

SAFETY DATA SHEET

according to Regulation (EU) 2020/878

Page 1/8

Sirius

Revision 37

Revision date 2022-12-09

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

1.1. Product identifier

Product name	Sirius
Other means of identification	UFI Number - K800-D0M5-Q00X-TFGE.

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	Agricultural Product.

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008	Flam. Liq. 3: H226; Skin Irrit. 2: H315; Eye Dam. 1: H318; Acute Tox. 4: H332; STOT SE 3: H335; Aquatic Chronic 3: H412;
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2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Flam. Liq. 3: H226 - Flammable liquid and vapour. Skin Irrit. 2: H315 - Causes skin irritation. Eye Dam. 1: H318 - Causes serious eye damage. Acute Tox. 4: H332 - Harmful if inhaled. STOT SE 3: H335 - May cause respiratory irritation. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Precautionary Statement: Prevention	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . 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

Sirius

Revision 37

Revision date 2022-12-09

2.2. Label elements

Precautionary Statement: Disposal SUPPLEMENTAL HAZARD INFORMATION	lenses, if present and easy to do. Continue rinsing.
	P501 - Dispose of contents/container to an approved disposal site, in accordance with local regulations.
	Contains - Ethyl Silicate, Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-(trimethylsilyloxy)-1-disiloxanyl]propyl] ether, Alcohols C11-15 Secondary Ethoxylated, Ethylpolysilicate.

2.3. Other hazards

Other hazards	This substance/mixture is not classified as PBT or vPvB according to current criteria. The substance/mixture does not contain substances with endocrine disrupting properties.
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Further information

	Recommended shelf life 3 years from date of delivery.
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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
Ethyl Silicate (Tetraethyl orthosilicate)		78-10-4	201-083-8	01-2119496195-28	70 - 80%	Flam. Liq. 3: H226; Eye Irrit. 2: H319; Acute Tox. 4: H332; STOT SE 3: H335;
Oxirane, 2-methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyloxy)-1-disiloxanyl]propyl] ether		134180-76-0			1 - 10%	Acute Tox. 4: H312+H332; Eye Irrit. 2: H319; Aquatic Chronic 2: H411;
Alcohols C11- 15 Secondary Ethoxylated		68131-40-8			10 - 20%	Acute Tox. 4: H302+H332; Skin Irrit. 2: H315; Eye Dam. 1: H318;
Ethylpolysilicate		11099-06-2	234-324-0		1 - 10%	Flam. Liq. 3: H226; Eye Irrit. 2: H319; Aquatic Chronic 2: H411;

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	Harmful by inhalation. May cause irritation to respiratory system. High concentration of vapour in enclosed space may cause irritation, headaches and nausea.
Eye contact	Causes serious eye damage.
Skin contact	Causes skin irritation. Prolonged contact may cause defatting of the skin.
Ingestion	May cause irritation to mucous membranes.

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

	TREAT SYMPTOMATICALLY.
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

Sirius

Revision 37

Revision date 2022-12-09

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

	Flammable liquid. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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5.2. Special hazards arising from the substance or mixture

	Burning produces irritating, toxic and obnoxious fumes.
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5.3. Advice for firefighters

	Fire fighters should wear self contained positive pressure breathing apparatus (SCBA) and full turnout gear.
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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.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	Wear suitable protective equipment. Flammable liquid. Avoid sparks, flames, heat and sources of ignition.
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6.2. Environmental precautions

	Advise local authorities if large spills cannot be contained.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Avoid sparks, flames, heat and sources of ignition.
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6.4. Reference to other sections

	See section 2, 7, 8, 13 for further information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

	Adopt best Manual Handling considerations when handling, carrying and dispensing.
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7.2. Conditions for safe storage, including any incompatibilities

	Flammable liquid. Avoid sparks, flames, heat and sources of ignition. Avoid storing in direct Sun Light. Store in a well-ventilated place. Keep cool. Store in original container. Keep container tightly closed. Keep away from combustible material. Keep out of the reach of children.
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7.3. Specific end use(s)

	Agricultural Product.
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Suitable packaging

	Plastic containers.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

	Occupational exposure controls.
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8.1.1. Exposure Limit Values

Sirius

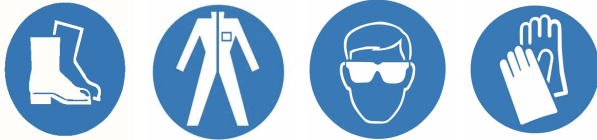
Revision 37

Revision date 2022-12-09

8.1.1. Exposure Limit Values

Ethyl Silicate (Tetraethyl orthosilicate)	DIR: 2017/164	8hTWA mg/m3: 44
	8hTWA ppm: 5	STEL mg/m3: -
	STEL ppm: -	NOT: -

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 their respective threshold limit value. Ensure eyewash stations and safety showers are close to the workstation location.
Eye / face protection	Avoid contact with eyes. Approved safety goggles.
Skin protection - Handprotection	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.
Respiratory protection	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

Appearance	Liquid
Colour	Clear
Odour	Slight
Odour threshold	No data available
pH	No data available
Melting point	No data available
Initial boiling point	No data available
Flash point	35 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Relative Vapour Density	No data available
Density / Relative Density	0.95 - 0.96 (H ₂ O = 1 @ 20 °C)
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available
Solubility	Miscible in water

9.2. Other information

Sirius

Revision 37

Revision date 2022-12-09

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

9.2.1. Information with regard to physical hazard classes

No data is available on this product.

9.2.2. Other safety characteristics

No data is available on this product.

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid. Stable under normal conditions.

10.2. Chemical stability

Flammable liquid. Stable under normal conditions.

10.3. Possibility of hazardous reactions

Oxidising agents. Combustible materials.

10.4. Conditions to avoid

Avoid sparks, flames, heat and sources of ignition. Avoid storing in direct Sun Light.

10.5. Incompatible materials

Oxidising agents.

10.6. Hazardous decomposition products

No Hazardous decomposition products when stored and handled correctly.

SECTION 11: Toxicological information

11.1 Information on hazard classes

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).
	Acute Tox. 4: H332 - Harmful if inhaled.
	Oral ATE = 2362.3853 mg/kg.
	Dermal ATE = >10,000 mg/kg.
Skin corrosion/irritation	Inhalation - Dust/Mist ATE = 1.4384 mg/l.
	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.

Sirius

Revision 37

Revision date 2022-12-09

11.1.2. Mixtures

No data available.

11.1.3. Hazard Information

No data available.

11.1.4. Toxicological Information

Alcohols C11- 15 Secondary Ethoxylated	Dermal Rat LD50: >2800 mg/kg	Oral Rat LD50: >412.00 mg/kg
	Inhalation Rat LC50/4 h: 1.06 mg/l	
Ethyl Silicate	Oral Rat LD50: 6270 mg/kg (literature)	Dermal Rabbit LD50: 5880 mg/kg (literature)

11.2 Information on other hazards

No data is available on this product.

SECTION 12: Ecological information

12.1. Toxicity

Alcohols C11- 15 Secondary Ethoxylated	Daphnia EC50/48h: 7.3000 mg/l	Fathead minnows LC50/96h: 3.2 - 3.6 mg/l
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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

	Sirius No data available	Alcohols C11- 15 Secondary Ethoxylated 2.72 Log Pow
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12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

No data is available on this product.

12.7. Other adverse effects

No data is available on this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

General information

Dispose of in compliance with all local and national requirements.

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

Sirius

Revision 37
Revision date 2022-12-09

Hazard pictograms

	
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14.1. UN number

	UN1993
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14.2. UN proper shipping name

	FLAMMABLE LIQUID, N.O.S. (contains Tetraethyl silicate solution)
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14.3. Transport hazard class(es)

ADR/RID	3
Subsidiary risk	-
IMDG	3
Subsidiary risk	-
IATA	3
Subsidiary risk	-

14.4. Packing group

Packing group	III
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14.5. Environmental hazards

Environmental hazards	No
Marine pollutant	No

14.6. Special precautions for user

	No additional special precautions.
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14.7 Maritime Transport in bulk according to IMO instruments

	Not applicable.
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ADR/RID

Hazard ID	30
Tunnel Category	(D/E)

IMDG

EmS Code	F-E S-E
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IATA

Packing Instruction (Cargo)	366
Maximum quantity	220 L
Packing Instruction (Passenger)	355
Maximum quantity	60 L

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.
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Sirius

Revision 37

Revision date 2022-12-09

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

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.

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No information available.

SECTION 16: Other information**Other information**

Revision	<p>This document differs from the previous version in the following areas:.</p> <ul style="list-style-type: none"> 1 - Description. 1 - Other means of identification. 1 - Further information. 2 - Other hazards. 2 - Hazard pictograms. 2 - Further information. 2 - SUPPLEMENTAL HAZARD INFORMATION. 9 - 9.2.2. Other safety characteristics. 9 - 9.2.1. Information with regard to physical hazard classes. 11 - 11.2 Information on other hazards. 12 - 12.6 Endocrine disrupting properties. 12 - 12.7. Other adverse effects. 15 - Regulations.
Data sources	<p>Classification and Procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008, as retained and amended in UK law.</p> <p>Flam. Liq. 3: H226 - Flammable liquid and vapour. - Flash Point - 35 degC.</p> <p>Skin Irrit. 2: H315 - Causes skin irritation. - Calculation Method.</p> <p>Eye Dam. 1: H318 - Causes serious eye damage. - Calculation Method.</p> <p>Acute Tox. 4: H332 - Harmful if inhaled. - Calculation Method.</p> <p>STOT SE 3: H335 - May cause respiratory irritation. - Calculation Method.</p> <p>Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. - Calculation Method.</p>
Text of Hazard Statements in Section 3	<p>Flam. Liq. 3: H226 - Flammable liquid and vapour.</p> <p>Eye Irrit. 2: H319 - Causes serious eye irritation.</p> <p>Acute Tox. 4: H332 - Harmful if inhaled.</p> <p>STOT SE 3: H335 - May cause respiratory irritation.</p> <p>Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled</p> <p>Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.</p> <p>Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled</p> <p>Skin Irrit. 2: H315 - Causes skin irritation.</p> <p>Eye Dam. 1: H318 - Causes serious eye damage.</p>
Further information	<p>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.</p>