

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : X400 Triple Power Cleaner

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

##### 1.2.1. Relevant identified uses

Main use category : Sludge remover 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]
Pyridine-2-thiol 1-oxide, sodium salt	(CAS No) 3811-73-2 (EC No.) 223-296-5 (REACH-no) 01-2119493385-28-XXXX	< 0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)

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	: Immediately flush eyes thoroughly with water for at least 15 minutes. 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. Sulphur oxides.
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#### 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.
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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

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.
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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	: Avoid contact with skin, eyes and clothing. Wear recommended personal protective equipment. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.
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.
Incompatible materials	: None known.

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### 7.3. Specific end use(s)

Sludge remover for central heating 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 aqueous solution.
Colour	: Slightly hazy brown liquid.
Odour	: Barely perceptible.
Odour threshold	: No data available
pH	: 6.2
Relative evaporation rate (butylacetate=1)	: < 1
Melting point	: 0 °C
Freezing point	: -13 °C
Boiling point	: 100 °C
Flash point	: > 100 °C
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	: < 1
Relative density	: 1.08 (Water = 1)
Solubility	: Water: Miscible
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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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.

### 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. Sulphur oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Pyridine-2-thiol 1-oxide, sodium salt (3811-73-2)

LD50 oral rat	1208 mg/kg
LD50 dermal rabbit	1800 mg/kg
LC50 inhalation rat (mg/l)	1.08 mg/l 4 Hours

Skin corrosion/irritation : Not classified  
pH: 6.2

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Additional information : 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

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Additional information : Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Pyridine-2-thiol 1-oxide, sodium salt (3811-73-2)

LC50 fish	0.0073 mg/l 96 Hours - Oncorhynchus mykiss
EC50 Daphnia	0.022 mg/l 48 Hours - Daphnia magna
EC50 72h algae (1)	0.46 mg/l 72 Hours (Growth rate) - Pseudokirchnerella subcapitata
EC50 72h algae (2)	0.23 mg/l 72 Hours (Biomass) - Pseudokirchnerella subcapitata

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### 12.2. Persistence and degradability

#### Sentinel X400 Triple Power Cleaner

Persistence and degradability	No information available.
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

#### Sentinel X400 Triple Power Cleaner

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

#### Sentinel X400 Triple Power Cleaner

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 / IMDG / IATA

### 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)

Not 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 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

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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

Indication of changes:

3	Composition/information on ingredients	Modified	
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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)

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 : None.

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation

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H332	Harmful if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

SDS EU (REACH Annex II)

*The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.*