

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2015/830.

Issue date: 11/08/2023 Revision date: 07/08/2024 Supersedes: 11/08/2023 Version: 2.0

SDS No: 12301-0062



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

1.1. Product identifier

Product form : Mixture

Product name : Sentinel X100 Rapid-Dose 250ml

Vaporizer : Aerosol

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Corrosion and Scale Inhibitor for Heating and Cooling Systems

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Sentinel Performance Solutions LTD

7650 Daresbury

Warrington, Cheshire, WA4 4BS

Great Britain

T +44 (0)1928 704 330 - F +44 (0)1928 562 070

info.uk@sentinelprotects.com

E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : +44 (0)1928 704 320

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Aerosol, Category 3 H229
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. Pressurised container: May burst if heated. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Signal word (GB CLP) : Warning
Contains : Octanoic acid

Hazard statements (GB CLP) : H229 - Pressurised container: May burst if heated.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (GB CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P251 - Do not pierce or burn, even after use. P273 - Avoid release to the environment.

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C. P501 - Dispose of contents and container to Dispose of contents/container in accordance

with local and national regulations.

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2.3. Other hazards

This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII

Compone	

Substance(s) included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP

1H-Benzotriazole(95-14-7)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
Octanoic acid	CAS-No.: 124-07-2 EC-No.: 204-677-5	≥ 10 – < 15	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412
1H-Benzotriazole substance identified as having endocrine disrupting properties	CAS-No.: 95-14-7 EC-No.: 202-394-1	≥ 3 - < 5	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Eye Irrit. 2, H319 Aquatic Chronic 2, H411
Propane-1,2 diol	CAS-No.: 57-55-6 EC-No.: 200-338-0	≥1-<3	Not classified

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical

advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if

present and easy to do. Continue rinsing.

First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Explosion hazard : Pressurised container: May burst if heated.

Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Nitrogen oxides. Phosphorus oxides.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Do not allow run-off from fire fighting

to enter drains or water courses.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and

no smoking.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep

away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use. Store in a well-ventilated place. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/

122 °F.

7.3. Specific end use(s)

See Section 1.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Propane-1,2 diol (57-55-6)	
United Kingdom - Occupational Exposure Limits	
Local name	Propane-1,2-diol
WEL TWA (OEL TWA)	10 mg/m³ particulates 474 mg/m³ total vapour and particulates
	150 ppm total vapour and particulates
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Protective goggles (EN 166)

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Chemically resistant protective gloves. ISO 374-1. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Clear. Colourless. Pale yellow.

Odour : Barely perceptible. Odour threshold : Not available : 7.6 - 8.2 (25 °C) Melting point : Not available Freezing point : Not available **Boiling point** : Not available : < -20 °C Flash point : Not available **Explosive limits** Vapour pressure : Not available Vapour pressure at 50°C : Not available

Relative density : Not available Density : 1.075 – 1.175 g

Density : 1.075 – 1.175 g/cm³ (25 °C)
Solubility : Miscible with water.

Partition coefficient n-octanol/water (Log Kow) : Not available
Auto-ignition temperature : Not available
Decomposition temperature : Not available
Viscosity, kinematic : Not available

Explosive properties : Pressurised container: May burst if heated.

Oxidising properties : Non oxidizing.

9.2. Other information

Relative vapour density at 20°C

Particle characteristics : Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Pressurised container: May burst if heated.

: Not available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Extremely high or low temperatures. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified Acute toxicity (dermal) : Not classified

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: Not classified Acute toxicity (inhalation)

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Propane-1,2 diol (57-55-6)			
LD50 oral rat	22000 mg/kg bodyweight Animal: rat		
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit		
Octanoic acid (124-07-2)			
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))		
Skin corrosion/irritation	: Not classified ((OECD 439 method)).		

pH: 7.6 – 8.2 (25 °C)

Serious eye damage/irritation : Not classified ((OECD 492 method)). pH: 7.6 – 8.2 (25 °C)

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified STOT-single exposure : Not classified STOT-repeated exposure : Not classified

NOAEL (subchronic, oral, animal/male, 90 days) 443 mg/kg bodyweight Animal: cat, Animal sex: male

Aspiration hazard : Not classified

Sentinel X100 Rapid-Dose 250ml

Vaporizer Aerosol

Endocrine disrupting properties

No additional information available

Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term : Not classified

Hazardous to the aquatic environment, long-term : Harmful to aquatic life with long lasting effects.

(chronic)

Propane-1,2 diol (57-55-6)		
LC50 fish 1	51600 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
LC50 - Fish [2]	51400 mg/l Test organisms (species): Pimephales promelas	
EC50 72h - Algae [1]	24200 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	19300 mg/l Test organisms (species): Skeletonema costatum	
EC50 96h - Algae [1]	19000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [2]	19100 mg/l Test organisms (species): Skeletonema costatum	

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Octanoic acid (124-07-2)		
LC50 fish 1	22 mg/l Test organisms (species): Lepomis macrochirus	
EC50 Daphnia 1	> 21 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	43.73 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	23.28 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Sentinel X100 Rapid-Dose 250ml

This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII

This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods Product/Packaging disposal recommendations

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shippin	g name			
AEROSOLS	AEROSOLS	Aerosols, non-flammable	AEROSOLS	AEROSOLS
14.3. Transport hazard class(es)				
2.2	2.2	2.2	2.2	2.2
2	2	2	2	2

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ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental haz	ards			
Dangerous for the environment: False	Dangerous for the environment: False Marine pollutant: No	Dangerous for the environment: False	Dangerous for the environment: False	Dangerous for the environment: False
No supplementary information	on available			

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5A

Special provisions (ADR) : 190, 327, 344, 625

Limited quantities (ADR) : 11 Excepted quantities (ADR) : E0 Packing instructions (ADR) : P207 Special packing provisions (ADR) : PP87, RR6, L2

Mixed packing provisions (ADR) : MP9 Transport category (ADR) : 3 : E Tunnel restriction code (ADR)

Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 381, 959

SG69

Limited quantities (IMDG) : SP277 Excepted quantities (IMDG) : E0 Packing instructions (IMDG) : P207, LP200 Special packing provisions (IMDG) : PP87, L2 Stowage category (IMDG) : None Stowage and handling (IMDG) SW1, SW22

Air transport

Segregation (IMDG)

: E0 PCA Excepted quantities (IATA) PCA Limited quantities (IATA) : Y203 PCA limited quantity max net quantity (IATA) : 30kgG PCA packing instructions (IATA) : 203 PCA max net quantity (IATA) : 75kg CAO packing instructions (IATA) : 203 CAO max net quantity (IATA) : 150kg

Special provisions (IATA) A98, A145, A167, A802

ERG code (IATA) 2L

Inland waterway transport

Classification code (ADN) : 5A

Special provisions (ADN) : 190, 327, 344, 625

Limited quantities (ADN) : 1 L Excepted quantities (ADN) : E0 Equipment required (ADN) : PP Ventilation (ADN) : VE04 Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : 5A

: 190, 327, 344, 625 Special provisions (RID)

: 1L Limited quantities (RID) Excepted quantities (RID) : E0 Packing instructions (RID) : P207, LP200

Transport category (RID) : 3

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Hazard identification number (RID) : 20

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

Contains no substance(s) listed on the UK REACH Candidate List

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : Not subject to the Seveso III Directive

GB PIC regulation (Prior Informed Conset)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:		
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
DNEL	Derived-No Effect Level	
EC50	Median effective concentration	
IARC	International Agency for Research on Cancer	

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Abbreviations and acr	onyms:
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
EC-No.	European Community number
EN	European Standard
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
ED	Endocrine disruptor
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods

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Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aerosol 3	Aerosol, Category 3	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H229	Pressurised container: May burst if heated.	
H302	Harmful if swallowed.	
H314	Causes severe skin burns and eye damage.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C	

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aerosol 3	H229	On basis of test data
Aquatic Chronic 3	H412	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.

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