SAFETY DATA SHEET

LIQUID OXYGEN

Compilation date: 12/11/2014

Revision date: 21/02/2017

Revision No: 2EN

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: LIQUID OXYGEN

CAS number: 7722-84-1

EINECS number: 231-765-0

Index number: 008-003-00-9

Synonyms: HYDROGEN PEROXIDE

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

Use of substance / mixture: PC12: Fertilizers. PC37: Water treatment chemicals.

1.3. Details of the supplier of the safety data sheet

Company name: Growth Technology Ltd

Great Western Way

Taunton

TA2 6BX

United Kingdom

Tel: +44 (0)1823 325291

Email: info@growthtechnology.com

1.4. Emergency telephone number

Emergency tel: +44 (0)845 4303001

+44 (0)1823 325291

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Skin Corr. 1A: H314

Most important adverse effects: Causes severe skin burns and eye damage.

2.2. Label elements

Label elements:

Hazard statements: H314: Causes severe skin burns and eye damage.

Hazard pictograms: GHS05: Corrosion

Signal words: Danger

[cont...]

Precautionary statements: P102: Keep out of reach of children.
P101: If medical advice is needed, have product container or label at hand.
P270: Do not eat, drink or smoke when using this product.
P260: Do not breathe vapours.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor/hospital.
P363: Wash contaminated clothing before reuse.
P405: Store locked up.
P501: Dispose of contents/container to hazardous or special waste collection point.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

HYDROGEN PEROXIDE SOLUTION

EINECS	CAS	PBT / WEL	CLP Classification	Percent
231-765-0	7722-84-1	-	Ox. Liq. 1: H271; Acute Tox. 4: H332; Acute Tox. 4: H302; Skin Corr. 1A: H314	5-15%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

[cont...]

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Water. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Oxidising. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 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. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid the formation or spread of mists in the air. Avoid direct contact with the substance. Use non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): PC12: Fertilizers. PC37: Water treatment chemicals.

[cont...]

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1.4 mg/m3	2.8 mg/m3	-	-

Hazardous ingredients:

HYDROGEN PEROXIDE SOLUTION...100%

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1.4 mg/m3	2.8 mg/m3	-	-

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Respiratory protection not required.

Hand protection: PVC gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: Prevent from entering in public sewers or the immediate environment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Pungent

Oxidising: Oxidising (by EC criteria)

Solubility in water: Miscible

Viscosity: Non-viscous

Boiling point/range°C: 100 - 107 **Vapour pressure:** 23.2 mmHg

Relative density: 1040 kg/m3 **pH:** 5.1

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

[cont...]

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

Conditions to avoid: Heat. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Reducing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	MUS	LD50	2	g/kg
ORAL	RAT	LD50	376	mg/kg
DERMAL	RAT	LD50	4060	mg/kg

Hazardous ingredients:

HYDROGEN PEROXIDE SOLUTION...100%

ORL	MUS	LD50	2	gm/kg
ORL	RAT	LD50	376	mg/kg
SKN	RAT	LD50	4060	mg/kg

Relevant hazards for product:

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

[cont...]

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
ALGAE	72H IC50	0.85	mg/l
DAPHNIA	48H EC50	2.4	mg/l
FISH	96H LC50	16.4	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

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

Disposal of packaging: Clean with water. Dispose of as normal industrial waste.

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

Section 14: Transport information

14.1. UN number

UN number: UN2984

14.2. UN proper shipping name

Shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

Transport class: 5.1

[cont...]

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No **Marine pollutant:** No

14.6. Special precautions for user

Special precautions: No special precautions.
Tunnel code: E
Transport category: 3

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.
* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H271: May cause fire or explosion; strong oxidiser.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H332: Harmful if inhaled.

Legal disclaimer: 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 company shall not be held liable for any damage resulting from handling or from contact with the above product.