

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diethylether**

Revision date: 11.10.2023

Product code: SOL-005

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Diethylether

**Further trade names**

1,1-Oxydiethane  
Diethyl Ether Anhydrous (stabilized with BHT)  
Diethylether (Peptide Grade)  
Ethoxyethane  
Ethyl ether  
1,1'-Oxybis-ethane  
1,1-Oxybisethane

Substance name: diethyl ether; ether  
Abbreviation: Et2O  
REACH Registration Number: 01-2119535785-29-XXXX  
CAS No: 60-29-7  
Index No: 603-022-00-4  
EC No: 200-467-2

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

Solvent  
Laboratory chemical. Manufacture of the substance

**Uses advised against**

Do not use for private purposes (household).  
Restrictions on use: Pharmaceutical substance

**1.3. Details of the supplier of the safety data sheet**

Company name: Iris Biotech GmbH  
Street: Adalbert-Zoellner-Straße 1  
Place: D-95615 Marktredwitz, Germany  
Post-office box: 568  
D-95605 Marktredwitz, Germany  
Telephone: +49 9231 97121 0  
Telefax: +49 9231 97121 99  
E-mail: info@iris-biotech.de  
Contact person: Compliance Department  
Telephone: +49 9231 97121 0  
E-mail: sds@iris-biotech.de  
Internet: www.iris-biotech.de  
Responsible Department: Only available during office hours.

**1.4. Emergency telephone number:** +49 (0)89 19240 (POISON CENTER Munich: 24 h)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Flam. Liq. 1; H224  
Acute Tox. 4; H302  
STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008**

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**Hazard components for labelling**

diethyl ether; ether

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

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

**Precautionary statements**

P210 Keep away from heat. No Smoking.  
 P241 Use explosion-proof electrical/ventilating/lighting equipment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Special labelling of certain mixtures**

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

**Additional advice on labelling**

Warning - substance not yet tested completely.

**2.3. Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**
**3.1. Substances**
**Chemical characterization**

Diethylether

 Sum formula: C<sub>4</sub>H<sub>10</sub>O

Molecular weight: 74,12 g/mol

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
60-29-7	diethyl ether; ether			100 %
	200-467-2	603-022-00-4	01-2119535785-29-XXXX	
	Flam. Liq. 1, Acute Tox. 4, STOT SE 3; H224 H302 H336 EUH019 EUH066			

Full text of H and EUH statements: see section 16.

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**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
60-29-7	200-467-2	diethyl ether; ether	100 %
		inhalation: LC50 = 32000 mg/l (vapours); dermal: LD50 = > 20000 mg/kg; oral: LD50 = 1600 mg/kg	

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

In all cases of doubt, or when symptoms persist, seek medical advice.

**After inhalation**

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps.

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

Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

**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**

Co-ordinate fire-fighting measures to the fire surroundings.  
alcohol resistant foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Extremely flammable liquid and vapour. Vapours can form explosive mixtures with air. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Usual measures for fire prevention.

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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Wear personal protection equipment. Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

Do not breathe gas/fumes/vapour/spray.  
Avoid substance contact.  
Provide adequate ventilation.  
Keep away from sources of ignition - No smoking.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Personal protection equipment: see section 8

**For emergency responders**

Wear personal protection equipment (refer to section 8).  
Cover drains.  
Make sure spills can be contained, e.g. in sump pallets or kerbed areas.  
Stop and contain spill/release if it can be done safely.

**6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into surface water or drains. Explosion hazard. Do not allow to enter into soil/subsoil. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains.  
Stop and contain spill/release if it can be done safely.

**For cleaning up**

Universal binder/ Binder

**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal.  
Clear contaminated areas thoroughly.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Danger of serious damage to health by prolonged exposure. The substance should only be handled in closed apparatus or systems. Pneumatic conveying only with nitrogen. Handle and open container with care.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

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Vapours can form explosive mixtures with air.

**Advice on general occupational hygiene**

 Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.  
 Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

**Further information on handling**

 May form explosive peroxides.  
 Test for peroxide formation periodically and before distillation.

**7.2. Conditions for safe storage, including any incompatibilities**
**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not keep the container sealed. Keep in a cool, well-ventilated place. Store in a place accessible by authorized persons only. Protect from moisture. Storage Inert gas: nitrogen Keep cool. Protect from sunlight. Recommended storage temperature: 15 °C - 25 °C

**Hints on joint storage**

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

**Further information on storage conditions**

 Avoid contact with air / oxygen (formation of peroxide).  
 Always close containers tightly after the removal of product.

**7.3. Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**Occupational exposure limit values**

CAS No	Name of agent	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
60-29-7	Diethylether	100	308		TWA (8 h)	
		200	616		STEL (15 min)	

**DNEL/DMEL values**

CAS No	Name of agent	Exposure route	Effect	Value
60-29-7	diethyl ether; ether			
	Worker DNEL, long-term	inhalation	systemic	308 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	systemic	616 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	44 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	54,5 mg/m <sup>3</sup>
	Consumer DNEL, long-term	dermal	systemic	15,6 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	15,6 mg/kg bw/day

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**PNEC values**

CAS No	Name of agent	
Environmental compartment		Value
60-29-7	diethyl ether; ether	
Freshwater		2 mg/l
Freshwater (intermittent releases)		1,65 mg/l
Marine water		0,2 mg/l
Freshwater sediment		9,14 mg/kg
Marine sediment		0,914 mg/kg
Micro-organisms in sewage treatment plants (STP)		4,2 mg/l
Soil		0,66 mg/kg

**Additional advice on limit values**

 short-term occupational exposure limit value: 616 mg/m<sup>3</sup>, 200 ml/m<sup>3</sup>

 Long-term occupational exposure limit value: 308 mg/m<sup>3</sup>, 100 ml/m<sup>3</sup>

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

**8.2. Exposure controls**

**Appropriate engineering controls**

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

**Individual protection measures, such as personal protective equipment**
**Eye/face protection**

Wear eye/face protection.

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Skin protection**

Use of protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

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

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(EU).

Full-face mask or mouthpiece with particulate filter: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 15 times the exposure limit. P3 filter: up to a max. of

**Thermal hazards**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

**Environmental exposure controls**

Avoid release to the environment. Do not allow to enter into surface water or drains. Explosion hazard!  
 Discharge into the environment must be avoided.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state:	liquid	
Colour:	colourless	
Odour:	sweetish; Odour threshold: 0,3-8,8 ppm	
Odour threshold:	not determined	
		<b>Test method</b>
Melting point/freezing point:	-116,3 °C	
Boiling point or initial boiling point and boiling range:	35 °C	
Flammability:	not applicable	
Lower explosion limits:	1,7 vol. %	
Upper explosion limits:	36 vol. %	
Flash point:	-40 °C	DIN 51755
Auto-ignition temperature:	170 °C	
Decomposition temperature:	not determined	
pH-Value:	not determined	
Viscosity / kinematic:	No data available	
Water solubility: (at 20 °C)	64,9 g/L	
Solubility in other solvents miscible with most organic solvents		
Dissolution rate:	not determined	
Partition coefficient n-octanol/water:	log Pow: 0,89	
Dispersion stability:	not determined	
Vapour pressure: (at 20 °C)	587 hPa	
Vapour pressure: (at 60 °C)	2.311 hPa	
Density (at 20 °C):	0,71 g/cm <sup>3</sup>	
Relative density:	No data available	
Bulk density:	not applicable	
Relative vapour density:	2,56 (Air = 1)	
Particle characteristics:	not applicable	

**9.2. Other information**
**Information with regard to physical hazard classes**

Explosive properties

May form explosive peroxides.

Sustaining combustion:

Sustaining combustion

Self-ignition temperature

Solid:

not applicable

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Gas:	not applicable
Oxidizing properties	
No data available	
<b>Other safety characteristics</b>	
Evaporation rate:	not determined
Solvent content:	100,00 %
Solid content:	not applicable
Viscosity / dynamic: (at 20 °C)	0,233 mPa·s
Flow time:	not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Extremely flammable liquid and vapour.  
Peroxide formation possible with air oxygen. Explosion hazard!

**10.2. Chemical stability**

The product is under normal ambient conditions (room temperature) chemically stable.  
Sensitivity to light.

Contains as stabilizer(s):  
Butylated hydroxytoluene (BHT): 6 ppm

**10.3. Possibility of hazardous reactions**

Explosive when mixed with oxidizing substances.  
May form explosive peroxides.  
Test for peroxide formation periodically and before distillation.

Risk of ignition or formation of inflammable gases or vapors with:  
Chromyl chloride.  
Peroxides.  
Risk of explosion with:  
Azides  
Halogenes  
Halogenes-Halogenic compounds.  
Halogenic compounds. Oxidizing agents, strong.  
Chromium (VI)-oxide  
Peroxides. Perchloric acid.  
Perchlorates  
Nitric acid  
Oxygen  
Ozon  
Turpentine  
Nitrate  
halogenated oxygen compounds.  
Nitrogen oxides (NOx).  
Chlorates  
Hydrogen peroxide  
sulphuric acid + Nitric acid

Test for peroxide formation periodically and before distillation. Explosion hazard!

Exothermic reaction with:  
Acid halides



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**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Handle with care - avoid bumps, friction and impact. Explosive. Remove all sources of ignition. Keep away from: Heat. Ignition. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Avoid contact with air / oxygen (formation of peroxide).

Warming.

**10.5. Incompatible materials**

Protect against: Contact with air/oxygen.

Oxidising agent, strong,

Strong acid.

Rubber. plastics

**10.6. Hazardous decomposition products**

May form explosive peroxides.

Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

Contact with air/oxygen: Peroxides.

**Further information**

In case of fire: See chapter 5.

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**
**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Harmful if swallowed.

vomiting. Aspiration hazard

Aspiration can lead to pulmonary edema and pneumonia.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
60-29-7	diethyl ether; ether				
	oral	LD50 mg/kg 1600	Rat	Toxicology and applied pharmacology, 197	OECD Guideline 401
	dermal	LD50 mg/kg > 20000	Rabbit	Am. Ind. Hyg. Assoc. J., 1962, 23, 95-10	OECD Guideline 402
	inhalation (4 h) vapour	LC50 mg/l 32000	Rat	Am. Ind. Hyg. Assoc. J., 1962, 23, 95-10	Test animals are exposed to metered vapo

**Irritation and corrosivity**

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Based on available data, the classification criteria are not met.

Skin corrosion:

Skin - rabbit.

Result: No skin irritation - 4 h

OECD 404

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

Serious eye damage/eye irritation:

Eye contact - Rabbit.

Result: No eye irritation

OECD 405

**Sensitising effects**

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:

In-vivo-test - Mouse.

Result: Did not cause sensitization on laboratory animals

OECD 429

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Type of test: micronucleus test Test system: human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD test guideline 487 Result: negative

Gene-mutations mammalian cells:

mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD 476

Result: negative.

**STOT-single exposure**

May cause drowsiness or dizziness. (diethyl ether; ether)

**STOT-repeated exposure**

Repeated exposure may cause skin dryness or cracking.

Has degreasing effect on the skin.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

inhalative

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

Repeated dose toxicity: Rat: male/ female - oral

13 week(s) Dose at which no harmful effects were observed: 500 mg/kg

Repeated dose toxicity - Lowest observed adverse effect level - 2.000 mg/kg

Source: ECHA

**Practical experience**

Narcotic effects

**11.2. Information on other hazards****Endocrine disrupting properties**

No data available

**Further information**

RTECS: KI5775000

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Following inhalation: The following symptoms may occur:  
 Coughing. Abdominal pain, Respiratory complaints  
 Dizziness. Dizziness

Following eye contact:  
 Redness. Blurred vision.

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

May cause damage to liver if swallowed. - Practical experience/human evidence.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12: Ecological information

### 12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
60-29-7	diethyl ether; ether					
	Acute fish toxicity	LC50 mg/l	2560	96 h	Pimephales promelas	Acute toxicities of organic chemicals to other: American Society for Testing and
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2010) OECD Guideline 201
	Acute crustacea toxicity	EC50	100 mg/l	48 h		
	Crustacea toxicity	NOEC	100 mg/l	21 d	Daphnia magna	Study report (2010) OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	26000	3 h	activated sludge of a predominantly domestic sewage	Study report (2010) OECD Guideline 209

### 12.2. Persistence and degradability

Not readily biodegradable (according to OECD criteria)

### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential. (log Pow ≤ 4).

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
60-29-7	diethyl ether; ether	1,05

### BCF

CAS No	Chemical name	BCF	Species	Source
60-29-7	diethyl ether; ether	2	not applicable	Other company data (

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.  
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7. Other adverse effects**

Warning - substance not yet tested completely.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.  
Consult the appropriate local waste disposal expert about waste disposal.  
Handle contaminated packages in the same way as the substance itself.

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1155
<b>14.2. UN proper shipping name:</b>	DIETHYL ETHER (ETHYL ETHER)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	I
Hazard label:	3



Classification code:	F1
Limited quantity:	0
Excepted quantity:	E3
Transport category:	1
Hazard No:	33
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1155
<b>14.2. UN proper shipping name:</b>	DIETHYL ETHER (ETHYL ETHER)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	I
Hazard label:	3



Classification code:	F1
Limited quantity:	0
Excepted quantity:	E3

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1155
<b>14.2. UN proper shipping name:</b>	DIETHYL ETHER (ETHYL ETHER)

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**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** I

Hazard label: 3



Special Provisions: -

Limited quantity: 0

Excepted quantity: E3

EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**
**14.1. UN number or ID number:** UN 1155

**14.2. UN proper shipping name:** DIETHYL ETHER

**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** I

Hazard label: 3



Limited quantity Passenger: Forbidden

Passenger LQ: Forbidden

Excepted quantity: E3

IATA-packing instructions - Passenger: 351

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 361

IATA-max. quantity - Cargo: 30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 40

2010/75/EU (VOC): 100 % (710 g/l)

2004/42/EC (VOC): 100 % (710 g/l)

Information according to 2012/18/EU (SEVESO III): P5a FLAMMABLE LIQUIDS

**Additional information**

Use restriction according to REACH annex XVII, no.: 3, 40

Regulation (EC) No. 2093/97

**National regulatory information**

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Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

1 - slightly hazardous to water

**Additional information**

Drug precursor: Cat. 3

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s):  
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diethylether**

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**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).  
Flam. Liq: Flammable liquid  
Acute Tox: Acute toxicity  
STOT SE: Specific target organ toxicity - single exposure

**Relevant H and EUH statements (number and full text)**

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.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.