

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

1.1. Product identifier

Product form : Mixture
Product name : Sentinel X500

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 : Inhibited antifreeze for central heating 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@sentinel-solutions.net

1.4. Emergency telephone number

Emergency number : +44 (0) 1928 704 320
(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

Adverse physicochemical, human health and environmental effects

No additional information available

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]
Propane 1,2-diol	(CAS No.) 57-55-6 (EC No.) 200-338-0 (REACH-no) 01-2119456809-23	80 - 100	Not classified

Full text of H-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 (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms develop obtain medical attention.

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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	: In case of eye contact, immediately rinse with clean water for 10-15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop, obtain medical attention.
First-aid measures after ingestion	: Wash out mouth with water and give 100-200 ml of water to drink. Do NOT induce vomiting. If symptoms develop, obtain medical attention.

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

Symptoms/injuries after skin contact	: May cause slight 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	: Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
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

General measures	: Ensure adequate ventilation. Avoid all contact with skin, eyes, or clothing.
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6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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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

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
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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	: Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded. 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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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. Keep away from heat. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible materials	: Strong oxidizing agents. Acids. Alkalis.

7.3. Specific end use(s)

Inhibited antifreeze for central heating systems.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propane 1,2-diol (57-55-6)		
United Kingdom	Local name	Propane-1,2-diol
United Kingdom	WEL TWA (mg/m ³)	474 mg/m ³ total vapour and particulates 10 mg/m ³ particulates
United Kingdom	WEL TWA (ppm)	150 ppm total vapour and particulates

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	: Long sleeved protective clothing.
Respiratory protection	: Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazard protection	: Not required for normal conditions of use.
Environmental exposure controls	: Avoid release to the environment.
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
Colour	: Colourless.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 6.2 - 6.6 (10% aqueous solution, 20°C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: Not flammable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.045 (20°C)
Solubility	: Miscible with water.
Log Pow	: No data available
Log Kow	: 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

Stable under normal conditions.

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

Heat. Sparks. Ignition sources.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Alkalis.

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 Based on available data, the classification criteria are not met
Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met pH: 6.2 - 6.6 (10% aqueous solution, 20°C)
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met pH: 6.2 - 6.6 (10% aqueous solution, 20°C)
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	: Not classified 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	: May cause slight irritation to the skin. May cause slight irritation to eyes. Ingestion may cause irritation of the gastrointestinal tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Not classified.

Sentinel X500	
LC50 fish	> 44000 mg/l 96h (rainbow trout)
EC50 Daphnia	> 4850 mg/l 48h (daphnia magna)
Propane 1,2-diol (57-55-6)	
EC50 Daphnia	> 10000 mg/l 24h (daphnia magna)
EC50 Daphnia 2	> 1000 mg/l 48h, static (daphnia magna)

12.2. Persistence and degradability

Sentinel X500	
Persistence and degradability	Biodegradable.
Biodegradation	> 80 % 28 days

12.3. Bioaccumulative potential

Sentinel X500	
Bioconcentration factor (BCF REACH)	< 1

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12.4. Mobility in soil

Sentinel X500

Ecology - soil	Mobile.
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12.5. Results of PBT and vPvB assessment

Sentinel X500

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

Additional information : No other effects known

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.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR/RID) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

:

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information 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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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Data sources	: REGULATION (EC) No 1272/2008
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). O/W (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).
Other information	: None.

NCEC 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