Ethylmagnesium Bromide	Pricing >

Linear Formula	C_2H_5BrMg
Pubchem CID	101914
MDL Number	MFCD00000043
EC No.	213-127-3
IUPAC Name	magnesium; ethane; bromide
Beilstein/Reaxys No.	N/A
SMILES	[CH2-].[Mg+2].[Br-]
Inchl Identifier	InChI=1S/C2H5.BrH.Mg/c1-2;;/h1H2,2H3;1H;/q-1;;+2/p-1
Inchl Key	FRIJBUGBVQZNTB-UHFFFAOYSA-M

Signal Word	Danger
Hazard Statements	H225-H250-H260-H302-H314-H336
Hazard Codes	C,F
Risk Codes	11-14-19-22-34-67
Safety Statements	16-26-36/37/39-45
RTECS Number	N/A
Transport Information	UN 2924 3/PG 1
WGK Germany	3
GHS Pictograms	**GHS02 Flame**  **GHS05 Corrosive**  **GHS07 Exclamation Point** 

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SAFETY DATA SHEET

Date Accessed: 04/27/2024
Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #925-90-6

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS02 Flame
Flam. Liq. 1
H224 Extremely flammable liquid and Vapor.
Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.
GHS05 Corrosion
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
GHS07
STOT SE 3
H336 May cause drowsiness or dizziness.
Hazards not otherwise classified
No data available
GHS label elements
GHS label elements, including precautionary statements
Hazard pictograms

GHS02 GHS05 GHS07
Signal word
Danger

Hazard-determining components of labeling:
Ethylmagnesium bromide
Hazard statements
H224 Extremely flammable liquid and Vapor.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
Precautionary statements
P210
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P231+P232
Handle under inert gas. Protect from moisture.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405
Store locked up.
P501
Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
B2 - Flammable liquid
B6 - Reactive flammable material
D2B - Toxic material causing other toxic effects
E - Corrosive material
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 3
Flammability = 4
Physical Hazard = 3
Other hazards
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
Dangerous components:
60-29-7 Diethyl ether Flam. Liq. 1, H224; Acute Tox. 4, H302; STOT SE 3, H336 60.0%
925-90-6 Ethylmagnesium bromide Water-react. 1, H260; Skin Corr. 1B, H314; Eye Dam. 1, H318 40.0%

Additional information
None known.

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
Immediately remove any clothing soiled by the product.
If inhaled:
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
In case of skin contact:
Immediately wash with soap and water; rinse thoroughly.
Seek immediate medical advice.
In case of eye contact:
Rinse opened eye for several minutes under running water. Consult a physician.
If swallowed:
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.
Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
For safety reasons unsuitable extinguishing agents
Water
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 fume
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Environmental precautions:
Do not allow product to enter drains, sewage systems, or other water courses.
Methods and materials for containment and cleanup:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Prevention of secondary hazards:
Keep away from ignition sources.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Keep away from heat and direct sunlight.
Ensure good ventilation at the workplace.
Open and handle container with care.
Prevent formation of aerosols.
Information about protection against explosions and fires:
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away.
Do not distill to dryness.
Explosive peroxides may form, handle container cautiously.
Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and

receptacles:
Store in a cool location.
Information about storage in one common storage facility:
Store away from air.
Store away from water/moisture.
Do not store together with acids.
Store away from strong bases.
Store away from oxidizing agents.
Store away from alcohols.
Further information about storage conditions:
Store under dry inert gas.
This product is moisture sensitive.
This product is air sensitive.
Protect from humidity and water.
Store in cool, dry conditions in well-sealed containers.
Protect from heat and direct sunlight.
Avoid contact with air/oxygen (formation of peroxide).
Check container pressure periodically to prevent explosive peroxides.
Specific end use(s)
No data available

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.
Control parameters
Components with limit values that require monitoring at the workplace:
60-29-7 Diethyl ether (60.0%)
PEL (USA)

Long-term value: 1200 mg/m^3, 400 ppm
TLV (USA)

Short-term value: 1520 mg/m^3, 500 ppm

Long-term value: 1210 mg/m^3, 400 ppm
EL (Canada) Short-term value: 500 ppm
Long-term value: 400 ppm

EV (Canada) Short-term value: 1.515 mg/m^3, 500 ppm

Long-term value: 1.210 mg/m^3, 400 ppm
Additional information:
No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment:
Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with organic vapor/acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).
Protection of hands:
Impervious gloves
Inspect gloves prior to use.
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.
Penetration time of glove material (in minutes)
Not determined
Eye protection:
Tightly sealed goggles
Full face protection
Body protection:
Protective work clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance:
Form: Liquid
Color: Pale yellow to brown
Odor: Ether-like
Odor threshold: Not determined.
pH: Not determined.
Melting point/Melting range: Not determined
Boiling point/Boiling range: 34 °C (93 °F)
Sublimation temperature / start: Not determined
Flash point: -45 °C (-49 °F)
Flammability (solid, gas)
Not determined.
Ignition temperature: 170 °C (338 °F)
Decomposition temperature: Not determined
Autoignition: Product is not selfigniting.
Danger of explosion: May form explosive peroxides.
Do not distill to dryness.
Explosion limits:

Lower: 1.7 Vol %
Upper: 36.0 Vol %
Vapor pressure at 20 °C (68 °F): 586.3 hPa (440 mm Hg)

Density at 20 °C (68 °F): 1.02 g/cm^3 (8.512 lbs/gal)
Relative density
Not determined.
Vapor density
Not determined.
Evaporation rate
Not determined.
Solubility in Water (H_2O): Reacts violently

Contact with water releases flammable gases
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.
Solvent content:
Organic solvents: 60.0 %
Other information
No data available
Additional information
This product may form a precipitate.

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Reacts violently with water.
In contact with water releases flammable gases which may ignite spontaneously.
May form explosive peroxides.
Chemical stability
Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions
Reacts with strong oxidizing agents
Contact with water releases flammable gases
Reacts violently with water
May form explosive peroxides.
Conditions to avoid
No data available
Incompatible materials:
Acids
Air
Bases
Oxidizing agents
Alcohols
Water/moisture
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Hydrogen bromide

Metal oxide fume
Additional information:
This product may form a precipitate.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Harmful if swallowed.
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.
LD/LC50 values that are relevant for classification:
60-29-7 Diethyl ether
Oral
LD50 1211 mg/kg (rat)
Dermal LD50 >20 mL/kg (rabbit)
Skin irritation or corrosion:
Causes severe skin burns.
Eye irritation or corrosion:
Causes serious eye damage.
Sensitization:
No sensitizing effects known.
Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
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.
Specific target organ system toxicity - repeated exposure:
No effects known.
Specific target organ system toxicity - single exposure:
May cause drowsiness or dizziness.
May cause respiratory irritation.
Aspiration hazard:
No effects known.
Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Additional ecological information:
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN3399
UN proper shipping name
DOT
Organometallic substance, liquid, water-reactive, flammable (Ethylmagnesium bromide, Diethyl ether

(Ethyl ether))
IMDG, IATA
ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE(Ethylmagnesium bromide, DIETHYL ETHER)
Transport hazard class(es)
DOT
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3+3
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
DOT, IMDG, IATA
I
Environmental hazards:
Marine pollutant (IMDG):
No
Special precautions for user
Warning: Substances which, in contact with water, emit flammable gases
EMS Number: F-G,S-M
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No
UN "Model Regulation":
UN3399, Organometallic substance, liquid, water-reactive, flammable(Ethylmagnesium bromide, Diethyl ether (Ethyl ether)), 4.3 (3), I

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS GHS label elements, including precautionary statements

Hazard pictograms
GHS02
GHS05
GHS07
Signal word
Danger
Hazard-determining components of labeling:
Ethylmagnesium bromide
Hazard statements
H224 Extremely flammable liquid and Vapor.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
Precautionary statements
P210
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P231+P232
Handle under inert gas. Protect from moisture.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405
Store locked up.
P501
Dispose of contents/container in accordance with local/regional/national/international regulations.
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
The components of this product are listed on the Canadian Domestic Substances List (DSL) and/or the Canadian Non-Domestic Substances List (NDSL).
SARA Section 313 (specific toxic chemical listings)
None of the ingredients are listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer
None of the ingredients are listed.
Prop 65 - Developmental toxicity
None of the ingredients are listed.
Prop 65 - Developmental toxicity, female
None of the ingredients are listed.
Prop 65 - Developmental toxicity, male
None of the ingredients are listed.
Information about limitation of use:
For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

None of the ingredients are listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
None of the ingredients is listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use)
None of the ingredients is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements 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.