

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

1.1. Product identifier

Product form : Mixture
Product name : Sentinel X100 Triple Power Inhibitor

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

1.2.1. Relevant identified uses

Main use category : 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

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

e-mail: info.uk@sentinelprotects.com

1.4. Emergency telephone number

Emergency number : +44 (0) 1928 704 339
(24 hours, 7 days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not Classified

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sodium nitrate	(CAS No) 7631-99-4 (EC No.) 231-554-3 (REACH-no) 01-2119488221-41-XXXX	3 - 10	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302
Benzotriazole	(CAS No) 95-14-7 (EC No.) 202-394-1 (REACH-no) 01-2119979079-20	1 - 3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

Full text of H-statements: see section 16

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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 (show the label where possible).
- First-aid measures after inhalation : Remove to fresh air, keep the patient warm and at rest. If symptoms develop obtain medical attention.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If symptoms develop, obtain medical attention.
- First-aid measures after eye contact : Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop, obtain medical attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Give 100 - 200 ml of water to drink. If symptoms develop, obtain medical attention.

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

- Symptoms/injuries after skin contact : Repeated and/or prolonged skin contact may cause irritation.
- Symptoms/injuries after eye contact : May cause slight irritation.
- Symptoms/injuries after ingestion : Ingestion may cause irritation of the gastrointestinal tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
- Protection during firefighting : As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use chemically protective clothing.
- Emergency procedures : Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapours.

6.2. Environmental precautions

None.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Wear recommended personal protective equipment. Take off contaminated clothing and wash before reuse.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Protect material from direct sunlight.
- Incompatible materials : None known.

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7.3. Specific end use(s)

Corrosion and Scale Inhibitor for Heating and Cooling Systems.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls	: Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves. Standard EN 374 - Protective gloves against chemicals.
Eye protection	: Chemical goggles or safety glasses. Standard EN 166 - Personal eye-protection.
Skin and body protection	: Use chemically protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment
Thermal hazard protection	: Not required for normal conditions of use.
Environmental exposure controls	: Not required.
Other information	: Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, coloured aqueous solution.
Colour	: Colourless pale green to yellow or amber.
Odour	: Barely perceptible.
Odour threshold	: No data available
pH	: 6.5 (25°C - Approximate)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 104 °C (760mm Hg)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.3 Approximate
Solubility	: Miscible with water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None known.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Extremely high or low temperatures. Ignition sources.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Benzotriazole (95-14-7)	
LD50 oral rat	560 mg/kg
LD50 dermal rat	> 1 g/kg

Sodium nitrate (7631-99-4)	
LD50 oral rat	1267 mg/kg

Skin corrosion/irritation : Not classified
Based on available data, the classification criteria are not met
pH: 6.5 (25°C - Approximate)

Serious eye damage/irritation : Not classified
Based on available data, the classification criteria are not met
pH: 6.5 (25°C - Approximate)

Respiratory or skin sensitisation : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : 2,2',2''-nitrilotriethanol. IARC group. 3
Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Benzotriazole (95-14-7)	
EC50	141.6 mg/l (48 Hours, water flea)
EC50	15.4 mg/l (96 Hours, Freshwater, algae)

12.2. Persistence and degradability

Sentinel X100 Triple Power Inhibitor	
Persistence and degradability	No information available.

12.3. Bioaccumulative potential

Sentinel X100 Triple Power Inhibitor	
Bioaccumulative potential	No information available.

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12.4. Mobility in soil

Sentinel X100 Triple Power Inhibitor

Ecology - soil	No information available.
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12.5. Results of PBT and vPvB assessment

Sentinel X100 Triple Power Inhibitor

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

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

14.1. UN number

Not dangerous good in sense of transport regulations :

14.2. UN proper shipping name

Proper Shipping Name (IMDG) : Not Applicable

Proper Shipping Name (IATA) : Not Applicable

Transport document description (ADR) : Not Applicable

Transport document description (IMDG) : Not Applicable

14.3. Transport hazard class(es)

No Applicable

14.4. Packing group

Not Applicable :

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

	ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route)
	ATE (Acute Toxicity Estimate)
	CAS (Chemical Abstracts Service) number
	CLP (Classification, Labeling and Packaging)
	DNEL (Derived No effect Limit)
	EC (European Community)
	EC50 (Effective Concentration 50%)
	EN (European Norm)
	IARC (International Agency for Research on Cancer)
	IATA (International Air Transport Association)
	IBC (Intermediate Bulk Container)
	IMDG (International Maritime Dangerous Goods Code)
	IMO (International Maritime Organisation)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	MAC (Maximal Allowed Concentration)
	OW (Oil-in-Water (chemistry))
	OECD (Organisation for Economic Co-operation and Development)
	PBT (Persistent, bioaccumulative and toxic)
	PMcc (Pensky-Martens Closed Cup test)
	PNEC (predicted no effect concentration)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	RID (Règlement concernant le transport international ferroviaire de marchandises)
	STEL (Short Term Exposure Limit)
	TWA (Time Weighted Average)
	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	vPvB (very persistent and very bioaccumulative)

Data sources : REGULATION (EC) No 1272/2008

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H319	Causes serious eye irritation
H332	Harmful if inhaled
H412	Harmful to aquatic life with long lasting effects
EUH210	Safety data sheet available on request

SDS EU (REACH Annex II)

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 not therefore be construed as guaranteeing any specific property of the product