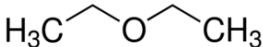


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Substance
	:
CAS No	: 60-29-7
Product code	: 00104
Chemical structure	: 
Synonyms	: Ether / Ethyl ether

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 1	H224
Acute toxicity (oral), Category 4	H302
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336

Full text of classification categories and H statements : see section 16

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

F+; R12

Xn; R22

R19

R66

R67

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

GHS07

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H224 - Extremely flammable liquid and vapour
H302 - Harmful if swallowed
H336 - May cause drowsiness or dizziness

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P261 - Avoid breathing vapours, dust, fume, gas

EUH phrases

: EUH066 - Repeated exposure may cause skin dryness or cracking
EUH019 - May form explosive peroxides

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : DIETHYLETHER AR

CAS No : 60-29-7

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Repeated exposure may cause skin dryness or cracking.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause drowsiness or dizziness.
- Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Extremely flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form explosive peroxides.

5.3. Advice for firefighters

- Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Hazardous waste due to potential risk of explosion.

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Precautions for safe handling	: Avoid contact with skin and eyes. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe vapours. Use only outdoors or in a well-ventilated area. Keep away from sources of ignition - No smoking.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep in fireproof place. Keep container tightly closed.
Incompatible products	: Oxidizing agent.
Incompatible materials	: Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear Colorless.
Odour	: sweet ethereal odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 37.5
Melting point	: -116 °C
Freezing point	: No data available
Boiling point	: 34.6 °C
Flash point	: -40 °C
Auto-ignition temperature	: 160 °C
Decomposition temperature	: No data available

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Flammability (solid, gas)	: Flammable Extremely flammable liquid and vapour
Vapour pressure	: 563 hPa at 20 °C
Relative vapour density at 20 °C	: 2.6
Relative density	: No data available
Density	: 0.71 g/cm ³
Solubility	: Water: 65 g/l at 20 °C
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: May form explosive peroxides.
Oxidising properties	: No data available
Explosive limits	: 0.018 - 0.48 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid

Sparks. Heat. Open flame.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

May release flammable gases. May form explosive peroxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Skin corrosion/irritation	: Not classified
Additional information	: Repeated exposure may cause skin dryness or cracking
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

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Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...
Additional information : Handle empty containers with care because residual vapours are flammable. Hazardous waste due to potential risk of explosion.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1155
UN-No. (IMDG) : 1155

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UN-No.(IATA) : 1155
UN-No.(ADN) : 1155
UN-No. (RID) : 1155

14.2. UN proper shipping name

Proper Shipping Name (ADR) : DIETHYL ETHER (ETHYL ETHER)
Proper Shipping Name (IMDG) : DIETHYL ETHER (ETHYL ETHER)
Proper Shipping Name (IATA) : DIETHYL ETHER
Proper Shipping Name (ADN) : DIETHYL ETHER (ETHYL ETHER)
Proper Shipping Name (RID) : DIETHYL ETHER (ETHYL ETHER)
Transport document description (ADR) : UN 1155 DIETHYL ETHER (ETHYL ETHER), 3, I, (D/E)
Transport document description (IMDG) : UN 1155 DIETHYL ETHER (ETHYL ETHER), 3, I (-40°C c.c.)
Transport document description (IATA) : UN 1155 DIETHYL ETHER, 3, I
Transport document description (ADN) : UN 1155 DIETHYL ETHER (ETHYL ETHER), 3, I
Transport document description (RID) : UN 1155 DIETHYL ETHER (ETHYL ETHER), 3, I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3



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RID

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

Packing group (ADN) : I

Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1

Limited quantities (ADR) : 0

Excepted quantities (ADR) : E3

Packing instructions (ADR) : P001

Mixed packing provisions (ADR) : MP7, MP17

Portable tank and bulk container instructions (ADR) : T11

Portable tank and bulk container special provisions (ADR) : TP2

Tank code (ADR) : L4BN

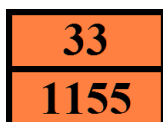
Vehicle for tank carriage : FL

Transport category (ADR) : 1

Special provisions for carriage - Operation (ADR) : S2, S20

Hazard identification number (Kemler No.) : 33

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : •3YE

- Transport by sea

Limited quantities (IMDG) : 0

Excepted quantities (IMDG) : E3

Packing instructions (IMDG) : P001

Tank instructions (IMDG) : T11

Tank special provisions (IMDG) : TP2

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : E

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Stowage and handling (IMDG)	: SW2
Flash point (IMDG)	: -40°C c.c.
MFAG-No	: 127

- Air transport

PCA Excepted quantities (IATA)	: E3
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 351
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 361
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 3AH

- Inland waterway transport

Classification code (ADN)	: F1
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E3
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

- Rail transport

Classification code (RID)	: F1
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E3
Packing instructions (RID)	: P001
Mixed packing provisions (RID)	: MP7, MP17
Portable tank and bulk container instructions (RID)	: T11
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 1
Hazard identification number (RID)	: 33

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DIETHYLETHER AR is not on the REACH Candidate List

DIETHYLETHER AR is not on the REACH Annex XIV List

15.1.2. National regulations

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Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 80)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F+ <Flam. Liq. 1>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 1	Flammable liquids, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H224	Extremely flammable liquid and vapour
H302	Harmful if swallowed
H336	May cause drowsiness or dizziness
EUH019	May form explosive peroxides
EUH066	Repeated exposure may cause skin dryness or cracking
R12	Extremely flammable
R19	May form explosive peroxides
R22	Harmful if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
F+	Extremely flammable
Xn	Harmful

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product