

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Isopropylmagnesium bromide solution

CAS-No.: 920-39-8

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

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225


Substances and mixtures, which in contact with water, emit flammable gases (Category 2), H261

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	H225 Highly flammable liquid and vapour. H261 In contact with water releases flammable gases. H314 Causes severe skin burns and eye damage.
Precautionary statement(s)	P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231 + P232 Handle under inert gas. Protect from moisture. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/ physician. P321 Specific treatment (see supplemental first aid instructions on this label). P335 + P334 Brush off loose particles from skin. Immerse in cool water/ wrap in wet bandages. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P402 + P404 Store in a dry place. Store in a closed container. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

May form explosive peroxides.

Reacts violently with water., May form explosive peroxides.  
May form explosive peroxides.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Mixtures

Formula:  $C_3H_7BrMg$   
Molecular weight: 147.30 g/mol

#### Hazardous components

Component	Classification	Concentration
<b>Tetrahydro-2-methylfuran</b>		
CAS-No. 96-47-9 EC-No. 202-507-4	Flam. Liq. 2; H225	60 -100 %
<b>Bromo(1-methylethyl)magnesium</b>		
CAS-No. 920-39-8	Water-react. 1; Skin Corr. 1B; Eye Dam. 1; H260, H314	30 -60 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

<b>General advice</b>
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>If inhaled</b>
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact</b>
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact</b>
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
<b>If swallowed</b>
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 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

#### 4.2 Indication of any immediate medical attention and special treatment needed

No data available

### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Dry powder

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, 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.

For personal protection see section 8.

### 6.2 Environmental precautions

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

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

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

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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.

Never allow product to get in contact with water during storage.

Handle and store under inert gas. Dry residue is explosive.

### 7.3 Specific end use(s)

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

Eye/face protection	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
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Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Splash contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 10 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	Complete suit protecting against chemicals, Flame retardant antistatic 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	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).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form: liquid
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	< -25 °C (< -13 °F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.112 g/cm <sup>3</sup>
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

### 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

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

#### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.

#### 10.5 Incompatible materials

Strong bases, Strong oxidizing agents, Strong acids

#### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute toxicity</b>
No data available
<b>Skin corrosion/irritation</b>
No data available
<b>Serious eye damage/eye irritation</b>
No data available
<b>Respiratory or skin sensitisation</b>
No data available
<b>Germ cell mutagenicity</b>
No data available
<b>Carcinogenicity</b>
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.
<b>Reproductive toxicity</b>
No data available No data available
<b>Specific target organ toxicity -single exposure</b>
No data available
<b>Specific target organ toxicity -repeated exposure</b>
No data available
<b>Aspiration hazard</b>
No data available
<b>Additional Information</b>
RTECS: Not available 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 Stomach - Irregularities - Based on Human Evidence Lungs - Irregularities - This information is not available. (Tetrahydro-2-methylfuran) Stomach - Irregularities - Based on Human Evidence (Bromo(1-methylethyl)magnesium)

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### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

No data available

#### 12.2 Persistence and degradability

No data available

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Other adverse effects

No data available

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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

<b>Product</b>
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
<b>Contaminated packaging</b>
Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### DOT (US)

UN number: 3399 Class: 4.3 (3) Packing group: II

Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Tetrahydro-2-methylfuran, Bromo(1-methylethyl)magnesium)

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No

#### IMDG

UN number: 3399 Class: 4.3 (3) Packing group: II EMS-No: F-G, S-N

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Tetrahydro-2-methylfuran, Bromo(1-methylethyl)magnesium)

Marine pollutant: No

#### IATA

UN number: 3399 Class: 4.3 (3) Packing group: II

Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Tetrahydro-2-methylfuran, Bromo(1-methylethyl)magnesium)

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### 15. REGULATORY INFORMATION

#### SARA 302 Components

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

#### SARA 313 Components

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

Component	CAS-No.	Revision Date
Tetrahydro-2-methylfuran	96-47-9	1993-04-24

## Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
Tetrahydro-2-methylfuran	96-47-9	1993-04-24
Bromo(1-methylethyl)magnesium	920-39-8	

## New Jersey Right To Know Components

Component	CAS-No.	Revision Date
Tetrahydro-2-methylfuran	96-47-9	1993-04-24
Bromo(1-methylethyl)magnesium	920-39-8	

## California Prop. 65 Components

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

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Eye Dam. Serious eye damage

Flam. Liq. Flammable liquids

H225 Highly flammable liquid and vapour.

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

H261 In contact with water releases flammable gases.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Skin Corr. Skin corrosion

Water-react. Substances and mixtures, which in contact with water, emit flammable gases

### HMIS Rating

Health hazard: 3

Chronic Health Hazard: \*

Flammability: 3

Physical Hazard 1

### NFPA Rating

Health hazard: 3

Fire Hazard: 3

Reactivity Hazard: 1

Special hazard.I: W

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