



# SAFETY DATA SHEET

**MATERION**

## 1. Product and company identification

<b>Name of the chemical</b>	<b>Magnesium Product</b>
<b>Other means of identification</b>	
SDS number	64
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Recommended use</b>	Manufacture of computer, electronic and optical products, electrical equipment Scientific research and development Other: Manufacture of medical and defense equipment
<b>Recommended restrictions</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)
<b>Manufacturer/Importer/Supplier/ Distributor information</b>	Materion Electronic Materials
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights OH 44124 United States
<b>Telephone</b>	1.216.383.4019
<b>E-mail</b>	Theodore.Knudson@materion.com
<b>Contact person</b>	Theodore Knudson
<b>Emergency telephone number</b>	See Section 16.

## 2. Hazards identification

<b>Hazard classification</b>		
<b>Physical hazards</b>	Pyrophoric solids	Category 1
	Substances and mixtures which, in contact with water, emit flammable gases	Category 2
<b>Health hazards</b>	Not classified.	
<b>Environmental hazards</b>	Not classified.	

### Label elements

#### Symbols



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Catches fire spontaneously if exposed to air. In contact with water releases flammable gas.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not allow contact with air. Do not allow contact with water. Handle under inert gas. Protect from moisture. Wear protective gloves/eye protection/face protection.
<b>Response</b>	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. In case of fire: Use appropriate media to extinguish.
<b>Storage</b>	Store in a dry place. Store in a closed container. Store contents under appropriate liquid or inert gas.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Other hazards</b>	None known.
<b>Supplemental information</b>	For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 3. Composition/information on ingredients

### Substance

Chemical properties	CAS Number	Concentration (%)
Magnesium	7439-95-4	99 - 100

## 4. First aid measures

### First aid measures for different exposure routes

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms and effects** Direct contact with eyes may cause temporary irritation.

**Personal protection for first-aid responders** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Notes to physician** Treat symptomatically.

## 5. Fire-fighting measures

**Extinguishing media** Powder. Dry sand. Dry sand, sodium chloride powder, graphite powder or Met-L-X powder. Dry chemical, soda ash, lime or DRY sand.

**Extinguishing media to avoid** Water. Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards during fire fighting** During fire, gases hazardous to health may be formed.

**Special fire fighting procedures** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Do not get water inside container.

**Protection of fire-fighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**General fire hazards** Catches fire spontaneously if exposed to air. In contact with water releases flammable gas.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

**Personal precautions** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use only non-sparking tools. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**Spill cleanup methods** Do not get water on spilled substance or inside containers. Neutralize with lime or soda ash. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

**Handling** Do not allow contact with air. Open container carefully and only in a dry, oxygen-free or inert atmosphere. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Storage** Never allow product to get in contact with water during storage. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a dry place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Exposure limits

No exposure limits noted for ingredient(s).

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Silver-white.

**Odor** None.

**Odor threshold** Not applicable

**Melting point/freezing point** 1203.8 °F (651 °C)

**pH** Not applicable

**Boiling point, initial boiling point, and boiling range** 2012 °F (1100 °C)

**Flammability (solid, gas)** Not available.

**Flash point** 932.0 °F (500.0 °C)

**Decomposition temperature** Not applicable

**Auto-ignition temperature** 883.4 °F (473 °C)

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not applicable

**Flammability limit - upper (%)** Not applicable

**Explosive limit - lower (%)** Not applicable

**Explosive limit - upper (%)** Not applicable

**Vapor pressure** < 0.0000001 kPa (77 °F (25 °C))

**Vapor density** Not applicable

**Density** 1.74 g/cm<sup>3</sup> estimated at 20 °C

**Solubility(ies)**

**Solubility (water)** Insoluble

**Partition coefficient (n-octanol/water)** Not applicable

**Evaporation rate** Not applicable

**Other data**

**Dynamic viscosity** 1.25 mPa.s

**Explosive properties** Not explosive.

**Kinematic viscosity** 0.7193 mm<sup>2</sup>/s estimated

**Molecular formula** Mg

**Molecular weight** 24.3 g/mol

**Oxidizing properties** Not oxidizing.

**Relative density** Not applicable

**Specific gravity** 1.74 at 20 °C

**Surface tension** 563 mN/m (68 °F (20 °C))

Viscosity Not applicable

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Exposure to moisture. Exposure to air. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Air. Water.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

Information on likely routes of exposure	
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms	Direct contact with eyes may cause temporary irritation.
Information on toxicological effects	
Acute toxicity	Not known.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not available.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Not available.

## 12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this substance.
Bioaccumulation	No data available.
Mobility in soil	No data available.
Other hazardous effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
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<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.

## 14. Transport information

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**Applicable regulations** Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste  
Regulations for the Labeling and Hazard Communication of Hazardous Chemicals  
Toxic Chemical Substances Control Act  
Toxic Chemical Substances Labeling and Materials Safety Data Sheets Regulations  
This material safety data sheet was prepared in accordance with the Regulation of Labeling and Hazard Communication of Hazardous Chemicals.

### Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Not listed.

### Priority Management Chemical List (Regulations on Handling Priority Managed Chemicals), as amended

Magnesium (CAS 7439-95-4)

### Toxic Chemical Substances (TCS) List (EPA Toxic Substances Notice No. 0960095331E, Tables 1-3, Dec. 17, 2007, as amended)

Not listed.

### Hazardous Substances and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations

Magnesium (CAS 7439-95-4)

Class 2: Flammable Solids

### GHS Classification List: GHS implementation phase 1, 2 and 3 (CLA No. 0980145063, 0990146707, and 1020146801)

Magnesium (CAS 7439-95-4)

### International regulations

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Montreal Protocol

Not applicable.

#### Kyoto protocol

Not applicable.

#### Basel Convention

Not applicable.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

### References

ACGIH  
EPA: ACQUIRE database  
NLM: Hazardous Substances Data Base  
Taiwan. Dangerous Materials (Regulations for the Labeling and Hazard Communication of Hazardous Chemicals), as amended  
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)  
Taiwan. OELs (Standards of Permissible Exposure Limits at Workplace), as amended  
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)  
Taiwan. Toxic Materials (Toxic and Concerned Chemical Substances Control Act)  
US. IARC Monographs on Occupational Exposures to Chemical Agents

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### Prepared by

Not available.

### Further information

Transportation Emergency  
Call Chemtrec at:  
US: 800.424.9300  
International: 703.741.5970  
Spain: 900.868.538  
Switzerland: 0800.564.402  
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059  
South Korea Toll-free Number – 080-880-0468