

According to REACH Regulations (EC) 1907/2006 and (EU) 2020/878

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product code : GK7323
 Product name : Diethyl ether
 CAS number : 60-29-7
 EINECS : 200-467-2
 Physical form : liquid, substance
 REACH : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

PC21: Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company name	: Glentham Life Sciences Ltd	Telephone	: +44 (0) 1225 667 798
	Unit 5 Leafield Way	Fax	: +44 (0) 2033 978 909
	Corsham SN13 9SW	Email	: info@glentham.com
	United Kingdom	Web	: www.glentham.com

1.4 Emergency telephone number

Emergency telephone : NHS Direct 111 (UK, 24 hours), 112 (EU, 24 Hours), +44 (0) 1225 667 798 (09.00 – 17.00 GMT) number

2. Hazards identification

2.1 Classification of the substance or mixture

Classification under CLP according to (EC) 1272/2008

H224	Flam. Liq. 1
H302	Acute Tox. 4
H335	STOT SE 3
H336	STOT SE 3

2.2 Label elements

Label elements under CLP according to (EC) 1272/2008

Pictograms



GHS02 GHS07

Signal words

Danger

Hazard statements

H224	Extremely flammable liquid and vapour
H302	Harmful if swallowed
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements

P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: call a POISON CENTER/doctor/... IF you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P264	Do not breathe fume.
P241	Use explosion-proof electrical equipment.

2.3 Other hazards

PBT

This substance is not identified as a PBT substance.

3.0 Composition/information on ingredients

3.1 Substances

Name	Identifier	%	Classification
Diethyl ether	CAS: 60-29-7 EC: 200-467-2 REACH: Not applicable	99.0%	H224, Flam. Liq. 1 H302, Acute Tox. 4 H335, STOT SE 3 H336, STOT SE 3

4. First aid measures

4.1 Description of first aid measures

Skin contact	Consult a doctor. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.
Eye contact	Consult a doctor. Bathe the eye with running water for 15 minutes.
Ingestion	Consult a doctor. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible. Wash out mouth with water.
Inhalation	Remove casualty from exposure ensuring one's own safety whilst doing so. Transfer to hospital as soon as possible. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact	There may be irritation and redness at the site of contact. There may be mild irritation at the site of contact.
Eye contact	The eyes may water profusely. There may be irritation and redness. There may be pain and redness.
Ingestion	Nausea and stomach pain may occur. There may be difficulty swallowing. There may be irritation of the throat. There may be soreness and redness of the mouth and throat. There may be vomiting.
Inhalation	Absorption through the lungs can occur causing symptoms similar to those of ingestion. Exposure may cause coughing or wheezing. Nausea and stomach pain may occur. There may be irritation of the throat with a feeling of tightness in the chest. There may be vomiting.
Delayed / immediate effects	Delayed effects can be expected after long-term exposure. Immediate effects can be expected after short-term exposure. Nausea and stomach pain may occur.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate / special treatment

Do not induce vomiting. Eye bathing equipment should be available on the premises.

5. Fire-fighting measures

5.1 Extinguishing media

Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Suitable extinguishing media for the surrounding fire should be used. Water spray.

5.2 Special hazards arising from the substance or mixture

Exposure hazards

Highly flammable. In combustion emits toxic fumes. May form flammable / explosive dust-air mixture.

5.3 Advice for fire-fighters

Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Do not create dust. Eliminate all sources of ignition. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Notify the police and fire brigade immediately. Refer to section 8 of SDS for personal protection details.

6.2 Environmental precautions

Do not discharge into drains or rivers.

6.3 Methods and material for containment and cleaning up

Clean-up procedures

Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

6.4 Reference to other sections

Refer to section 8 of SDS.

7. Handling and storage

7.1 Precautions for safe handling

Handling requirements

Avoid direct contact with the substance. Avoid the formation or spread of dust in the air. Do not handle in a confined space. Smoking is forbidden. Use non-sparking tools. Ensure there is sufficient ventilation of the area.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Avoid contact with water or humidity. Ensure lighting and electrical equipment are not a source of ignition. Keep away from sources of ignition. Keep container tightly closed. Prevent the build up of electrostatic charge in the immediate area. Store in cool, well ventilated area.

7.3 Specific end use(s)

No data available.

8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits

Substance (CAS)	Control Parameter	Value	Notes	Source
Diethylether (60-29-7)	Long-term Exposure Limit (ppm)	308		2000/39/EC
	Long-term Exposure Limit (mg m ⁻³)	100		
	Short-term Exposure Limit (ppm)	616		
	Short-term Exposure Limit (mg m ⁻³)	200		
	Long-term Exposure Limit (ppm)	100		UK HSE EH40/2005
	Long-term Exposure Limit (mg m ⁻³)	310		
	Short-term Exposure Limit (ppm)	200		
	Short-term Exposure Limit (mg m ⁻³)	620		

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	Short-term Exposure Limit (ppm)	200	
	Short-term Exposure Limit (mg m ⁻³)	620	

8.2 Exposure controls

Engineering measures	Ensure lighting and electrical equipment are not a source of ignition. Ensure there is sufficient ventilation of the area.
Respiratory protection	Respiratory protective device with particle filter. Self-contained breathing apparatus must be available in case of emergency.
Hand protection	Protective gloves.
Eye protection	Ensure eye bath is to hand. Safety glasses.
Skin protection	Protective clothing.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	No data available.
Melting point/Freezing point	-116 °C
Boiling point/initial boiling point/boiling range	2.2 °C @ Press: 200 Torr
Flammability	Extremely flammable liquid and vapour
Lower/Upper explosion limit	No data available.
Flash Point	No data available.
Auto-ignition temperature	175°C
Decomposition temperature	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	64.9 g/L @ 20 °C
Partition coefficient n-octanol/water	No data available.
Vapour pressure	No data available.
Density/relative density	0.713
Relative vapour pressure	No data available.
Particle characteristics	No data available.

9.2 Other information

No data available.

10. Stability and reactivity

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable at room temperature. Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions

Decomposition may occur on exposure to conditions or materials listed below. Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid

Flames. Hot surfaces. Sources of ignition. Heat.

10.5 Incompatible materials

Materials to avoid

Carbon dioxide. Strong acids. Strong oxidising agents.

11. Toxicological information

11.1 Information on toxicological effects

a) Acute toxicity

Diethylether

14 d LC50 Guppy (Poecilia reticulata) (Aquatic): 2134 mg/L

90 min LC50 Mouse (Inhalation): 186 mg/L

LD50 Mouse (IP): 2420 mg/kg

LD50 Mouse (IV): 9963 mg/kg

Diethyl ether

14 d LC50 Guppy (Poecilia reticulata) (Aquatic): 2134 mg/L

90 min LC50 Mouse (Inhalation): 186 mg/L

LD50 Mouse (IP): 2420 mg/kg

LD50 Mouse (IV): 9963 mg/kg

b) Skin corrosion/irritation

No data available.

c) Serious eye damage/irritation

No data available.

d) Respiratory or skin sensitisation

No data available.

e) Germ cell mutagenicity

No data available.

f) Carcinogenicity

No data available.

g) Reproductive toxicity

No data available.

h) STOT-single exposure

Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3)

i) STOT-repeated exposure

No data available.

j) Aspiration hazard

No data available.

11.2 Symptoms / routes of exposure

Skin contact	There may be irritation and redness at the site of contact. There may be mild irritation at the site of contact.
Eye contact	The eyes may water profusely. There may be irritation and redness. There may be pain and redness.
Ingestion	Nausea and stomach pain may occur. There may be difficulty swallowing. There may be irritation of the throat. There may be soreness and redness of the mouth and throat. There may be vomiting.
Inhalation	Absorption through the lungs can occur causing symptoms similar to those of ingestion. Exposure may cause coughing or wheezing. Nausea and stomach pain may occur. There may be irritation of the throat with a feeling of tightness in the chest. There may be vomiting.

Delayed / immediate effects Delayed effects can be expected after long-term exposure. Immediate effects can be expected after short-term exposure. Nausea and stomach pain may occur.

Other information No data available.

12. Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

Biodegradable.

12.3 Bioaccumulative potential

No bioaccumulation potential.

12.4 Mobility in soil

Readily absorbed into soil.

12.5 Results of PBT and vPvB assessment

This substance is not identified as a PBT substance.

12.6 Endocrine disrupting properties

This substance is not identified as having endocrine disrupting properties

12.7 Other adverse effects

No data available.

13. Disposal considerations

13.1 Waste treatment methods






Disposal operations

Transfer to a suitable container and arrange for collection by specialised disposal company.

NB

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. Transport information

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN1155	UN1155	UN1155	UN1155	UN1155
14.2. UN proper shipping name				
DIETHYL ETHER	DIETHYL ETHER	Diethyl ether	DIETHYL ETHER	DIETHYL ETHER
Transport document description				
UN1155 DIETHYL ETHER, 3, I	UN1155 DIETHYL ETHER, 3, I	UN1155 Diethyl ether, 3, I	UN1155 DIETHYL ETHER, 3, I	UN1155 DIETHYL ETHER, 3, I
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
I	I	I	I	I

14.5. Environmental hazards

No No No No No

15. Regulatory information

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

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/787.

Authorisations/Restrictions

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: No data available.

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: No data available.

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: No data available.

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: No data available.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

16. Other information

H-Statement Full Texts

H224 Extremely flammable liquid and vapour
H302 Harmful if swallowed
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness

Abbreviations Full Texts

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ALARP As low as is reasonably practicable
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging Regulations
COSHH Control of Substances Hazardous to Health
EC Number European Community Number
EC50 Effective Concentration 50%
EILINCS European List of Notified Chemical Substances
EINECS European Inventory of Existing Commercial Chemical Substances
GHS Globally Harmonised System
HSE Health & Safety Executive UK
IATA International Air Transport Association
IM Intramuscular
IMDG The International Maritime Dangerous Goods Code
IP Intraperitoneal
IV Intravascular
LD50 Lethal Dose 50%
LOEC Lowest Observable Effective Concentration
LTEL Long Term Exposure Limit
NOEC No Observable Effective Concentration
OECD Organisation for Economic Cooperations and Development
PBT Persistent Bioaccumulative Toxic
PPE Personal Protective Equipment
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
RID Regulations Concerning the International Carriage of Dangerous Goods by Rail
SC Subcutaneous
SDS Safety Data Sheet
STEL Short Term Exposure Limit
VOC Volatile Organic Compounds
vPvB Very Persistent and Very Bioaccumulative
WEL Workplace Exposure Limits

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amended by Commission Regulation (EU) 2020/787.**

Disclaimer: Glentham Life Sciences shall not be held liable for any damage resulting from handling or from contact with the above product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This document does not guarantee the properties or quality of the product.