Safety Data Sheet

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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	:	GK7255
Product name	:	Triethylamine
CAS number	:	121-44-8
EINECS	:	204-469-4
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 number : NHS Direct 111 (UK, 24 hours), 112 (EU, 24 Hours), +44 (0) 1225 667 798 (09.00 – 17.00 GMT)

2. Hazards identification

2.1 Classification of the substance or mixture

Classification under CLP according to (EC) 1272/2008

H225	Flam. Liq. 2
H302	Acute Tox. 4
H311	Acute Tox. 3
H314	Skin Corr. 1A
H331	Acute Tox. 3
H335	STOT SE 3
H336	STOT SE 3

2.2 Label elements

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

Pictograms

GHS02 GHS05 GHS06

Signal words Danger

Hazard statements

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

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.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P370+P378	In case of fire: Use ... to extinguish.
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
Triethylamine	CAS: 121-44-8 EC: 204-469-4 REACH: Not applicable	99.0%	H225, Flam. Liq. 2 H302, Acute Tox. 4 H311, Acute Tox. 3 H314, Skin Corr. 1A H331, Acute Tox. 3 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. Transfer to hospital if there are burns or symptoms of poisoning.
Eye contact	Consult a doctor. Transfer to hospital for specialist examination. Bathe the eye with running water for 15 minutes.
Ingestion	Consult a doctor. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If conscious, give half a litre of water to drink immediately. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. Transfer to hospital as soon as possible. Wash out mouth with water.
Inhalation	If breathing becomes bubbly, have the casualty sit and provide oxygen if available. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. 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	Absorption through the skin may be fatal. Blistering may occur. Irritation or pain may occur at the site of contact. Progressive ulceration will occur if treatment is not immediate. There may be mild irritation at the site of contact. There may be redness or whiteness of the skin in the area of exposure.
Eye contact	Corneal burns may occur. May cause permanent damage. The eyes may water profusely. There may be irritation and redness. There may be severe pain.
Ingestion	Blood may be vomited. Convulsions may occur. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose. There may be irritation of the throat. There may be loss of consciousness. 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. Convulsions may occur. Exposure may cause coughing or wheezing. There may be irritation of the throat with a feeling of tightness in the chest. There may be loss of consciousness. There may be shortness of breath with a burning sensation in the throat. There may be vomiting.
Delayed / immediate effects	Convulsions may occur. Delayed effects can be expected after long-term exposure. Immediate effects can be expected after short-term exposure. There may be bleeding from the mouth or nose. There may be loss of consciousness.

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

Immediate / special treatment

Do not induce vomiting. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. 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. Use water spray to cool containers. Water spray.

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

Exposure hazards

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

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 attempt to take action without suitable protective clothing - see section 8 of SDS. 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. Turn leaking containers leak-side up to prevent the escape of liquid. Refer to section 8 of SDS for personal protection details.

6.2 **Environmental precautions**

Contain the spillage using bunding. Do not discharge into drains or rivers.

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

Clean-up procedures

Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Absorb into dry earth or sand. 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. Ensure there is exhaust ventilation of the area. 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
Triethylamine (121-44-8)	Long-term Exposure Limit (ppm)	2	Sk	UK HSE EH40/2005
	Long-term Exposure Limit (mg m^{-3})	8		
	Short-term Exposure Limit (ppm)	4		
	Short-term Exposure Limit (mg m^{-3})	17		
	Long-term Exposure Limit (ppm)	8.4	Skin	2000/39/EC
	Long-term Exposure Limit (mg m^{-3})	2		
	Short-term Exposure Limit (ppm)	12.6		
	Short-term Exposure Limit (mg m^{-3})	3		

8.2 Exposure controls

Engineering measures	Ensure lighting and electrical equipment are not a source of ignition. Ensure there is exhaust ventilation of the area. 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	Impermeable gloves. Protective gloves.
Eye protection	Ensure eye bath is to hand. Safety glasses with side-shields. Tightly fitting safety goggles. 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	-115 °C
Boiling point/initial boiling point/boiling range	89.3 °C
Flammability	Highly flammable liquid and vapour
Lower/Upper explosion limit	No data available.
Flash Point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	112 - 112.4 g/L @ 20 °C
Partition coefficient n-octanol/water	No data available.
Vapour pressure	No data available.
Density/relative density	0.726
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**

Triethylamine

96 hr LC50 Fathead minnow (Pimphales promelas) (Aquatic): 44 mg/L
48 hr LC50 Medaka (Oryzias latipes) (Aquatic): 720 mg/L
LD50 Rabbit (Dermal): 416 mg/kg
LD50 Mouse (IP): 405 mg/kg
LD50 Rat (Oral): 460 mg/kg
LD50 Mouse (Oral): 546 mg/kg

b) **Skin corrosion/irritation**

Skin corrosion/irritation (Category 1A)

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	Absorption through the skin may be fatal. Blistering may occur. Irritation or pain may occur at the site of contact. Progressive ulceration will occur if treatment is not immediate. There may be mild irritation at the site of contact. There may be redness or whiteness of the skin in the area of exposure.
Eye contact	Corneal burns may occur. May cause permanent damage. The eyes may water profusely. There may be irritation and redness. There may be severe pain.
Ingestion	Blood may be vomited. Convulsions may occur. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose. There may be irritation of the throat. There may be loss of consciousness. 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. Convulsions may occur. Exposure may cause coughing or wheezing. There may be irritation of the throat with a feeling of tightness in the chest. There may be loss of consciousness. There may be shortness of breath with a burning sensation in the throat. There may be vomiting.
Delayed / immediate effects	Convulsions may occur. Delayed effects can be expected after long-term exposure. Immediate effects can be expected after short-term exposure. There may be bleeding from the mouth or nose. There may be loss of consciousness.
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				
UN1296	UN1296	UN1296	UN1296	UN1296
14.2. UN proper shipping name				
TRIETHYLAMINE	TRIETHYLAMINE	Triethylamine	TRIETHYLAMINE	TRIETHYLAMINE
Transport document description				
UN1296 TRIETHYLAMINE, 3 (8), II	UN1296 TRIETHYLAMINE, 3 (8), II	UN1296 Triethylamine, 3 (8), II	UN1296 TRIETHYLAMINE, 3 (8), II	UN1296 TRIETHYLAMINE, 3 (8), II

14.3. Transport hazard class(es)				
3 (8)	3 (8)	3 (8)	3 (8)	3 (8)
				
14.4. Packing group				
II	II	II	II	II
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

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
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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