1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Methylmagnesium bromide solution

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008
Flammable liquids (Category 2)
Substances, which in contact with water, emit flammable gases (Category 1)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Specific target organ toxicity - single exposure (Category 3)

According to European Directive 67/548/EEC as amended.
Highly flammable. Contact with water liberates extremely flammable gases. Causes burns. Harmful if swallowed. May form explosive peroxides. Vapours may cause drowsiness and dizziness. Reacts violently with water.

Label elements

Pictogram

Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
EUH019 May form explosive peroxides.

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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P422 Store contents under inert gas.

Hazard symbol(s)
F Highly flammable
C Corrosive

R-phrase(s)
R11 Highly flammable.
R14/15 Reacts violently with water, liberating extremely flammable gases.
R19 May form explosive peroxides.
R22 Harmful if swallowed.
R34 Causes burns.
R67 Vapours may cause drowsiness and dizziness.

S-phrase(s)
S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Caution - this mixture contains a substance not yet fully tested.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CH3BrMg

CAS-No.	EC-No.	Classification	Concentration
DIETHYL ETHE R			
60-29-7	200-467-2	-	Flam. Liq. 1; STOT SE 3; Acute Tox. 4; H224, H302, H336, EUH019, EUH066 F+, Xn, R12 - R19 - R22 - R66 - R67	>= 60 - <= 65 %
Methylmagnesium bromide			
75-16-1	200-844-1	-	Water-react 1; Skin Corr. 1B; H260, H314, EUH014 F, C, R14/15 - R34	>= 35 - <= 40 %

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

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

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. Consult a physician.

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

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2) Dry powder

Extinguishing media which shall not be used for safety reasons
Water

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, 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.

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

Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
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. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	1,035 g/mL at 25 °C
Water solubility	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Reacts violently with water.

Conditions to avoid
Heat, flames and sparks. Exposure to moisture.

Materials to avoid
Oxygen, Oxidizing agents, Alcohols, acids, Reacts violently with with water.

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas, Magnesium oxide

11. TOXICOLOGICAL INFORMATION

Acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
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.

Reproductive toxicity

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

Potential health effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Vapours may cause drowsiness and dizziness.
Ingestion	Harmful if swallowed. Causes burns.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., Inhalation of vapors may cause:, spasm, inflammation and edema of the bronchi, Oedema, Aspiration or inhalation may cause chemical pneumonitis.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID
UN-Number: 1928 Class: 4.3 (3) Packing group: I
Proper shipping name: METHYL MAGNESIUM BROMIDE IN ETHYL ETHER

IMDG
UN-Number: 1928 Class: 4.3 (3) Packing group: I EMS-No: F-G, S-L
Proper shipping name: METHYLMAGNESIUM BROMIDE IN ETHYL ETHER
Marine pollutant: No

IATA
UN-Number: 1928 Class: 4.3 (3) Packing group: I
Proper shipping name: Methyl magnesium bromide in ethyl ether
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Tox.	Acute toxicity
EUH014	Reacts violently with water.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.
Flam. Liq.	Flammable liquids
H224	Extremely flammable liquid and vapour.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H336	May cause drowsiness or dizziness.
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure
Water-react	Substances, which in contact with water, emit flammable gases
C	Corrosive
F	Highly flammable
R12	Extremely flammable.
R14/15	Reacts violently with water, liberating extremely flammable gases.
R19	May form explosive peroxides.
R22	Harmful if swallowed.
R34	Causes burns.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
F+	Extremely flammable
Xn	Harmful

Further information

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