SAFETY DATA SHEET

Sentinel X100 InstaDose

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

1.1. Product identifier

Trade name

Sentinel X100 InstaDose

Product no.

12301-0072

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

Relevant identified uses of the substance or mixture

Corrosion and Scale Inhibitor for Heating and Cooling Systems

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Sentinel Performance Solutions Ltd
7650 Daresbury Park
Daresbury
WA4 4BS Warrington
United Kingdom
T- +44 (0)1928 704 330
F- +44 (0)1928 562 070

Contact person

Customer Services

E-mail

customer.services@sentinelprotects.com

Revision

13/08/2025

SDS Version

1.0

1.4. Emergency telephone number

+44 (0)1928 704 320
Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)
General public:
England - Dial 111 to reach NHS 111 (24 hour service)
Scotland - Dial 111 to reach NHS 24 (24 hour service)
Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)
See section 4 “First aid measures”.

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Aquatic Chronic 3; H412, Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s)

Not applicable.

Signal word

Not applicable.

Hazard statement(s)

Harmful to aquatic life with long lasting effects. (H412)

Precautionary statement(s)

General

Not applicable.

Prevention

Not applicable.

Response

Not applicable.

Storage

Not applicable.

Disposal

Not applicable.

Hazardous substances

Does not contain any substances required to report

Additional labelling

Not applicable.

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
octanoic acid	CAS No.: 124-07-2 EC No.: 204-677-5 UK-REACH: Index No.: 607-708-00-4	10-15%	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412	
Benzotriazole	CAS No.: 95-14-7 EC No.: 202-394-1 UK-REACH: Index No.:	3-5%	Acute Tox. 4, H302 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

-

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.
Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage conditions

< 50°C
Dry, cool and well ventilated

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propane-1,2-diol
Long term exposure limit (8 hours) (ppm): 150(total)
Long term exposure limit (8 hours) (mg/m³): 474(total)/10(particulates)

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

Benzotriazole

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	120 µg/kg bw/day
Long term – Systemic effects - Workers	Dermal	240 µg/kg bw/day
Long term – Systemic effects - General population	Inhalation	2.1 mg/m³
Long term – Systemic effects - Workers	Inhalation	4.2 mg/m³
Long term – Systemic effects - General population	Oral	120 µg/kg bw/day
Short term – Systemic effects - General population	Oral	120 µg/kg bw/day

Propane-1,2-diol

Duration:	Route of exposure:	DNEL:

Long term – Local effects - General population	Inhalation	10 mg/m³
Long term – Local effects - Workers	Inhalation	10 mg/m³
Long term – Systemic effects - General population	Inhalation	50 mg/m³
Long term – Systemic effects - Workers	Inhalation	168 mg/m³

PNEC

Benzotriazole

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		97 µg/L
Freshwater sediment		1.1 mg/kg
Intermittent release (freshwater)		158 µg/L
Intermittent release (marine water)		15.8 µg/L
Marine water		9.7 µg/L
Marine water sediment		110 µg/kg
Sewage treatment plant		9.4 mg/L
Soil		169 µg/kg

octanoic acid

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		20 µg/L
Freshwater sediment		295.2 µg/kg
Intermittent release (freshwater)		220 µg/L
Intermittent release (marine water)		22 µg/L
Marine water		2 µg/L
Marine water sediment		29.5 µg/kg
Sewage treatment plant		912 mg/L
Soil		47.3 µg/kg

Propane-1,2-diol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		260 mg/L
Freshwater sediment		572 mg/kg
Intermittent release (freshwater)		183 mg/L
Marine water		26 mg/L
Marine water sediment		57.2 mg/kg
Sewage treatment plant		20 g/L
Soil		50 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally

Wash contaminated clothing before reuse.
Use only UKCA marked protective equipment.

Respiratory Equipment

No specific requirements.

Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Chemically resistant protective gloves. EN 374	-	-	-

Eye protection

Type	Standards	
Safety glasses	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Clear, Pale yellow

Odour / Odour threshold

No data available.

pH

7.75 - 7.95

Density (g/cm^3)

-

Relative density

1.157 - 1.169 (25 °C)

Kinematic viscosity

No data available.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)
No data available.

Softening point/range (°C)
Does not apply to liquids.

Boiling point (°C)
No data available.

Vapour pressure
No data available.

Relative vapour density
No data available.

Decomposition temperature (°C)
No data available.

Data on fire and explosion hazards

Flash point (°C)
No data available.

Flammability (°C)
No data available.

Auto-ignition temperature (°C)
No data available.

Lower and upper explosion limit (% v/v)
No data available.

Solubility

Solubility in water
No data available.

n-octanol/water coefficient (LogKow)
No data available.

Solubility in fat (g/L)
No data available.

9.2. Other information

Oxidizing properties
No data available.

Other physical and chemical parameters
No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials
Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

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 hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance	octanoic acid
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	10080 mg/kg

Product/substance	Benzotriazole
Test method:	OECD 423
Species:	Rat, male/female
Route of exposure:	Oral
Test:	LD50
Result:	500 mg/kg

Product/substance	Benzotriazole
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (dust)
Result:	1.5 mg/L

Product/substance	Propane-1,2-diol
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	20000 mg/kg

Product/substance	Propane-1,2-diol
Route of exposure:	Dermal
Test:	LD50
Result:	2001 mg/kg

Product/substance	Propane-1,2-diol
Species:	Rat
Route of exposure:	Inhalation
Result:	317.042 mg/L

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

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

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.

11.2. Information on other hazards

Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	octanoic acid
Species:	Fish, Brachydanio rerio
Duration:	96 hours
Test:	LC50
Result:	110 mg/L

Product/substance	octanoic acid
Species:	Fish, Oryzias latipes
Duration:	96 hours
Test:	LC50
Result:	310 mg/L

Product/substance	Benzotriazole
Test method:	OECD 202
Species:	Daphnia, Daphnia galeata
Duration:	48 hours
Test:	EC50
Result:	15.8

Product/substance	Propane-1,2-diol
Species:	Fish, Oncorhynchus mykiss
Duration:	96 hours
Result:	40.613 mg/L

Product/substance	Propane-1,2-diol
Species:	Daphnia, Ceriodaphnia dubia
Duration:	48 hours
Result:	18340 mg/L

Product/substance	Propane-1,2-diol
Species:	Pseudomonas putida
Duration:	18 hours
Test:	NOEC
Result:	>20000 mg/L

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Product/substance	Propane-1,2-diol
Conclusion:	Potential for bioaccumulation is low

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 8 – Corrosive

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

Not applicable.

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements.

Control of Major Accident Hazards (COMAH) - Categories / dangerous substances

Not applicable.

Additional information

Not applicable.

Sources

The Health and Safety at Work etc. Act 1974 Regulations 2013.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

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.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The safety data sheet is validated by

ADB

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en