HALBLEITER MATERIAL

Material Safety Data Sheet

Magnesium Granules

Report No.: VIH240925009-1
Version: 2.1
Preparation Date: 25/09/2024
Revision Date: 25/09/2024

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name	Magnesium
Product No.	1200GN
Formula	Mg
CAS No.	7439-95-4
Synonyms	Magnesium metal (pellets)

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

Identified uses	Laboratory chemicals, Scientific research
Uses advised against	Consulting manufacturers

1.3 Details of the supplier of the safety data sheet

Company Name	VI HALBLEITERMATERIAL GmbH
Street	Bergener Straße 14.,
City	Hannover
State	Niedersachsen
Zip Code	30625
Country	Germany
Tel	0049 1626484175
Email	info@vimaterial.de
Website	https://vimaterial.de/

1.4 Emergency telephone number

Emergency Phone #	0049 1626484175

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

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)

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal Word	Danger
Pictograms	

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.
P223	Do not allow contact with water.
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
P370+P378	In case of fire: Use sand, CO2, or powdered extinguishing agent for extinction.
Storage	
P402 + P404	Store in a dry place. Store in a closed container

2.3 Other hazards

This substance/mixture contains no components considered to be persistent PBT or vPvB.
This product does not contain any known or suspected endocrine disruptors.

3. Composition/information on ingredients

3.1 Substances

Chemical Family	Metal

Component	CAS No.	EC No.	Concentration	CLP Classification
Magnesium (Mg)	7439-95-4	231-104-6	<=100%	Flam. Sol. 1 (H228) Water-react. 2 (H261) Self-heat. 2 (H252)

4. First aid measures

4.1 Description of first aid measures

General Treatment	If symptoms persist, seek medical attention.
Inhalation	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration.
Skin	Wash off immediately with plenty of water for at least 15 minutes. Seek medical attention.
Eyes	Rinse with pure water for at least 15 minutes. Remove contact lenses. Seek medical attention.
Ingestion	Do NOT induce vomiting. Seek medical attention

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

1	Based on the symptoms that appear, provide targeted treatment.
2	Be aware that symptoms may be delayed.

5. Firefighting Measures

5.1 Extinguishing Media

Suitable extinguishing media	Dry chemical. approved class D extinguishers. clay. sodium carbonate.
Unsuitable extinguishing media	Water. Carbon dioxide (CO2).

5.2 Special hazards arising from the substance or mixture

1	Magnesium oxides, Hydrogen.

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

5.3 Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
2	Fight fire from a safe distance and with adequate protection.
	Do not allow firefighting water to enter drains or water courses.
3	Collect contaminated firefighting water separately.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Remove persons to safety. Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Remove all sources of ignition.
For emergency responders	Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental Precautions

1	Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill	Covering of drains, Take up mechanically. Remove all sources of ignition.
Advice on how to clean up a spill	Use only non-sparking tools. DO NOT use water.
Other information relating to spills and releases	Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

7. Handling and Storage

7.1 Precautions for safe handling

Recommendations	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.
Hygiene Measures	Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feeding stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Store under an inert atmosphere.
Storage class (TRGS 510)	Class 4.2
Incompatible materials	Keep away from heat, sparks and flame. Keep from any possible contact with water.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Exposure limits

No data available.

Biological limit values

No data available.

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

Exposure scenario	Route of exposure	Population	DNEL / DMEL value
chronic - systemic effects	inhalatory	worker (industry)	DNEL=10 mg/m³

Predicted No-Effect Concentration (PNEC)

Exposure scenario	Organism	Environmental compartment	PNEC value
short-term (single instance)	aquatic organisms	freshwater	PNEC=0,41 mg/l
short-term (single instance)	aquatic organisms	marine water	PNEC=0,41 mg/l
short-term (single instance)	aquatic organisms	sewage treatment plant (STP)	PNEC=10,8 mg/l
short-term (single instance)	aquatic organisms	freshwater sediment	PNEC=268 mg/kg

short-term (single instance)	aquatic organisms	marine sediment	PNEC=268 mg/kg
short-term (single instance)	terrestrial organisms	soil	PNEC=268 mg/kg

8.2 Exposure controls

Appropriate engineering controls

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/face protection

Wear safety glasses with side shields (or goggles) (European standard - EN166) and face protection.

Skin protection

-Hand Protection

Protective gloves (The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.)

-Other protection measures

Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

No special protective equipment required.

Large scale/emergency use	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required
Small scale/Laboratory use	No personal respiratory protective equipment normally required

Environmental exposure controls

No information available.

9. Physical and Chemical Characteristics

9.1 Information on basic physical and chemical properties

Physical State	Solid
Colour	Silver grey
Odor	Odorless
Melting Point/Range	650 °C
Boiling Point/Range	1107 °C
Flammability (liquid)	Not applicable
Flammability (solid, gas)	flammable solid in accordance with GHS criteria substance which, in contact with water, emits flammable gases (in accordance with GHS criteria)
Explosion limits	No data available
Flash Point	500 °C
Autoignition Temperature	472,8 °C
Decomposition Temperature	No data available
pH	Not applicable
Viscosity	Not relevant (solid matter)
Water Solubility	Insoluble
Solubility in other solvents	No data available
Partition Coefficient (n-octanol/water)	No data available
Vapor Pressure	Not determined
Density / Specific Gravity	1,75 g/cm^3
Vapor Density	Not applicable
Particle characteristics	No data available

9.2 Other information

Molecular formula	Mg
Molecular weight	24,3 g/mol
Evaporation Rate	Not applicable

10. Stability and reactivity

10.1 Reactivity

Risk of ignition. Reactivity with water.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous Polymerization: No data available.

Hazardous Reactions: Reacts violently with water.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Acids. Strong oxidizing agents. Halogens. Acid chloride.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Magnesium oxides. Hydrogen.
In the event of fire: see section 5

11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	Oral:	No data available.
	Dermal:	No data available.
	Inhalation:	No data available.
Skin corrosion/irritation	No data available.	
Serious eye damage/irritation	No data available.	
Respiratory or skin sensitization	Respiratory	No data available.
	Skin	No data available.
Germ cell mutagenicity	No data available.	
Carcinogenicity	No data available. There are no known carcinogenic chemicals in this product.	
Reproductive toxicity	No data available.	
STOT - single exposure	No data available.	
STOT - repeated exposure	No data available.	
Aspiration hazard	Not applicable. Solid	

11.2 Information on other hazards

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

12. Ecological Information

12.1 Toxicity

Ecotoxicity effects	No data available.

12.2 Persistence and degradability

Persistence	No data available.

Degradability	No data available.

12.3 Bioaccumulative potential

Bioaccumulative potential	No data available.

12.4 Mobility in soil

Mobility in soil	No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	In accordance with Annex XIII of the REACH Regulation, inorganic substances donot require assessment.

12.6 Endocrine disrupting properties

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

12.7 Other adverse effects

Persistent Organic Pollutant	This product does not contain any known or suspected substance
Ozone Depletion Potential	This product does not contain any known or suspected substance

13. Disposal Considerations

13.1 Waste treatment methods

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

14. Transport information

IMDG

14.1. UN number	UN 1869
14.2. UN Proper shipping name	MAGNESIUM
14.3. Transport hazard class(es)	4.1

14.4. Packaging group	III

ADR/RID/ADN

14.1. UN number	UN 1869
14.2. UN Proper shipping name	MAGNESIUM
14.3. Transport hazard class(es)	4.1
14.4. Packaging group	III

ICAO-IATA/DGR

14.1. UN number	UN 1869
14.2. UN Proper shipping name	Magnesium
14.3. Transport hazard class(es)	4.1
14.4. Packaging group	III

14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required
14.7. Maritime transport in bulk according to IMO instruments	Not applicable, packaged goods

15. Regulatory information

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

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/878.

Authorisations/Restrictions

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation:	Not applicable
Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances:	Not applicable
Regulation (EC) 1005/2009 on substances that deplete the ozone layer:	Not applicable
Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021:	Not applicable

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

16. Other information

Revision information

Preparation date	25/09/2024
Revision date	25/09/2024
Revision reason	Creation.

Abbreviations and acronyms

CAS	Chemical Abstracts Service
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
IATA	International Air Transportation Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
TWA	Time Weighted Average
STOT	Specific target organ toxicity
PBT	Persistent, Bioaccumulative, Toxic
vPvB	Very Persistent, very Bioaccumulative
WEL	Workplace exposure limit

References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

[2] ECHA - European Chemicals Agency, website: https://echa.europa.eu/

[3] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

[4] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

[5] HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

[6] IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

[7] IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

[8] ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

List of relevant phrases (code and full text as stated in chapter 2 and 3)

H228	Flammable solid
H252	Self-heating in large quantities; may catch fire
H261	In contact with water releases flammable gases

Disclaimer

The information of this safety data sheet is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products. For further information please contact info@vimaterial.de.