


<a href="#">Magnesium Hydride</a>		<a href="#">Pricing &gt;</a>
Linear Formula	MgH <sub>2</sub>	
Pubchem CID	107663	
MDL Number	MFCD00011101	
EC No.	231-705-3	
IUPAC Name	magnesium hydride	
Beilstein/Reaxys No.	N/A	
SMILES	[H-].[H-].[Mg+2]	
Inchl Identifier	InChI=1S/Mg.2H/q+2;2*-1	
Inchl Key	RHLWKNJTVXDVHU-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H228-H260	
Hazard Codes	N/A	
Precautionary Statements	P210-P231+P232-P280-P370+P378-P402+P404-P501	
Risk Codes	N/A	
Safety Statements	N/A	
RTECS Number	N/A	
Transport Information	UN 2010 4.3/PG 1	
WGK Germany	3	
GHS Pictograms	<a href="#">GHS02 Flame</a> 	

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## SAFETY DATA SHEET

Date Accessed: 05/05/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #7693-27-8

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in  
accordance with 29 CFR 1910 (OSHA HCS)

GHS02 Flame

Flam. Sol. 1

H228 Flammable solid.

Water-react. 1 H260 In contact with water releases  
flammable gases which may ignite spontaneously.

Hazards not otherwise classified

No information known.

Label elements

GHS label elements

The product is classified and labeled in accordance  
with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS02

Signal word

Danger

Hazard statements

H228 Flammable solid.

H260 In contact with water releases flammable gases  
which may ignite spontaneously.

Precautionary statements

P210

Keep away from heat/sparks/open flames/hot  
surfaces. No smoking.

P231+P232 Handle under inert gas. Protect from  
moisture.

P280

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

P370+P378 In case of fire: Use for extinction: CO2,  
sand, extinguishing powder.

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

P501

Dispose of contents/container in accordance with

local/regional/national/international regulations.  
WHMIS classification  
B6 - Reactive flammable material  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
Health (acute effects) = 1  
Flammability = 3  
Physical Hazard = 3  
Other hazards  
Results of PBT and vPvB assessment  
PBT:  
N/A.  
vPvB:  
N/A.

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical characterization: Substances  
CAS# Description:  
7693-27-8 Magnesium hydride  
Identification number(s):  
EC number: 231-705-3

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
After inhalation  
Supply fresh air. If required, provide artificial  
respiration. Keep patient warm.  
Seek immediate medical advice.  
After skin contact  
Immediately wash with water and soap and rinse  
thoroughly.  
Seek immediate medical advice.  
After eye contact  
Rinse opened eye for several minutes under running  
water. Then consult a doctor.  
After swallowing  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and  
delayed  
No further relevant information available.  
Indication of any immediate medical attention and  
special treatment needed  
No further relevant information available.

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

For safety reasons unsuitable extinguishing agents

Water

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Prevention of secondary hazards:

Keep away from ignition sources.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Information about storage in one common storage facility:

Store away from water/moisture.

Store away from oxidizing agents.

Store away from reducing agents.

Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

Specific end use(s)

No further relevant information available.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their

proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes)

No data available

Eye protection:

Safety glasses

Full face protection

Body protection:

Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

General Information

Appearance:

Form: Crystalline

Color: White

Odor: No data available

Odor threshold: No data available.

pH-value: N/A.

Change in condition

Melting point/Melting range: 327 °C (621 °F) (dec)

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flammability (solid, gaseous)

Highly flammable.

Contact with water liberates extremely flammable gases.

Ignition temperature: No data available

Decomposition temperature: No data available

Auto igniting: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: N/A.

Density at 20 °C (68 °F): 1.45 g/cm<sup>3</sup> (12.1 lbs/gal)

Relative density

No data available.

Vapor density: N/A.

Evaporation rate: N/A.

Solubility in / Miscibility with Water: Contact with water releases flammable gases

Partition coefficient (n-octanol/water): No data available.

Viscosity:

dynamic: N/A.

kinematic: N/A.

Other information

No further information available.

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## **SECTION 10. STABILITY AND REACTIVITY**

### Reactivity

In contact with water releases flammable gases which may ignite spontaneously.

### Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

Reacts with strong oxidizing agents

Contact with water releases flammable gases

Conditions to avoid

No further relevant information available.

Incompatible materials:

Oxidizing agents

Reducing agents

Water/moisture

Hazardous decomposition products:

Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

No effects known.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.  
Subacute to chronic toxicity:  
No effects known.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity:  
No further relevant information available.  
Persistence and degradability  
No further relevant information available.  
Bioaccumulative potential  
No further relevant information available.  
Mobility in soil  
No further relevant information available.  
Additional ecological information:  
General notes:  
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment  
PBT:  
N/A.  
vPvB:  
N/A.  
Other adverse effects  
No further relevant information available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation  
Consult state, local or national regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA  
UN2010  
UN proper shipping name  
DOT



Magnesium hydride  
IMDG, IATA  
MAGNESIUM HYDRIDE  
Transport hazard class(es)  
DOT  
Class  
4.3 Substances which, in contact with water, emit flammable gases.  
Label  
4.3  
Class  
4.3 (W2) Substances which, in contact with water, emit flammable gases  
Label  
4.3  
IMDG, IATA  
Class  
4.3 Substances which, in contact with water, emit flammable gases.  
Label  
4.3  
Packing group  
DOT, IMDG, IATA  
I  
Environmental hazards:  
N/A.  
Special precautions for user  
Warning: Substances which, in contact with water, emit flammable gases  
EMS Number: F-G,S-O  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N/A.  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT):  
No  
UN "Model Regulation":  
UN2010, Magnesium hydride, 4.3, I

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements  
The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)  
Hazard pictograms  
GHS02  
Signal word  
Danger

#### Hazard statements

H228 Flammable solid.

H260 In contact with water releases flammable gases which may ignite spontaneously.

#### Precautionary statements

P210

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P231+P232 Handle under inert gas. Protect from moisture.

P280

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

P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, sand, extinguishing powder.

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

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed.

#### California Proposition 65

Prop 65 - Chemicals known to cause cancer  
Substance is not listed.

Prop 65 - Developmental toxicity  
Substance is not listed.

Prop 65 - Developmental toxicity, female  
Substance is not listed.

Prop 65 - Developmental toxicity, male  
Substance is not listed.

#### Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
Substance is not listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried  
out.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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