

## Chemical Safety Data Sheet MSDS / SDS

**Benzylmagnesium chloride**

Revision Date:2026-06-06 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : Benzylmagnesium chloride  
CBnumber : CB5201929  
CAS : 6921-34-2  
EINECS Number : 230-039-0  
Synonyms : benzylmagnesium chloride,Benzylmagnesiumchlorid

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P501 Dispose of contents/container to....  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P271 Use only outdoors or in a well-ventilated area.  
P270 Do not eat, drink or smoke when using this product.  
P264 Wash skin thoroughly after handling.  
P240 Ground/bond container and receiving equipment.  
P233 Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P370+P378 In case of fire: Use ... for extinction.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P310 Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

#### **Hazard statements**

H351 Suspected of causing cancer

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H225 Highly Flammable liquid and vapour

H333 May be harmful if inhaled

H318 Causes serious eye damage

H303 May be harmful if swallowed

H372 Causes damage to organs through prolonged or repeated exposure

H371 May cause damage to organs

---

## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Benzylmagnesium chloride
Synonyms	: benzylmagnesium chloride, Benzylmagnesiumchlorid
CAS	: 6921-34-2
EC number	: 230-039-0
MF	: C7H7ClMg
MW	: 150.89

---

## SECTION 4: First aid measures

### **General advice**

First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.

### **If inhaled**

After inhalation: fresh air. Call in physician.

### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

### **In case of eye contact**

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### **If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### **Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### **Protection of first-aiders**

For personal protection see section 8.

### **Notes to physician**

No data available

---

## SECTION 5: Firefighting measures

### **Suitable extinguishing media**

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

### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **Specific hazards during fire fighting**

Combustible. Pay attention to flashback. Vapours are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

### **Hazardous combustion products**

Carbon oxides Hydrogen chloride gas Magnesium oxide

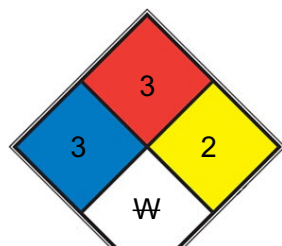
### **Specific extinguishing methods**

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### **Special protective equipment for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### **NFPA 704**





<input checked="" type="checkbox"/>	HEALTH	3	Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , hexafluorosilicic acid)
<input checked="" type="checkbox"/>	FIRE	3	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, <a href="#">acetone</a> )
<input checked="" type="checkbox"/>	REACT	2	Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g. white phosphorus, <a href="#">potassium</a> , <a href="#">sodium</a> )
<input type="checkbox"/>	SPEC. HAZ.	W	

---

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains. Risk of explosion.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.

---

## SECTION 7: Handling and storage

### Handling

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Avoidance of contact

Water Bases Oxidizing agents Powdered metals Alcohols Strong acids

### Storage

#### Further information on storage conditions

Keep container tightly closed in a dry and wellventilated place. Keep away from heat and sources of ignition.

#### Storage class

3, Flammable liquids

#### Recommended storage temperature

Recommended storage temperature see product label.

#### Further information on storage stability

Handle and store under inert gas. Test for peroxide formation periodically and before distillation.

#### **Packaging material**

Suitable material: Mild Steel Drum, Sure-Seal Bottles

---

## SECTION 8: Exposure controls/personal protection

### **Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

### **Engineering measures**

No data available

### **Personal protective equipment**

#### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Recommended Filter type**

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

#### **Skin and body protection**

Flame retardant antistatic protective clothing.

#### **Hand protection**

#### **Remarks**

required

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

---

## SECTION 9: Physical and chemical properties

### **Information on basic physicochemical properties**

liquid

---

#### **Color**

Brown to purple

#### **Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

No data available

**Boiling point/boiling range**

182 °C(Press: 16 Torr)

**Flash point**

-13.0 °C

Method: closed cup

**Evaporation rate**

No data available

**Flammability (solid, gas)**

No data available

**Flammability (liquids)**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.031 g/mL at 25 °C

**Density**

0.899 g/cm<sup>3</sup>

**Water solubility**

Severe reaction

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

150.89 g/mol

**Particle characteristics Particle size**

No data available

**Physical state**

Liquid

---

**SECTION 10: Stability and reactivity****Reactivity**

Formation of peroxides possible. Vapours may form explosive mixture with air.

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

Warming. Moisture.

### **Incompatible materials**

Water Bases Oxidizing agents Powdered metals Alcohols Strong acids

### **Hazardous decomposition products**

Peroxides : In the event of fire: see section 5

---

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Mixture Acute toxicity**

Oral: No data available

Acute toxicity estimate Oral - 588.24 mg/kg (Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

#### **Skin corrosion/irritation**

Remarks: Mixture causes burns.

#### **Serious eye damage/eye irritation**

Remarks: Mixture causes serious eye damage.

Risk of blindness!

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

### **11.2 Additional Information**

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper

respiratory tract, eyes, and skin.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

### **Components 2-Methyltetrahydrofuran**

#### **Acute toxicity**

LD50 Oral - Rat - female - > 300 - 2,000 mg/kg (OECD Test Guideline 420)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting.,

Aspiration may cause pulmonary oedema and pneumonitis.

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

#### **Skin corrosion/irritation**

Skin - In vitro study

Result: irritating - 15 min (OECD Test Guideline 439)

#### **Serious eye damage/eye irritation**

Eyes - In vitro study

Result: Corrosive - 10 min (OECD Test Guideline 437)

#### **Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative (OECD Test Guideline 429)

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: negative

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity - Possible damages:, mucosal irritations

#### **Specific target organ toxicity - repeated exposure Aspiration hazard**

Classified based on available data. For more details, see section 2

#### **Benzylmagnesium chloride Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

#### **Skin corrosion/irritation**

Remarks: No data available

#### **Serious eye damage/eye irritation**

Remarks: No data available

### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

### **Carcinogenicity**

Classified based on available data. For more details, see section 2

### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

### **Aspiration hazard**

Classified based on available data. For more details, see section 2

---

## SECTION 12: Ecological information

### **Ecotoxicity**

#### **Components:**

#### **2-Methyltetrahydrofuran:**

##### **Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes

##### **Toxicity to daphnia and other aquatic invertebrates**

EC50 (Daphnia magna (Water flea)): > 139 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes

##### **Toxicity to algae/aquatic plants**

ErC50 (Desmodesmus subspicatus (green algae)): > 104 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

##### **Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

NOEC (Daphnia magna (Water flea)): >= 120 mg/l End point: mortality Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes

##### **Toxicity to microorganisms**

EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209 GLP: yes

#### **Benzylmagnesium chloride:**

##### **Toxicity to fish**

Remarks: No data available

#### **Persistence and degradability**

#### **Components:**

## **2-Methyltetrahydrofuran:**

### **Biodegradability**

aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 2 % Exposure time: 28 d Method: OECD Test Guideline 301D GLP: yes

## **Benzylmagnesium chloride:**

### **Biodegradability**

Remarks: No data available

### **Bioaccumulative potential**

### **Components:**

## **2-Methyltetrahydrofuran:**

### **Partition coefficient: noctanol/water**

log Pow: 1.35 Method: (calculated) Remarks: Bioaccumulation is not expected. (Lit.)

## **Benzylmagnesium chloride:**

### **Bioaccumulation**

Remarks: No data available

### **Mobility in soil**

### **Components:**

## **Benzylmagnesium chloride:**

### **Stability in soil**

Remarks: No data available

### **Other adverse effects**

### **Components:**

## **2-Methyltetrahydrofuran:**

### **Additional ecological information**

Discharge into the environment must be avoided.

## **Benzylmagnesium chloride:**

### **Additional ecological information**

No data available

---

## SECTION 13: Disposal considerations

### **Disposal methods**

## Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

---

# SECTION 14: Transport information

## International Regulations

### IATA-DGR

UNID No. : UN 2924

Proper shipping name : Flammable liquid, corrosive, n.o.s.

(Benzylmagnesium chloride, 2Methyltetrahydrofuran)

Class : 3

Subsidiary risk : 8

Packing group : II

Labels : Class 3 - Flammable liquids, Class 8 - Corrosive substances

Packing instruction (cargo aircraft) : 363

Packing instruction (passenger aircraft) : 352

### IMDG-Code

UN number : UN 2924

Proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.

(Benzylmagnesium chloride, 2-Methyltetrahydrofuran)

Class : 3

Subsidiary risk : 8

Packing group : II

Labels : 3 (8)

EmS Code : F-E, S-C

Marine pollutant : no

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## National Regulations

### JT/T 617

UN number : UN 2924

Proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.

(Benzylmagnesium chloride, 2Methyltetrahydrofuran)

Class : 3

Subsidiary risk : 8

Packing group : II

Labels : 3 (8)

Environmentally hazardous : no

## Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

## SECTION 15: Regulatory information

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### National regulatory information

#### Regulations on Safety Management of Hazardous Chemicals

##### Catalogue of Hazardous Chemicals

Listed

##### Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

##### No. / Code Chemical name / Category Threshold quantity

W5.3 Flammable liquids 1,000 t

##### Hazardous Chemicals for Priority Management

Not listed under SAWS

##### China. List of Explosive Precursors

Not applicable

##### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

##### Catalogue of Highly Toxic Chemicals

Not listed

##### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

##### China Severely Restricted Toxic Chemicals for Import and Export

Not listed

##### Measures on the Environmental Administration of New Chemical Substances Registration

##### Registration/Notification number

B1A222241373

---

## SECTION 16: Other information

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardisation

KECI - Korea Existing Chemicals Inventory

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Effect Level

NOELR - No Observable Effect Loading Rate

NOM - Official Mexican Norm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chemicals

OECD - Organisation for Economic Co-operation and Development

OPPTS - Office of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Substances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - Taiwan Chemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI - Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (United States)

UN - United Nations

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.