

## SAFETY DATA SHEET

Creation Date 17-January-2011

Revision Date 28-March-2024

Revision Number 5

### 1. Identification

**Product Name** Magnesium sputtering target

**Cat No. :** 40859

**CAS-No** 7439-95-4  
**Synonyms** Magnesium metal (ribbons/turnings)

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

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

##### Company

##### **Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **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

##### **WHMIS 2015 Classification**

Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

<b>Flammable solids</b>	Category 1	
<b>Self-heating substances and mixtures</b>	Category 2	Gas(es) = Hydrogen
<b>Substances/mixtures which, in contact with water, emit flammable gases</b>	Category 2	

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Flammable solid  
Self-heating in large quantities; may catch fire  
In contact with water releases flammable gas

**Precautionary Statements****Prevention**

Keep container tightly closed

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

Do not allow contact with water

Keep cool. Protect from sunlight

Ground/bond container and receiving equipment

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

Handle and store contents under inert gas. Protect from moisture

**Response**

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages

In case of fire: Use fire-fighting equipment on basis class D to extinguish

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion

**Storage**

Maintain air gap between stacks/pallets

Store away from other materials

Store in a dry place. Store in a closed container

Store bulk masses at temperatures not exceeding manufacturer recommendations

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Magnesium	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 plenty of water for at least 15 minutes. Get medical attention.
<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Most important symptoms/effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical. approved class D extinguishers. clay. sodium carbonate.
<b>Unsuitable Extinguishing Media</b>	No information available

Flash Point	500 °C / 932 °F
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 information available
Sensitivity to Static Discharge	No information available

**Specific Hazards Arising from the Chemical**

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

**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**

Health  
0

Flammability  
4

Instability  
2

Physical hazards  
W

## 6. Accidental release measures

Personal Precautions	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 for Containment and Clean Up	Pick up and transfer to properly labelled containers. Remove all sources of ignition. Do not expose spill to water.

## 7. Handling and storage

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.
Storage.	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

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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**  
**Hand Protection**Goggles  
Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) 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. gloves with care avoiding skin contamination.

**Respiratory Protection**

No special protective equipment required.

**Environmental exposure controls**

No information available.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

**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>	7
<b>Melting Point/Range</b>	651 °C / 1203.8 °F
<b>Boiling Point/Range</b>	1107 °C / 2024.6 °F
<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>	
Upper	No data available
Lower	No data available
<b>Vapor Pressure</b>	negligible
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	No information available
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	472.8 °C / 883 °F
<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****Reactive Hazard** Yes**Stability** Stable under normal conditions. Air sensitive. Water reactive.

<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

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Magnesium	LD50 = 230 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** May cause irritation

**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	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** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

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

**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** UN1869  
**Proper Shipping Name** consumer commodity MAGNESIUM  
**Hazard Class** 4.1  
**Packing Group** III

#### TDG

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

#### IATA

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

#### IMDG/IMO

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

### 15. Regulatory information

#### International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Magnesium	7439-95-4	X	-	X	ACTIVE	231-104-6	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Magnesium	7439-95-4	X	KE-22673	X	-	X	X	X	X

#### Legend:

X - Listed '-' - Not Listed

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

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

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

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

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

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

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

**AICS** - Australian Inventory of Chemical Substances

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

#### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

#### Other International Regulations

**Authorisation/Restrictions according to EU REACH**

Not applicable

## 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	7439-95-4	Listed	Not applicable	Not applicable	Not applicable

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)
Magnesium	7439-95-4	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other information

Prepared By	Product Safety Department Email: chem.techinfo@thermofisher.com www.thermofisher.com
Creation Date	17-January-2011
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Revision Summary	New emergency telephone response service provider.

## Disclaimer

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**End of SDS**