

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product Identifier**

Perihalan Produk: **Magnesium sputtering target**  
 Product Description: **Magnesium sputtering target**  
 Cat No. : 40858  
 Synonyms Magnesium metal (ribbons/turnings)  
 CAS No 7439-95-4  
 Molecular Formula Mg

**Relevant identified uses of the substance or mixture and uses advised against**

Recommended Use Laboratory chemicals.  
 Uses advised against No Information available

**Company**

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd  
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,  
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,  
 Selangor Darul Ehsan, Malaysia.  
 Main line: +60 3-5525 7888

**Supplier**

E-mail address Enquiry.my@thermofisher.com

**Emergency Telephone Number**

Tel: +03-5525 7888  
 CHEMTREC Malaysia **1-800-815-308** (Malay)  
 CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

**SECTION 2: HAZARDS IDENTIFICATION**
**Classification of the substance or mixture**

Flammable solids	Category 1 (H228)
Self-heating substances/mixtures	Category 2 (H252)
Substances/mixtures which, in contact with water, emit flammable gases	Category 2 (H261)

**Label Elements**

**Signal Word**
**Danger**

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

## Hazard Statements

H228 - Flammable solid

H252 - Self-heating in large quantities; may catch fire

H261 - In contact with water releases flammable gases

## Precautionary Statements

### Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P231 + P232 - Handle and store contents under inert gas. Protect from moisture

P235 + P410 - Keep cool. Protect from sunlight

P240 - Ground and bond container and receiving equipment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

### Response

P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages

### Storage

P402 + P404 - Store in a dry place. Store in a closed container

P407 - Maintain air gap between stacks/pallets

P420 - Store away from other materials

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Magnesium	7439-95-4	>95

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### 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. Get medical attention.

#### Ingestion

Do NOT induce vomiting. Get medical attention.

#### Inhalation

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration.

#### Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### Most important symptoms and effects, both acute and delayed

No information available.

### Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

Treat symptomatically.

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Dry chemical. approved class D extinguishers. clay. sodium carbonate. Do not use a solid water stream as it may scatter and spread fire.

#### **Extinguishing media which must not be used for safety reasons**

Carbon dioxide (CO<sub>2</sub>).

### Special hazards arising from the substance or mixture

Water reactive. Produce flammable gases on contact with water. Flammable.

### **Hazardous Combustion Products**

Magnesium oxides, Hydrogen.

### Advice for fire-fighters

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Remove all sources of ignition.

### Environmental precautions

See Section 12 for additional Ecological Information.

### Methods and Material for Containment and Cleaning Up

Pick up and transfer to properly labelled containers. Remove all sources of ignition. Do not expose spill to water.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Protect from moisture. Avoid contact with skin and eyes. Wash hands before breaks and immediately after handling the product. Ensure adequate ventilation. Wear personal protective equipment/face protection.

### Conditions for Safe Storage, Including any Incompatibilities

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.

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

## Control Parameters

## Exposure Controls

### Engineering Measures

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.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### **Eye Protection**

Goggles

#### **Hand Protection**

Protective gloves

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### **Respiratory Protection**

No special protective equipment required

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### **Appearance**

Silver

#### **Physical State**

Solid

#### **Odor**

Odorless

#### **Odor Threshold**

No data available

#### **pH**

7

#### **Melting Point/Range**

651 °C / 1203.8 °F

#### **Softening Point**

No data available

#### **Boiling Point/Range**

1107 °C / 2024.6 °F

#### **Flash Point**

500 °C / 932 °F

**Method -** No information available

#### **Evaporation Rate**

Not applicable

Solid

#### **Flammability (solid,gas)**

No information available

#### **Explosion Limits**

No data available

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

Vapor Pressure	negligible	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	No data available	
Bulk Density	No data available	
Water Solubility	Insoluble	
Solubility in other solvents	No information available	

## Partition Coefficient (n-octanol/water)

Autoignition Temperature	472.8 °C / 883 °F	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Molecular Formula	Mg
Molecular Weight	24.3

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

Yes.

### Chemical Stability

Stable under normal conditions. Air sensitive. Water reactive.

### Possibility of Hazardous Reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	No information available.

### Conditions to Avoid

Protect from water. Exposure to air. Incompatible products. Exposure to moist air or water.

### Incompatible Materials

Acids. Strong oxidizing agents. Halogens. Acid chlorides.

### Hazardous Decomposition Products

Magnesium oxides. Hydrogen.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Product Information

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

**(a) acute toxicity;**

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Magnesium	LD50 = 230 mg/kg ( Rat )	-	-

**(b) skin corrosion/irritation;**

Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;**

Based on available data, the classification criteria are not met

**(d) respiratory or skin sensitization;**

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;**

Based on available data, the classification criteria are not met

**(f) carcinogenicity;**

Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;**

Based on available data, the classification criteria are not met

**(h) STOT-single exposure;**

Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;**

Based on available data, the classification criteria are not met

Target Organs

None known.

**(j) aspiration hazard;**

Not applicable

Solid

**Symptoms / effects, both acute and delayed** No information available.

**Endocrine Disrupting Properties**

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**Persistence and degradability**

Persistence

Insoluble in water.

Degradability

Not relevant for inorganic substances.

**Bioaccumulative potential**

May have some potential to bioaccumulate

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

**Mobility in soil** Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Other adverse effects** No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### **Waste treatment methods**

**Waste from Residues/Unused Products** Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous Keep product and empty container away from heat and sources of ignition

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used Do not flush to sewer Can be landfilled or incinerated, when in compliance with local regulations

## SECTION 14: TRANSPORT INFORMATION

### **IMDG/IMO**

UN-No	UN1869
Hazard Class	4.1
Packing Group	III
Proper Shipping Name	MAGNESIUM

### **Road and Rail Transport**

UN-No	UN1869
Hazard Class	4.1
Packing Group	III
Proper Shipping Name	MAGNESIUM

### **IATA**

UN-No	UN1869
Hazard Class	4.1
Packing Group	III
Proper Shipping Name	MAGNESIUM

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

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

**International Inventories** X = listed

# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Magnesium	231-104-6	X	X	X	X		X	X	KE-22673

## National Regulations

**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Prepared By**

**Revision Date**

**Revision Summary**

Health, Safety and Environmental Department

26-Mar-2025

Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

### 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



# SAFETY DATA SHEET

Magnesium sputtering target

Revision Date 26-Mar-2025

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**End of Safety Data Sheet**