**CAS No** 7439-95-4  
**Synonyms** No information available  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757

##### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**: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 |
| Combustible dust   | Yes        |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

May form combustible dust concentrations in air  
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

Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component         | CAS No    | Weight % |
|-------------------|-----------|----------|
| Magnesium, powder | 7439-95-4 | >95      |

### 4. First-aid measures

|  |  |
|--|--|
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.  |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur. |
| <b>Inhalation</b>                          | Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.  |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Get medical attention.   |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Dry chemical. approved class D extinguishers. clay. sodium carbonate.

**Unsuitable Extinguishing Media** No information available

|   |                          |
|---|--------------------------|
| <b>Flash Point</b>                      | 500 °C / 932 °F          |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

**Specific Hazards Arising from the Chemical**

Dust can form an explosive mixture with air. Water reactive. Produce flammable gases on contact with water. Pyrophoric: Spontaneously flammable in air. Contact with water liberates extremely flammable gases.

**Hazardous Combustion Products**

Magnesium oxides. Hydrogen.

**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**

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 1             | 4                   | 2                  | W                       |

**6. Accidental release measures**

|   |  |
|---|--|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges. |
| <b>Environmental Precautions</b>            | Should not be released into the environment. See Section 12 for additional Ecological Information.   |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.                    |

**7. Handling and storage**

|                 |  |
|-----------------|--|
| <b>Handling</b> | Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Do not breathe dust. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Storage.</b> | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Keep from any possible contact with water. Store under an inert atmosphere. Incompatible Materials. Acids. Strong oxidizing agents. Halogens. Acid chlorides.                   |

**8. Exposure controls / personal protection**

|                                      |  |
|--------------------------------------|--|
| <b>Exposure Guidelines</b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.  |
| <b>Engineering Measures</b>          | Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. |
| <b>Personal Protective Equipment</b> |  |

|                                 |   |
|---------------------------------|---|
| <b>Eye/face Protection</b>      | 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.   |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>   | 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. |
| <b>Recommended Filter type:</b> | Particulates filter conforming to EN 143.   |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.  |

## 9. Physical and chemical properties

|   |                                |
|---|--------------------------------|
| <b>Physical State</b>                         | Solid                          |
| <b>Appearance</b>                             | Silver                         |
| <b>Odor</b>                                   | Odorless                       |
| <b>Odor Threshold</b>                         | No information available       |
| <b>pH</b>                                     | No information available       |
| <b>Melting Point/Range</b>                    | 651 °C / 1203.8 °F             |
| <b>Boiling Point/Range</b>                    | 1107 °C / 2024.6 °F @ 760 mmHg |
| <b>Flash Point</b>                            | 500 °C / 932 °F                |
| <b>Evaporation Rate</b>                       | Not applicable                 |
| <b>Flammability (solid,gas)</b>               | No information available       |
| <b>Flammability or explosive limits</b>       |                                |
| <b>Upper</b>                                  | No data available              |
| <b>Lower</b>                                  | No data available              |
| <b>Vapor Pressure</b>                         | No information available       |
| <b>Vapor Density</b>                          | Not applicable                 |
| <b>Specific Gravity</b>                       | No information available       |
| <b>Solubility</b>                             | Water reactive                 |
| <b>Partition coefficient; n-octanol/water</b> | No data available              |
| <b>Autoignition Temperature</b>               | No information available       |
| <b>Decomposition Temperature</b>              | No information available       |
| <b>Viscosity</b>                              | Not applicable                 |
| <b>Molecular Formula</b>                      | Mg                             |
| <b>Molecular Weight</b>                       | 24.3                           |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | Yes   |
| <b>Stability</b>                        | Moisture sensitive. Air sensitive.  |
| <b>Conditions to Avoid</b>              | Protect from water. Exposure to air. Incompatible products. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Acids, Strong oxidizing agents, Halogens, Acid chlorides                                    |
| <b>Hazardous Decomposition Products</b> | Magnesium oxides, Hydrogen  |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

|                            |   |
|----------------------------|---|
| <b>Product Information</b> | No acute toxicity information is available for this product |
|----------------------------|---|

**Component Information**

| Component         | LD50 Oral           | LD50 Dermal | LC50 Inhalation |
|-------------------|---------------------|-------------|-----------------|
| Magnesium, powder | >2000 mg/kg ( Rat ) | Not listed  | Not listed      |

**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.

| Component         | CAS No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|-----------|------------|------------|------------|------------|------------|
| Magnesium, powder | 7439-95-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**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** See actual entry in RTECS for complete information.

## 12. Ecological information

**Ecotoxicity**

Reacts with water so no ecotoxicity data for the substance is available.

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment.

## 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**

|                                |                   |
|--------------------------------|-------------------|
| <b>UN-No</b>                   | UN1418            |
| <b>Proper Shipping Name</b>    | MAGNESIUM, POWDER |
| <b>Hazard Class</b>            | 4.3               |
| <b>Subsidiary Hazard Class</b> | 4.2               |
| <b>Packing Group</b>           | II                |

**TDG**

|              |        |
|--------------|--------|
| <b>UN-No</b> | 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, POWDER  
**Hazard Class** 4.3  
**Subsidiary Hazard Class** 4.2  
**Packing Group** II

**IMDG/IMO**

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

## 15. Regulatory information

**United States of America Inventory**

| Component         | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------------|-----------|------|---|-----------------------------|
| Magnesium, powder | 7439-95-4 | X    | ACTIVE  | -                           |

**Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b)** - Notices of Export Not applicable

**International Inventories**

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

| Component         | CAS No    | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|-------------------|-----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Magnesium, powder | 7439-95-4 | X   | -    | 231-104-6 | X     | X    |      | X    | X     | KE-22673 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** - Occupational Safety and Health Administration Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Magnesium, powder | X             | X          | X            | -        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:

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

| Component         | DHS Chemical Facility Anti-Terrorism Standard |
|-------------------|---|
| Magnesium, powder | Theft STQs - 100lb (powder)                   |

**Other International Regulations****Mexico - Grade**

No information available

**Authorisation/Restrictions according to EU REACH**

Not applicable

| Component         | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------|-----------|---|---|---|
| Magnesium, powder | 7439-95-4 | -   | -   | -   |

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component         | CAS No    | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------|-----------|----------|------------------------------|---------------------------|--|
| Magnesium, powder | 7439-95-4 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-----------|--------|---|--|----------------------------|------------------------------------|
|           |        |   |  |                            |                                    |

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|                   |           |                |                |                |                |
|-------------------|-----------|----------------|----------------|----------------|----------------|
| Magnesium, powder | 7439-95-4 | Not applicable | Not applicable | Not applicable | Not applicable |
|-------------------|-----------|----------------|----------------|----------------|----------------|

## 16. Other information

**Prepared By** Health, Safety and Environmental Department  
Email: chem.techinfo@thermofisher.com  
www.thermofisher.com

**Creation Date** 17-Jan-2011  
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**Revision Summary** New emergency telephone response service provider.

### 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**