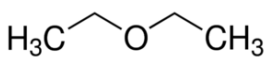


CAS-No.: 60-29-7 MSDS

## 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 : 3326E  
Formula : C<sub>4</sub>H<sub>10</sub>O  
Chemical structure :   
Synonyms : Ethoxyethane

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

##### 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](mailto:info@lobachemie.com) - [www.lobachemie.com](http://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, H224  
Category 1  
Acute toxicity (oral), H302  
Category 4  
Specific target organ H336  
toxicity — Single  
exposure, Category 3,  
Narcosis

Full text of H statements : see section 16

# DIETHYL ETHER For pesticide residue trace analysis

## Safety Data Sheet

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

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, spray, dust, fume, gas.

EUH-statements :

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. Substances

Name : DIETHYL ETHER For pesticide residue trace analysis

CAS-No. : 60-29-7

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

### 3.2. Mixtures

Not applicable

# DIETHYL ETHER For pesticide residue trace analysis

## Safety Data Sheet

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. 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/doctor if you feel unwell.

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

- Symptoms/effects after inhalation : May cause drowsiness or dizziness.
- Symptoms/effects after ingestion : Harmful if swallowed.

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

Treat symptomatically.

### 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 open flames. 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 : Collect spillage. On land, sweep or shovel into suitable containers.

#### 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.

# DIETHYL ETHER For pesticide residue trace analysis

## Safety Data Sheet

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. Use explosion-proof electrical/ventilating/lighting 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	: [In case of inadequate ventilation] wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 74.12 g/mol
Colour	: Clear colourless.
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 K

# DIETHYL ETHER For pesticide residue trace analysis

## Safety Data Sheet

Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Extremely flammable liquid and vapour.
Vapour pressure	: 563 hPa at 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: 2.6
Density	: 0.71 g/cm <sup>3</sup>
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

Extremely flammable liquid and vapour.

### 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

# DIETHYL ETHER For pesticide residue trace analysis

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
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

# DIETHYL ETHER For pesticide residue trace analysis

## Safety Data Sheet

UN-No. (IMDG)	: 1155
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

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

Hazard identification number (Kemler No.) : 33

Hazard identification number (Kemler No.) : 33

Orange plates : 

Orange plates : 

Orange plates : 

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



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Stowage category (IMDG)	: E
Stowage and handling (IMDG)	: SW2
Flash point (IMDG)	: -40°C c.c.
Properties and observations (IMDG)	: Colourless, volatile and mobile liquid with a pleasant aromatic odour. Flashpoint: -40°C c.c. Explosive limits: 1.7% to 48%. Boiling point: 34°C. Immiscible with water. In the presence of oxygen or on long standing or exposure to sunlight, unstable peroxides sometimes form; these may explode spontaneously or when heated. Strongly narcotic. Readily ignited by static electricity.
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

DIETHYL ETHER For pesticide residue trace analysis is not on the REACH Candidate List

DIETHYL ETHER For pesticide residue trace analysis is not on the REACH Annex XIV List

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### 15.1.2. National regulations

#### Germany

- Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 80)
- 12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

- SZW-lijst van kankerverwekkende stoffen : The substance is not listed
- SZW-lijst van mutagene stoffen : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

#### 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-statements:

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

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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*