

SAFETY DATA SHEET

Date Accessed: 04/24/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Name: Magnesium bis(diisopropyl)amide

Product Number: All applicable American Elements product codes, e.g. MG-I2PLAM-01-SOL

CAS #: 23293-23-4

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:

+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

Water-react. 1 H260 In contact with water releases flammable gases, which may ignite spontaneously.

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard Pictograms



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and Vapor.
H261 In contact with water releases flammable gases.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.
Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P223 Do not allow contact with water.
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.
P261 Avoid breathing dust/ fume/ gas/ mist/ Vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
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 to extinguish.
P402 + P404 Store in a dry place. Store in a closed container.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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.
Hazards not otherwise classified (HNOC) or not covered by GHS
Reacts violently with water., May form explosive peroxides.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Synonyms: Magnesium diisopropylamide

Formula: C₁₂H₂₈MgN₂

Molecular weight: 224.67 g/mol

Hazardous components

Component

Classification

Concentration

Tetrahydrofuran

CAS-No. 109-99-9

EC-No. 203-726-8

Index-No. 603-025-00-0

Registration number 01-2119444314-46-XXXX

Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; Carc. 2; STOT SE 3; H225, H302, H319, H335, H351
>=70-<90%

N-(1-Methylethyl)-2-propanamine magnesium salt

CAS-No. 23293-23-4

Water-react. 2; Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; H261, H302 + H332, H314
>=20-<30%

2-Methyl-2-butene

CAS-No. 513-35-9

EC-No. 208-156-3

Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Muta. 2; Carc. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 2;
Aquatic Chronic 2; H225, H302, H304, H315, H336, H341, H351, H411
>=1-<5%

Undecane

CAS-No. 1120-21-4

EC-No. 214-300-6

Flam. Liq. 4; Asp. Tox. 1; H227, H304
>=1-<5%

Decane

CAS-No. 124-18-5

EC-No. 204-686-4

Flam. Liq. 3; Asp. Tox. 1; H226, H304
>=1-<5%

Dodecane

CAS-No. 112-40-3

EC-No. 203-967-9

Flam. Liq. 4; Asp. Tox. 1; H227, H304
>=1-<5%

Pentadecane

CAS-No. 629-62-9

EC-No. 211-098-1

Asp. Tox. 1; H304
>=1-<5%

Tridecane

CAS-No. 629-50-5

EC-No. 211-093-4

Asp. Tox. 1; H304
>=1-<5%

Tetradecane
CAS-No. 629-59-4
EC-No. 211-096-0
Asp. Tox. 1; H304
>=1-<5%

SECTION 4. FIRST AID MEASURES

Description of 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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Continue rinsing eyes during transport to hospital.

If swallowed

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

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

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Dry powder

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of Vapors accumulating to form explosive concentrations.

Vapors can accumulate in low areas.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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.

Reference to other sections

For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of Vapor 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.

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.

Recommended storage temperature

2 -8 °C

Handle and store under inert gas.

Air and moisture sensitive.

Test for peroxide formation periodically and before distillation.

Dry residue is explosive.

Store under inert gas.

Test for peroxide formation periodically and before distillation.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Component

CAS-No.

Value

Control parameters

Basis

Tetrahydrofuran

109-99-9

TWA

50.000000 ppm

USA. ACGIH Threshold Limit Values
(TLV)

Remarks

Central Nervous System impairment

Upper Respiratory Tract irritation

Kidney damage

Confirmed animal carcinogen with unknown relevance to humans
Danger of cutaneous absorption
STEL
100.000000 ppm
USA. ACGIH Threshold Limit Values
(TLV)
Central Nervous System impairment
Upper Respiratory Tract irritation
Kidney damage
Confirmed animal carcinogen with unknown relevance to humans
Danger of cutaneous absorption
TWA
200.000000 ppm
590.000000 mg/m3
USA. NIOSH Recommended
Exposure Limits
ST
250.000000 ppm
735.000000 mg/m3
USA. NIOSH Recommended
Exposure Limits
TWA
200.000000 ppm
590.000000 mg/m3
USA. Occupational Exposure Limits
(OSHA) -Table Z-1 Limits for Air
Contaminants
The value in mg/m3 is approximate.
PEL
200 ppm
590 mg/m3
California permissible exposure limits for chemical contaminants
(Title 8, Article 107)
STEL
250 ppm
735 mg/m3
California permissible exposure limits for chemical contaminants
(Title 8, Article 107)
Hazardous components without workplace control parameters
Biological occupational exposure limits
Component
CAS-No.
Parameters
Value
Biological specimen
Basis
Tetrahydrofuran
109-99-9
Tetrahydrofuran
2.0000 mg/l
Urine
ACGIH -Biological
Exposure Indices
(BEI)
Remarks

End of shift (As soon as possible after exposure ceases)

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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).

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. Discharge into the environment must be avoided.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form: liquid

Odor: No data available

Odor 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

Vapor pressure: No data available
Vapor density: No data available
Relative density: 0.871 g/cm³
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
Other safety information: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

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

Conditions to avoid

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

Incompatible materials

No data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. -Carbon oxides, Nitrogen oxides (NO_x), Magnesium oxide

Other decomposition products-No data available

In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

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.

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.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity -single exposure

No data available

Specific target organ toxicity -repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

Stomach-Irregularities-Based on Human Evidence

Stomach-Irregularities-Based on Human Evidence (Tetrahydrofuran)

Stomach-Irregularities-Based on Human Evidence (Decane)

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

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

Other adverse effects

Harmful to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

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.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

UN number: 3399

Class: 4.3 (3)

Packing group: II

Proper shipping name: Organometallic substance, liquid, water-reactive, flammable
(N-(1-Methylethyl)-2-propanamine magnesium salt, Tetrahydrofuran)
Reportable Quantity
(RQ): 1250 lbs
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
(N-(1-Methylethyl)-2-propanamine magnesium salt, Tetrahydrofuran)
IATA
UN number: 3399
Class: 4.3 (3)
Packing group: II
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable
(N-(1-Methylethyl)-2-propanamine magnesium salt, Tetrahydrofuran)

SECTION 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

Tetrahydrofuran

CAS-No.

109-99-9

Revision Date

1993-04-24

2-Methyl-2-butene

513-35-9

1993-04-24

Pennsylvania Right To Know Components

Tetrahydrofuran

CAS-No.

109-99-9

Revision Date

1993-04-24

N-(1-Methylethyl)-2-propanamine magnesium salt

23293-23-4

2-Methyl-2-butene

513-35-9

1993-04-24

Decane

124-18-5

2007-03-01

New Jersey Right To Know Components

Tetrahydrofuran
CAS-No.
109-99-9
Revision Date
1993-04-24
N-(1-Methylethyl)-2-propanamine magnesium salt
23293-23-4
2-Methyl-2-butene
513-35-9
1993-04-24
Undecane
1120-21-4
2007-03-01
Decane
124-18-5
2007-03-01
Dodecane
112-40-3
Pentadecane
629-62-9
Tridecane
629-50-5
Tetradecane
629-59-4

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.

SECTION 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. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.