

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Diethyl ether ≥99.5 % for synthesis, stabilized

article number: **5920**  
Version: **4.0 en**  
Replaces version of: 2022-05-20  
Version: (3)

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

### 1.1 Product identifier

Identification of the substance	<b>Diethyl ether ≥99.5 % for synthesis, stabilized</b>
Article number	5920
Index No (GB CLP)	603-022-00-4
EC number	200-467-2
CAS number	60-29-7

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

Relevant identified uses:	Laboratory chemical Laboratory and analytical use
Uses advised against:	Do not use for private purposes (household). Food, drink and animal feedingstuffs.

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)  
**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification acc. to GHS**

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Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	1	Flam. Liq. 1	H224
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.8D	Specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336

### Supplemental hazard information

Code	Supplemental hazard information
EUH019	may form explosive peroxides
EUH066	repeated exposure may cause skin dryness or cracking

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

## 2.2 Label elements

### Labelling

#### Signal word

**Danger**

#### Pictograms

GHS02, GHS07



#### Hazard statements

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

#### Precautionary statements

##### Precautionary statements - prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P243 Take action to prevent static discharges  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray

##### Precautionary statements - response

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  
P312 Call a POISON CENTRE/doctor if you feel unwell

#### Supplemental hazard information

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

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	Diethyl ether
Molecular formula	C <sub>4</sub> H <sub>10</sub> O
Molar mass	74,12 g/mol
CAS No	60-29-7
EC No	200-467-2
Index No (GB CLP)	603-022-00-4

#### To stabilise:

Name of substance	Identifier	Wt%
Butylated hydroxytoluene	CAS No 128-37-0  EC No 204-881-4	<0,1

#### Substance, Specific Conc. Limits, M-factors, ATE

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	1.215 mg/kg	oral

For full text of abbreviations: see SECTION 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

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

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek

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medical advice.

### Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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

Irritant effects, Vomiting, Vertigo, Dizziness, Drowsiness, Narcosis

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

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

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation.

#### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Protect against external exposure, such as

humidity, UV-radiation/sunlight, contact with air/oxygen

#### Consideration of other advice:

Ground/bond container and receiving equipment.

#### Ventilation requirements

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
EU	diethyl ether	60-29-7	IOELV	100	308	200	616				2000/39/EC
GB	diethyl ether	60-29-7	WEL	100	310	200	620				EH40/2005

#### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur  
STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)  
TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	308 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	616 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	44 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Butylated hydroxytoluene	128-37-0	DNEL	19 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
Butylated hydroxytoluene	128-37-0	DNEL	18 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
Butylated hydroxytoluene	128-37-0	DNEL	3,5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Butylated hydroxytoluene	128-37-0	DNEL	0,5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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### Environmental values

Relevant PNECs and other threshold levels				
End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	2 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0,2 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	4,2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	9,14 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,914 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0,66 mg/kg	terrestrial organisms	soil	short-term (single instance)

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Butylated hydroxytoluene	128-37-0	PNEC	8,33 mg/kg	aquatic organisms	water	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	1,99 µg/l	aquatic organisms	water	intermittent release
Butylated hydroxytoluene	128-37-0	PNEC	0,199 µg/l	aquatic organisms	freshwater	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	0,02 µg/l	aquatic organisms	marine water	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	0,17 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	99,6 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	9,96 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
Butylated hydroxytoluene	128-37-0	PNEC	47,69 µg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### Skin protection



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### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

### • type of material

FKM (fluoro rubber)

### • material thickness

0,65 mm

### • breakthrough times of the glove material

>30 minutes (permeation: level 2)

### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	mild sweet
Melting point/freezing point	-116 °C
Boiling point or initial boiling point and boiling range	34,58 – 34,59 °C at 1.013 hPa (ECHA)
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	50 g/m <sup>3</sup> (LEL) - 1.100 g/m <sup>3</sup> (UEL) / 1,7 vol% (LEL) - 39 vol% (UEL)
Flash point	-40 °C (c.c.)
Auto-ignition temperature	175 °C at 1.013 hPa (ECHA)
Decomposition temperature	not relevant



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pH (value)	not determined
Kinematic viscosity	0,331 mm <sup>2</sup> /s at 293,2 K
Dynamic viscosity	0,235 mPa s at 293,2 K

### Solubility(ies)

Water solubility 64,9 g/l at 20 °C (ECHA)

### Partition coefficient

Partition coefficient n-octanol/water (log value): 1,19 (pH value: 7, 25 °C) (ECHA)

Soil organic carbon/water (log KOC) 0,987 (ECHA)

Vapour pressure 589,6 hPa at 20 °C

### Density and/or relative density

Density 0,71 g/cm<sup>3</sup> at 20 °C (ECHA)

Relative vapour density 2,56 (air = 1)

Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: There is no additional information.

Other safety characteristics:

Gas group (explosion group) IIB  
Maximum Experimental Safe Gap value; 0,5 mm  $\leq$  MESG  $\leq$  0,9 mm

Maximum explosion pressure 9,2 bar

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

It's a reactive substance. Risk of ignition. Vapours may form explosive mixtures with air. May form explosive peroxides.

#### **If heated**

Risk of ignition.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

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### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser, Nitrate, Perchlorates, Peroxides, Nitric acid, Oxygen, Sulphuric acid, Nitrogen oxides (NO<sub>x</sub>), Hydrogen peroxide,  
=> Explosive properties

### 10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from moisture.

### 10.5 Incompatible materials

Rubber articles, different plastics

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5. Peroxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Classification acc. to GHS**

#### Acute toxicity

Harmful if swallowed.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	1.215 mg/kg	rat		TOXNET

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Butylated hydroxytoluene	128-37-0	oral	LD50	>6.000 mg/kg	rat
Butylated hydroxytoluene	128-37-0	dermal	LD50	>2.000 mg/kg	rat

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

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### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting

#### • If in eyes

Data are not available.

#### • If inhaled

Inebriation, vertigo, dizziness, fatigue, narcosis

#### • If on skin

Frequently or prolonged contact with skin may cause dermal irritation, has degreasing effect on the skin, repeated exposure may cause skin dryness or cracking

#### • Other information

Other adverse effects: Circulatory collapse

### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
ErC50	$>100 \text{ mg/l}$	algae	ECHA	72 h

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Butylated hydroxy-toluene	128-37-0	LC50	$>0,57 \text{ mg/l}$	fish	96 h
Butylated hydroxy-toluene	128-37-0	EC50	$0,48 \text{ mg/l}$	aquatic invertebrates	48 h
Butylated hydroxy-toluene	128-37-0	ErC50	$>0,4 \text{ mg/l}$	algae	72 h

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### Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
EC50	$>100 \text{ mg/l}$	aquatic invertebrates	ECHA	21 d

### Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Butylated hydroxytoluene	128-37-0	EC50	$0,096 \text{ mg/l}$	aquatic invertebrates	21 d

## 12.2 Persistence and degradability

Theoretical Oxygen Demand:  $2,59 \text{ mg/mg}$   
Theoretical Carbon Dioxide:  $2,375 \text{ mg/mg}$

### Biodegradation

Not readily biodegradable.

### Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Butylated hydroxytoluene	128-37-0	biotic/abiotic	$<10\%$	20 d		

## 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1,19 (pH value: 7, 25 °C) (ECHA)
BCF	2,29

### Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Butylated hydroxytoluene	128-37-0	598,4	5,1	

## 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	0,987 (ECHA)
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## 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## 12.7 Other adverse effects

Data are not available.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

**HP 3** flammable

**HP 15** waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste

**HP 6** acute toxicity

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADRRID UN 1155

IMDG-Code UN 1155

ICAO-TI UN 1155

### 14.2 UN proper shipping name

ADRRID DIETHYL ETHER

IMDG-Code DIETHYL ETHER

ICAO-TI Diethyl ether

### 14.3 Transport hazard class(es)

ADRRID 3

IMDG-Code 3

ICAO-TI 3

### 14.4 Packing group

ADRRID I

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IMDG-Code I

ICAO-TI I

**14.5 Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations

**14.6 Special precautions for user**  
Provisions for dangerous goods (ADR) should be complied within the premises.

**14.7 Maritime transport in bulk according to IMO instruments**  
The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

Proper shipping name DIETHYL ETHER  
Particulars in the transport document UN1155, DIETHYL ETHER, 3, I, (D/E)  
Classification code F1  
Danger label(s) 3



Excepted quantities (EQ) E3  
Transport category (TC) 1  
Tunnel restriction code (TRC) D/E  
Hazard identification No 33  
**Emergency Action Code** 3YE

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

**Classification code** F1  
**Danger label(s)** 3



**Excepted quantities (EQ)** E3  
**Transport category (TC)** 1  
**Hazard identification No** 33

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name DIETHYL ETHER  
Particulars in the shipper's declaration UN1155, DIETHYL ETHER, 3, I, -40°C c.c.  
Marine pollutant -  
Danger label(s) 3

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Special provisions (SP)	-
Excepted quantities (EQ)	E3
Limited quantities (LQ)	0
EmS	F-E, S-D
Stowage category	E

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Diethyl ether
Particulars in the shipper's declaration	UN1155, Diethyl ether, 3, I
Danger label(s)	3



Excepted quantities (EQ)	E3
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## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
P5a	flammable liquids (cat. 1)	10 50	49)

##### Notation

- 49) - Flammable liquids, category 1, or  
- flammable liquids category 2 or 3 maintained at a temperature above their boiling point, or  
- other liquids with a flash point ≤ 60 °C, maintained at a temperature above their boiling point

##### Deco-Paint Directive

VOC content	100 %
VOC content	710 g/l

##### Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	710 g/l

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

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### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

### Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Diethyl ether	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

#### Legend

A) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

not listed

### Regulation on drug precursors

Name of substance	CAS No	Wt%	Classification	CN Code	Threshold level
Diethyl ether	60-29-7	100	Category 3	2909 11 00	

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

### Regulation on persistent organic pollutants (POP)

not listed

### National regulations(GB)

#### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

#### Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Diethyl ether	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3
Diethyl ether	flammable / pyrophoric		40

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.



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### UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

Name of substance	CAS No	Listed in	HS code
Diethyl ether	60-29-7	Table II	2909.11

### National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)

#### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.	yes
15.1	VOC content: 100 % 710 g/l	VOC content: 100 %	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
15.1		VOC content: 710 <sup>9</sup> / <sub>1</sub>	yes
15.1		Regulation on drug precursors: change in the listing (table)	yes
15.1		National inventories: change in the listing (table)	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CN Code	Combined Nomenclature
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
IATA	International Air Transport Association

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Abbr.	Descriptions of used abbreviations
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

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

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### **Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.