

SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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Silvanus

Revision 11

Revision date 2020-05-22

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

1.1. Product identifier

Product name	Silvanus
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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); [SU1] Agriculture, forestry, fishery;
Description	A unique formulation of phosphite and silicon.

1.3. Details of the supplier of the safety data sheet

Company	Orion Future Technology Ltd
Address	Milbank House Earls Colne Business Park Earls Colne Essex CO6 2NS
Web	www.orionft.com
Telephone	01787 220560
Email	info@orionft.com

1.4. Emergency telephone number


Emergency telephone number	01787 220560 9am - 5pm 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
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008	Skin Sens. 1: H317; Eye Irrit. 2: H319;
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2.2. Label elements

Hazard pictograms	
Signal Word	Warning
Hazard Statement	Skin Sens. 1: H317 - May cause an allergic skin reaction. Eye Irrit. 2: H319 - Causes serious eye irritation.
Precautionary Statement: Prevention	P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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2.2. Label elements

Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to an approved disposal site, in accordance with local regulations.

2.3. Other hazards

Other hazards	This mixture is not classified as PBT or vPvB according to current EU criteria.
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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
Potassium Phosphite		13977-65-6	604-162-9	01-2119988836-13	70 - 90%	Eye Irrit. 2: H319;
b-alanine, N-(2-Hydroxyethyl)-N-[2-[(1-oxooctyl)amino]ethyl] UREA		64265-45-8	264-761-2		1 - 10%	Skin Sens. 1: H317; Eye Irrit. 2: H319;
		57-13-6	200-315-5	01-2119463277-33	1 - 10%	
Poly(oxy-1,2-ethanediyl), a-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-w-hydroxy-		67674-67-3	614-100-2		1 - 15%	Eye Irrit. 2: H319; Acute Tox. 4: H332; Aquatic Chronic 3: H412;

Further information

Product Shelf Life	Recommended shelf life 3 years from date of delivery.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
Eye contact	Rinse immediately with plenty of water. Contact lenses should be removed.
Skin contact	Remove contaminated clothing. Wash with water and soap as a precaution.
Ingestion	DO NOT INDUCE VOMITING. Rinse mouth thoroughly.

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

Inhalation	May cause irritation to respiratory system.
Eye contact	Causes serious eye irritation.
Skin contact	May cause sensitisation by skin contact.
Ingestion	May cause irritation to mucous membranes.

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

Inhalation	Move the exposed person to fresh air. Seek medical attention if irritation or symptoms persist.
Eye contact	Contact lenses should be removed. Rinse immediately with plenty of water. Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Drink 1 to 2 glasses of water. Seek medical attention if irritation or symptoms persist.

General information

	If you feel unwell, seek medical advice (show the label where possible). Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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5.1. Extinguishing media

This product is not flammable . Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Wear suitable respiratory equipment when necessary.

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.

6.2. Environmental precautions

Advise local authorities if large spills cannot be contained.

6.3. Methods and material for containment and cleaning up

For large spills:. Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water. For small spills:. Flush down the drain 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

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. Keep out of the reach of children. Store in original container.

7.3. Specific end use(s)

A unique formulation of phosphite and silicon.

Suitable packaging

Plastic containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure controls.

8.1.1. Exposure Limit Values

UREA	WEL 8-hr limit ppm:	WEL 8-hr limit mg/m3: 4
	WEL 15 min limit ppm:	WEL 15 min limit mg/m3:
	WEL 8-hr limit mg/m3 total -	WEL 15 min limit mg/m3 total -
	inhalable dust:	inhalable dust:
	WEL 8-hr limit mg/m3 total -	WEL 15 min limit mg/m3 total -
	respirable dust:	respirable dust:

DNEL: Derived no-effect level.

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DNEL: Derived no-effect level.



Exposure Pattern - Workers

UREA	Acute inhalation - Systemic effects	292 mg/m ³	
	Acute dermal - Systemic effects	580 mg/kg	Long-term - inhalation - Systemic effects
	Long-term - dermal - Systemic effects	580 mg/kg	

Exposure Pattern - General population

UREA	Acute inhalation - Systemic effects	125 mg/kg	
	Acute dermal - Systemic effects	580 mg/kg	Acute oral - Systemic effects
	Long-term - inhalation - Systemic effects	125 mg/m ³	Long-term - oral - Systemic effects

8.2. Exposure controls

8.2.1. Appropriate engineering controls Eye / face protection Skin protection - Handprotection Respiratory protection	 	<p>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.</p>
		Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure eyewash stations and safety showers are close to the workstation location.
		Avoid contact with eyes. If splashes are likely to occur, wear: safety glasses with side-shields.
		Rubber gloves.
		No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment.
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

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9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Amber
Odour	Characteristic
Odour threshold	No data available
pH	6.6 - 7.6
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.35 - 1.45 g/cm ³
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	< 100 centipoise
Explosive properties	No data available
Oxidising properties	No data available
Melting point	No data available
Initial boiling point	No data available
Flash point	No data available
Solubility	Soluble in water

9.2. Other information

Conductivity	Not relevant
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.
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10.2. Chemical stability

	Stable under normal conditions. No particular stability concerns.
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10.3. Possibility of hazardous reactions

	Strong acids. Strong oxidising agents.
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10.4. Conditions to avoid

	Protect from frost.
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10.5. Incompatible materials

	No incompatible groups noted.
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10.6. Hazardous decomposition products

	No Hazardous decomposition products when stored and handled correctly. Burning produces irritating, toxic and obnoxious fumes.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	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). based on available data the classification criteria are not met.
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11.1. Information on toxicological effects

Skin corrosion/irritation	based on available data the classification criteria are not met.
Serious eye damage/irritation	Eye Irrit. 2: H319 - Causes serious eye irritation.
Respiratory or skin sensitisation	Skin Sens. 1: H317 - May cause an allergic skin reaction.
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	based on available data the classification criteria are not met.
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.

11.1.2. Mixtures

	No data available.
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11.1.3. Hazard Information

	No data available.
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11.1.4. Toxicological Information

Poly(oxy-1,2-ethanediyl), a-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-w-hydroxy-	Dermal Rat LD50: >5000 mg/kg	Oral Rat LD50: >5000 mg/kg
	Inhalation Rat LC50/4 h: 1.08 mg/l	
UREA	Oral Rat LD50: 14300.0 mg/kg	

SECTION 12: Ecological information

12.1. Toxicity

Poly(oxy-1,2-ethanediyl), a-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-w-hydroxy-	Daphnia EC50/48h: 28.3000 mg/l	Fish LC50/96h: 18.1000 mg/l
UREA	Daphnia EC50/48h: 10000.0000 mg/l	Golden orfe LC50/48h: >6810 mg/l

12.2. Persistence and degradability

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

	No data is available on this product.
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Partition coefficient

	Silvanus No data available	UREA -1.73 Log Pow
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12.4. Mobility in soil

	No data is available on this product.
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12.5. Results of PBT and vPvB assessment

	No data is available on this product.
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12.6. Other adverse effects

	No data available.
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SECTION 13: Disposal considerations

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13.1. Waste treatment methods

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

	Dispose of in compliance with all local and national requirements.
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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.
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SECTION 14: Transport information

14.1. UN number

	The product is not classified as dangerous for carriage.
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14.2. UN proper shipping name

	The product is not classified as dangerous for carriage.
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14.3. Transport hazard class(es)

	The product is not classified as dangerous for carriage.
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14.4. Packing group

	The product is not classified as dangerous for carriage.
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14.5. Environmental hazards

	The product is not classified as dangerous for carriage.
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14.6. Special precautions for user

	The product is not classified as dangerous for carriage.
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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

	The product is not classified as dangerous for carriage.
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SECTION 15: Regulatory information

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

Regulations	<p>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.</p> <p>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.</p>
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15.2. Chemical safety assessment

	No information available.
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SECTION 16: Other information

Other information

Revision	<p>This document differs from the previous version in the following areas:.</p> <p>1 - Description.</p> <p>1 - Product Use.</p> <p>7 - 7.3. Specific end use(s).</p>
Data sources	Classification and Procedure used to derive the classification for mixtures according to Regulation

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Other information

Text of Hazard Statements in Section 3	(EC) No. 1272/2008: Skin Sens. 1: H317 - May cause an allergic skin reaction. - Calculation Method. Eye Irrit. 2: H319 - Causes serious eye irritation. - Calculation Method.
	Eye Irrit. 2: H319 - Causes serious eye irritation. Skin Sens. 1: H317 - May cause an allergic skin reaction. Acute Tox. 4: H332 - Harmful if inhaled. Aquatic Chronic 3: H412 - Harmful 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.
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