



Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name Ethynylmagnesium bromide, 0.5M solution in tetrahydrofuran
Product Number 346152
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS MO 63103 US
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Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
ETHYNYLMAGNESIUM BROMIDE, 0.5M SOLUTION IN TETRAHYDROFURAN	4301-14-8	No		

<u>Ingredient Name</u>	<u>CAS #</u>	<u>Percent</u>	<u>SARA 313</u>
TETRAHYDROFURAN (Inhibitor free)	109-99-9	94.000 %	No

Formula C₂H₄BrMg
Synonyms

Section 3 - Hazards Identification

Emergency Overview

Flammable (USA) Highly Flammable (EU) Corrosive.
May form explosive peroxides. Reacts violently with water. Harmful if swallowed. Causes burns.
Possible Carcinogen (US). Target organ(s): Central nervous system. Liver. Kidneys.

HMIS Rating
Health: 3* Flammability: 3 Reactivity: 2

NFPA Rating
Health: 3 Flammability: 3 Reactivity: 2

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flammable Hazards Yes **Peroxide Former:** Yes

Explosion Hazards

Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.

Conditions of Flammability

Reacts with water to liberate flammable and/or explosive gas.

Flash Point: -20 °F -28.89 °C

Autoignition Temp: N/A **Flammability:** Yes

Extinguishing Media

Suitable

Dry chemical powder.

Unsuitable

Do not use water.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Flammable liquid. Emits toxic fumes under fire conditions.

Specific Method(s) of Fire Fighting

Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Cover with dry-lime, sand, or soda ash. Place in covered containers using nonsparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Avoid contact with eyes, skin, and clothing. Do not breathe vapor. Avoid prolonged or repeated exposure.

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Storage
Suitable

Keep container closed. Keep away from heat, sparks, and open flame. Store in a cool dry place. Handle and store under nitrogen.
Store at 2-8°C

Special Requirements

Do not distill to dryness.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Physical State

Liquid

Molecular Weight 129.2 AMU

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density 0.94 g/cm³

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point °F -20 °F

Flash Point °C -28.89 °C

Method: closed cup

Method: closed cup

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A

Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability

Stable

Stable.

Conditions to Avoid

Do not allow water to enter container because of violent reaction.

Materials to Avoid

Oxidizing agents. Oxygen.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Hydrogen bromide gas

Hazardous Polymerization

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

Causes burns.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes burns.

Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

Harmful if swallowed.

Target Organ(s) or System(s)

Central nervous system, Liver, Kidneys.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Can cause CNS depression.

RTECS Number: N/A

Chronic Exposure - Carcinogen

Result: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Organometallic substance, liquid, waterreactive, flammable

UN#: 3399

Class: 4.3

Packing Group: Packing Group II

Hazard Label: Dangerous when wet

Hazard Label: Flammable liquid

PIH: Not PIH

IATA

Proper Shipping Name: Organometallic substance, liquid, waterreactive, flammable

IATA UN Number: 3399

Hazard Class: 4.3

Packing Group: II

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: F C

Indication of Danger

Highly Flammable, Corrosive.

Risk Statements **R:** 11 14 22 34

Highly flammable. Reacts violently with water. Harmful if swallowed. Causes burns.

Safety Statements **S:** 16 26 36/37/39 45

Keep away from sources of ignition- no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU), Corrosive.

Risk Statements

May form explosive peroxides. Reacts violently with water. Harmful if swallowed. Causes burns.

Safety Statements

Keep away from sources of ignition- no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Possible Carcinogen (US), Target organ(s): Central nervous system, Liver, Kidneys.

United States Regulatory Information

SARA Listed: No

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

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. SigmaAldrich Inc., shall not be held liable for

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