

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 25.02.2010

Printing date 01.07.2013

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

1.1 Product identifier

Trade name

Methylmagnesium bromide, 3M in ether

Stock number:

87324

CAS Number:

75-16-1

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

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 1 H224 Extremely flammable liquid and vapour.

Water-react. 2 H261 In contact with water releases flammable gases.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H336 May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R34: Causes burns.

Xn; Harmful

R22: Harmful if swallowed.

F+; Extremely flammable

R12: Extremely flammable.

F; Highly flammable

R14/15: Reacts violently with water, liberating extremely flammable gases.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
Has a narcotizing effect.

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS02, GHS05, GHS07

Danger

H224 Extremely flammable liquid and vapour.

H261 In contact with water releases flammable gases.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H336 May cause drowsiness or dizziness.

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

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

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

P309 IF exposed or if you feel unwell:

P310 Immediately call a POISON CENTER or doctor/physician.

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

EUH014 Reacts violently with water.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Additional information:

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation:

75-16-1 Methylmagnesium bromide, 3M in ether

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

After inhalation

Instantly remove any clothing soiled by the product.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

After skin contact

Instantly 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 doctor.

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After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents

CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents

Water.

5.2 Special hazards arising from the substance or mixture

Reacts violently with water
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Hydrogen bromide (HBr)
Metal oxide

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or water bodies.

Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Keep away from ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Keep away from ignition sources.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

Prevention of secondary hazards:

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

Information about protection against explosions and fires:

Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and containers:

Store in cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.
Store away from air.
Store away from water.

Further information about storage conditions:

Store under dry inert gas.
This product is moisture sensitive.
This product is air sensitive.
Protect from humidity and keep away from water.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Store in a locked cabinet or with access restricted to technical experts or their assistants.
No further relevant information available.

7.3 Specific end use(s)

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.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

Diethyl ether
ppm
ACGIH TLV 400; 500-STEL
Austria MAK 400
Belgium TWA 400; 500-STEL
Denmark TWA 400
Finland TWA 400; 500-STEL
France VME 400; 500-VLE
Germany MAK 400
Hungary TWA 300; 600-STEL (skin)
Ireland TWA 400; 500-STEL
Japan OEL 400
Korea TLV 400; 500-STEL
Netherlands MAC-TGG 400
Norway TWA 200
Poland TWA 300; 1500-STEL
Russia TWA 400; 300-STEL
Sweden TWA 400; 500-STEL
Switzerland MAK-W 400; 800-KZG-W

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Additional information:**8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures****Breathing equipment:****Protection of hands:****Material of gloves****Penetration time of glove material****Eye protection:****Body protection:**

United Kingdom TWA 400; 500-STEL
USA PEL 400
No data

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Use breathing protection with high concentrations.

Check protective gloves prior to each use for their proper condition.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Impervious gloves

Not determined

Tightly sealed safety glasses.

Full face protection

Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Liquid

Colour: Light brown

Smell: Ether-like

Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Flash point: -40 °C

Inflammability (solid, gaseous): Not determined.

Ignition temperature: 160 °C

Decomposition temperature: Not determined

Self-inflammability: Not determined.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not determined

Density at 20 °C: 1,035 g/cm³

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Reacts violently

Contact with water releases flammable gases

Partition coefficient (n-octanol/water): Not determined.

Viscosity: dynamic: Not determined.

kinematic: Not determined.

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

Reacts violently with water.

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

Stable under recommended storage conditions.

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with oxygen

Can react violently with oxygen rich (oxidizing) material. Explosive.

Contact with water releases flammable gases

Reacts violently with water

10.5 Incompatible materials:

Oxidizing agents

Air

Oxygen

Carbon dioxide

Water/moisture

10.6 Hazardous decomposition products:

Inflammable gases/vapours

Hydrogen bromide

Carbon monoxide and carbon dioxide

Metal oxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:**

Harmful if swallowed.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

Causes severe skin burns.

Repeated exposure may cause skin dryness or cracking.

Eye irritation or corrosion:

Irritant effect.

Causes serious eye damage.

Sensitization:

No sensitizing effect 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.

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Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: May cause drowsiness or dizziness.
Aspiration hazard: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability
12.3 Bioaccumulative potential
12.4 Mobility in soil
Additional ecological information: No further relevant information available.
General notes: Do not allow material to be released to the environment without proper governmental permits.
 Water hazard class 1 (Self-assessment): slightly hazardous for water.
 Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
 Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects
 No further relevant information available.



SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
 Hand over to disposers of hazardous waste.
 Must be specially treated under adherence to official regulations.
 Consult state, local or national regulations for proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA UN1928

14.2 UN proper shipping name
ADR 1928 METHYL MAGNESIUM BROMIDE IN ETHYL ETHER
IMDG, IATA METHYL MAGNESIUM BROMIDE IN ETHYL ETHER

14.3 Transport hazard class(es)
ADR

Class 4.3 (WF1) Substances which, in contact with water, emit flammable gases.
Label 4.3+3
IMDG, IATA

Class 4.3 Substances which, in contact with water, emit flammable gases.
Label 4.3+3

Packing group
ADR, IMDG, IATA I

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user
Kemler Number: Warning: Substances which, in contact with water, emit flammable gases.
 X323

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ): E0
Limited quantities (LQ) 0
Transport category 0
Tunnel restriction code B/E

UN "Model Regulation": UN1928, METHYL MAGNESIUM BROMIDE IN ETHYL ETHER, 4.3 (3), I

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances Substance is not listed.
Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.
National regulations
Information about limitation of use: Employment restrictions concerning young persons must be observed.
 For use only by technically qualified individuals.
Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical Substances) Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57 Substance is not listed.
REACH - Pre-registered substances Substance is listed.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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Department issuing data specification sheet: Health, Safety and Environmental Department.**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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