SAFETY DATA SHEET

according to Regulation (EU) 2015/830

Silvenox

Revision 0

Revision date 2022-03-21

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

1.1. Product identifier

Product name	Silvenox

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

Product Use	[SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen);
Description	Silver stabilised Hydrogen Peroxide.

1.3. Details of the supplier of the safety data sheet

Company	Oxiflo Ltd
Address	Office M 11-17 Fowler Road Hainault Business Park Ilford Essex IG6 3UJ
Web	www.oxiflo.com
Telephone	07979 591112
Email address of the competent person	info@oxiflo.com

1.4. Emergency telephone number

Emergency telephone number	07979 591112 9.00am to 17.00pm For medical advice or information you should contact your GP or NHS 111 (or NHS 24 in Scotland) on 111 (for 24 hour health advice) If you are a healthcare professional with an enquiry please visit www.TOXBASE.org

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008	Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Dam. 1: H318; STOT SE 3: H335;

2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Acute Tox. 4: H302 - Harmful if swallowed. Skin Irrit. 2: H315 - Causes skin irritation.

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2.2. Label elements

	Eye Dam. 1: H318 - Causes serious eye damage. STOT SE 3: H335 - May cause respiratory irritation.
Precautionary Statement: Prevention	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement: Response	P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/ /if you feel unwell. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to an approved disposal site, in accordance with local regulations.
SUPPLEMENTAL HAZARD INFORMATION	Contents - 50% Hydrogen Peroxide, Silver & Stabiliser. For Professional Use only.

2.3. Other hazards

Other hazards	This mixture is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Hydrogen Peroxide <50% (Hydrogen peroxide)		7722-84-1	231-765-0	01-2119485845-22	90 - 100%	Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Dam. 1: H318; Acute Tox. 4: H332; STOT SE 3: H335;
phosphoric acid ... %, orthophosphoric acid ... %. . (Orthophosphoric acid)	015-011-00-6	7664-38-2	231-633-2	01-2119485924-24	0 - 0.5%	Skin Corr. 1B: H314;
Silver (Silver, metallic)		7440-22-4	231-131-3	01-2119555669-21	0 - 0.5%	Aquatic Acute 1: H400; Aquatic Chronic 1: H410;

Hydrogen Peroxide Specific Concentration Limits., STOT SE; H335 C ≥ 35%, Eye Dam.1; H318: 8% ≤ C < 50%, Eye Irrit. 2; H319: 5 % ≤ C < 8 %, Ox. Liq. 1; H271: C ≥ 70 %,, Ox. Liq. 2; H272:, 50% ≤ C < 70 %, Skin Corr. 1A; H314: C ≥ 70 %, Skin Corr. 1B; H314: 50 % ≤ C < 70 %, Skin Irrit. 2; H315: 35 % ≤ C < 50 %.
Silver (CAS No. 7440-22-4) - M Factor (Acute/Chronic) = 10.

Further information

Product Shelf Life	1 year from the date of manufacture.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Contact lenses should be removed. Get medical advice/attention.
Skin contact	Remove contaminated clothing. Wash off immediately with plenty of soap and water. Get medical advice/attention.
Ingestion	Rinse mouth thoroughly. DO NOT INDUCE VOMITING. Get medical advice/attention.

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

Inhalation	Harmful by inhalation. May cause irritation to respiratory system.
Eye contact	Risk of serious damage to eyes. May cause permanent damage if eye is not immediately irrigated.
Skin contact	Causes skin irritation.
Ingestion	Harmful if swallowed.

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

Inhalation	Move the exposed person to fresh air. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Seek medical attention. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Contact lenses should be removed. Seek medical attention. Show this safety data sheet to the doctor in attendance.
Skin contact	Remove contaminated clothing immediately. Rinse immediately with plenty of water. Seek medical attention. Show this safety data sheet to the doctor in attendance.
Ingestion	Drink 1 to 2 glasses of water. Seek medical attention. Show this safety data sheet to the doctor in attendance.

General information

If you feel unwell, seek medical advice (show the label where possible). Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

This product is not flammable . Use fire-extinguishing media appropriate for surrounding materials.
EXTINGUISHING MEDIA:. Water spray.
Do NOT use water jet.

5.2. Special hazards arising from the substance or mixture

Closed containers can burst violently when heated, due to excess pressure build-up. Keep away from combustible materials.

5.3. Advice for firefighters

Fire fighters should wear self contained positive pressure breathing apparatus (SCBA) and full turnout gear. Cool fire exposed containers with waterspray.

Further information

In the event of a fire and/or explosion do not breath fumes. Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray/mist. Avoid sparks, flames, heat and sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Advise local authorities if large spills cannot be contained.

6.3. Methods and material for containment and cleaning up

Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water.

6.4. Reference to other sections

See section 2, 7, 8, 13 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes and skin. Do not breathe vapours or spray mist. Adopt best Manual Handling considerations when handling, carrying and dispensing.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry area. Keep container tightly closed. Store in original container. Keep away from combustible material. Avoid contact with oxidising agents., Avoid exposure to high temperatures or direct sunlight., Store away from the following materials: Reducing agents. Alkalis. Metal or metallic

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7.2. Conditions for safe storage, including any incompatibilities

	solid. Acetone. Organic compounds, Keep away from combustible material. Acids. Suitable container materials: Stainless steel. Aluminium. Polyethylene.

7.3. Specific end use(s)

	Silver stabilised Hydrogen Peroxide.

Suitable packaging

	Plastic containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

	Occupational exposure controls.

8.1.1. Exposure Limit Values

Hydrogen Peroxide <50% (Hydrogen peroxide)	**WEL 8-hr limit ppm:**	1	**WEL 8-hr limit mg/m3:**	1.4
	WEL 15 min limit ppm:	2	**WEL 15 min limit mg/m3:**	2.8
	WEL 8-hr limit mg/m3 total inhalable dust:	-	**WEL 15 min limit mg/m3 total inhalable dust:**	-
	WEL 8-hr limit mg/m3 total respirable dust:	-	**WEL 15 min limit mg/m3 total respirable dust:**	-

DNEL: Derived no-effect level.

Exposure Pattern - Workers

Hydrogen Peroxide <50%	**Acute inhalation - Local effects**	3 mg/m³
	Long-term - inhalation - Local effects	1.4 mg/m³

Exposure Pattern - General population

Hydrogen Peroxide <50%	**Acute inhalation - Local effects**	1.93 mg/m³
	Long-term - inhalation - Local effects	0.21 mg/m³

8.2. Exposure controls

	Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Use appropriate personal protective equipment. Wear suitable protective clothing and eye/face protection.
8.2.1. Appropriate engineering controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below there respective threshold limit value. Ensure eyewash stations and safety showers are close to the workstation location.
Eye / face protection	Chemical splash goggles. Personal Protective equipment for eye and face protection should comply with European Standard EN166. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Skin protection - Handprotection	Rubber gloves. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.
Skin protection - Other	Wear suitable protective clothing. Emergency safety showers should be available in the immediate vicinity of any potential exposure.

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8.2. Exposure controls

Respiratory protection	No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment. Respirator with ABEK filter EN 136/140/141/145/143/149.
8.2.3. Environmental exposure controls	Prevent further leakage or spillage if safe to do so.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless
Odour	Characteristic
Initial boiling point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.18 - 1.196
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	< 100 centipoise
Explosive properties	No data available
Oxidising properties	No data available
Odour threshold	No data available
pH	0.95 - 1.05
Melting point	No data available
Solubility	Soluble in water

9.2. Other information

Conductivity	No data available
Surface tension	No data available
Gas group	No data available
Benzene Content	No data available
Lead content	No data available
VOC (Volatile organic compounds)	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions. No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal conditions. No particular stability concerns.

10.3. Possibility of hazardous reactions

may detonate when in mixing with organic substances and under certain conditions contact with metals and its salts may result in catalyzed decomposition 7., Heavy metals and their salts Copper. Chromium. Nickel. Lead. Iron. Dusty powder. Kerosene.

10.4. Conditions to avoid

Avoid sparks, flames, heat and sources of ignition. Avoid storing in direct Sun Light. Protect from light, including direct sun rays. Store at moderate temperatures in a dry well ventilated area.

10.5. Incompatible materials

Keep away from combustible material. Strong acids. Strong bases. Strong oxidising agents. Strong reducing agents. Metal or metallic solid. Acetone. Organic compounds.

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10.6. Hazardous decomposition products

	Oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

	This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in Regulation (EC) No 1272/2008 (CLP).
Acute toxicity	Acute Tox. 4: H302 - Harmful if swallowed. Oral ATE = 431.4422 mg/kg. Inhalation - Vapours ATE = 11.0113 mg/l.
Skin corrosion/irritation	Skin Irrit. 2: H315 - Causes skin irritation.
Serious eye damage/irritation	Eye Dam. 1: H318 - Causes serious eye damage.
Respiratory or skin sensitisation	based on available data the classification criteria are not met.
Germ cell mutagenicity	based on available data the classification criteria are not met.
Carcinogenicity	based on available data the classification criteria are not met.
Reproductive toxicity	based on available data the classification criteria are not met.
STOT-single exposure	STOT SE 3: H335 - May cause respiratory irritation.
STOT-repeated exposure	based on available data the classification criteria are not met.
Aspiration hazard	based on available data the classification criteria are not met.
Repeated or prolonged exposure	based on available data the classification criteria are not met.

11.1.2. Mixtures

	No data available.

11.1.3. Hazard Information

	No data available.

11.1.4. Toxicological Information

Hydrogen Peroxide <50%	**Oral Rat LD50:** 431 mg/kg	**Dermal Rabbit LD50:** 6440 mg/kg
	Inhalation Rat LC50/4 h: 11.0 mg/l	

SECTION 12: Ecological information

12.1. Toxicity

	No data available

12.2. Persistence and degradability

	Substance biodegrades at a moderate rate and inherently biodegradable according to the OECD guide lines.

12.3. Bioaccumulative potential

	The product is not bioaccumulating.

Partition coefficient

	Silvenox No data available	**Hydrogen Peroxide <50%** -1.57 log P

12.4. Mobility in soil

	This product is soluble in water.

12.5. Results of PBT and vPvB assessment

	This mixture is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

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12.6. Other adverse effects

	No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

	Dispose of waste and residues in accordance with local authority requirements.

General information

	Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.

Disposal of packaging

	Do NOT reuse empty containers. Empty containers can be sent to landfill after cleaning, if in compliance with local and national regulations.

SECTION 14: Transport information

Hazard pictograms

14.1. UN number

	UN2014

14.2. UN proper shipping name

	HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

ADR/RID	5.1
Subsidiary risk	8
IMDG	5.1
Subsidiary risk	8
IATA	5.1
Subsidiary risk	8

14.4. Packing group

Packing group	II

14.5. Environmental hazards

Environmental hazards	No
Marine pollutant	No

14.6. Special precautions for user

	No additional special precautions.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

	Not applicable.

ADR/RID

Hazard ID	58
Tunnel Category	(E)

IMDG

EmS Code	F-H S-Q

IATA

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IATA

Packing Instruction (Cargo)	FORBIDDEN
Maximum quantity	FORBIDDEN
Packing Instruction (Passenger)	FORBIDDEN
Maximum quantity	FORBIDDEN

SECTION 15: Regulatory information

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

Regulations	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

15.2. Chemical safety assessment

	No information available.

SECTION 16: Other information

Other information

Data sources	Classification and Procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008, as retained and amended in UK law. Acute Tox. 4: H302 - Harmful if swallowed. - Calculation Method, See section 11 for ATE data. Skin Irrit. 2: H315 - Causes skin irritation. - Calculation Method. Eye Dam. 1: H318 - Causes serious eye damage. - Calculation Method. STOT SE 3: H335 - May cause respiratory irritation. - Calculation Method.
Text of Hazard Statements in Section 3	Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled Skin Irrit. 2: H315 - Causes skin irritation. Eye Dam. 1: H318 - Causes serious eye damage. STOT SE 3: H335 - May cause respiratory irritation. Met. Corr. 1: H290 - May be corrosive to metals. Aquatic Acute 1: H400 - Very toxic to aquatic life. Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Further information

	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.