

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Phenylmagnesium bromide solution

Product Number : 257117  
Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +18003255832  
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Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula :  $C_6H_5BrMg$

CAS-No.	EC-No.	Index-No.	Concentration
<b>Bromophenylmagnesium</b>			
100-58-3	202-867-2	-	59.62 %
<b>Diethyl ether</b>			
60-29-7	200-467-2	603-022-00-4	40.38 %

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Flammable liquid, Water Reactive, Target Organ Effect, Harmful by ingestion., Corrosive

##### Target Organs

Central nervous system, Liver, Kidney, Gastrointestinal tract, Skeletal muscle.

#### HMIS Classification

Health hazard: 3  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 2

#### NFPA Rating

Health hazard: 3  
Fire: 3  
Reactivity Hazard: 2  
Special hazard.: W

## Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	Harmful if swallowed. Causes burns.

## 4. FIRST AID MEASURES

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Flammable properties

Flash point -40 °C (-40 °F) - closed cup

Ignition temperature no data available

### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Dry powder

### Extinguishing media which shall not be used for safety reasons

Water

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.  
Never allow product to get in contact with water during storage.

Light sensitive.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Diethyl ether	60-29-7	TWA	400 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Central Nervous System impairment Upper Respiratory Tract irritation				
		STEL	500 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Central Nervous System impairment Upper Respiratory Tract irritation				
		TWA	400 ppm 1,200 mg/m <sup>3</sup>	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,500 mg/m <sup>3</sup>	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 1,200 mg/m <sup>3</sup>	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m <sup>3</sup> is approximate.				

**Personal protective equipment****Respiratory protection**

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves.

**Eye protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum).

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid

### Safety data

pH no data available

Melting point no data available

Boiling point no data available

Flash point -40 °C (-40 °F) - closed cup

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 1.134 g/mL at 25 °C (77 °F)

Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

### Materials to avoid

Water, Oxidizing agents, Strong oxidizing agents, Strong acids, Alcohols, acids

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas, Magnesium oxide

### Hazardous reactions

Vapours may form explosive mixture with air.  
Reacts violently with water.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as

a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

### Potential Health Effects

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<b>Eyes</b>	Causes eye burns.
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<b>Target Organs</b>	Central nervous system, Liver, Kidney, Gastrointestinal tract, Skeletal muscle.,

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

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. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN-Number: 3399 Class: 4.3 (3) Packing group: I  
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Bromophenylmagnesium, Diethyl ether)  
Reportable Quantity (RQ): 248 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

### IMDG

UN-Number: 3399 Class: 4.3 (3) Packing group: I EMS-No: F-G, S-N  
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Diethyl ether, Bromophenylmagnesium)  
Marine pollutant: No

**IATA**

UN-Number: 3399 Class: 4.3 (3) Packing group: I  
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Diethyl ether, Bromophenylmagnesium)  
IATA Passenger: Not permitted for transport

**15. REGULATORY INFORMATION****OSHA Hazards**

Flammable liquid, Water Reactive, Target Organ Effect, Harmful by ingestion., Corrosive

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Fire Hazard, Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Diethyl ether	60-29-7	2007-03-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Diethyl ether	60-29-7	2007-03-01
Bromophenylmagnesium	100-58-3	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Diethyl ether	60-29-7	2007-03-01
Bromophenylmagnesium	100-58-3	

**California Prop. 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION****Further information**

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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. Sigma-Aldrich Co., 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.