



# SAFETY DATA SHEET

Issuing Date 01-June-2017

Revision Date 30.05.17

Version 2.3

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product name** Sentinel X400  
**Pure substance/mixture** Mixture.

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

**Recommended Use** Sludge remover for central heating systems.

**Uses advised against** None known.

### 1.3 Details of the supplier of the safety data sheet

**Company Information** SENTINEL PERFORMANCE SOLUTIONS LTD  
  
7650 Daresbury Park  
Warrington  
Cheshire  
WA4 4BS  
United Kingdom

**Telephone** +44 (0) 1928 704 330  
**Fax** +44 (0) 1928 562 070

For further information, please contact:

**E-mail Address** info.uk@sentinelprotects.com

### 1.4 Emergency telephone

**Emergency telephone** +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

Not classified

### 2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

#### Signal Word

None

#### Hazard Statements

None

#### Precautionary statements

None

### 2.3 Other hazards

May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Chemical Name	EC-No	CAS-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)	REACH Registration Number
Potassium hydroxide	215-181-3	1310-58-3	<1	Xn; R22 C; R35	Acute Tox. 4 (H302) Skin Corr. 1A (H314)*	01-2119487136-33-XXXX

For the full text of H-Statements see Section 16

\* Substance with Workplace Exposure Limit. See Section 8.

## Section 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms develop obtain medical attention.
<b>Skin contact</b>	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. If symptoms develop obtain medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Wash out mouth with water and give 100 - 200 ml of water to drink. If symptoms develop obtain medical attention.
<b>Inhalation</b>	Remove patient from exposure, keep warm and at rest. If symptoms develop obtain medical attention.

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

<b>Main Symptoms</b>	May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.
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### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically.
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## Section 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### **Suitable Extinguishing Media**

Water spray, Foam, Dry powder, Carbon dioxide (CO<sub>2</sub>).

### 5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>).

### 5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear. Cool containers / tanks with water spray.

## Section 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid contact with the skin and the eyes. Avoid inhalation of mists or vapor. Use personal protective equipment.

### 6.2 Environmental precautions

Not required

### 6.3 Methods and materials for containment and cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

### 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

Ensure adequate ventilation. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

Do not eat, drink or smoke during work. Wash thoroughly after handling.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep only in the original container/package in a cool well-ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight. Protect from frost.

### 7.3 Specific end use(s)

Sludge remover for central heating systems.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Chemical Name	Potassium hydroxide 1310-58-3
The United Kingdom	STEL: 2 mg/m <sup>3</sup>
France	STEL: 2 mg/m <sup>3</sup>
Spain	STEL: 2 mg/m <sup>3</sup>
Portugal	Ceiling: 2 mg/m <sup>3</sup>
Finland	STEL: 2 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Denmark	Ceiling: 2 mg/m <sup>3</sup>
Austria	TWA: 2 mg/m <sup>3</sup>
Switzerland	TWA: 2 mg/m <sup>3</sup>
Poland	STEL: 1 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>
Norway	Ceiling: 2 mg/m <sup>3</sup>
Ireland	STEL: 2 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No 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

<b>Eye Protection</b>	Goggles (EN 166)
<b>Hand Protection</b>	Protective gloves (EN 374)
<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory protection</b>	Not normally required. In case of insufficient ventilation wear suitable respiratory equipment

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental Exposure Controls** Not normally required.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

## Sentinel X400

### 9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aqueous solution
Odor	Characteristic
Color	Clear, yellow-orange.
Odor Threshold	No information available

#### Property Values

pH	6.3
Melting/freezing point	-1 °C
Freezing Point	
Boiling point/boiling range	100 °C
Flash Point	> 100 °C
Evaporation rate	< 1
Flammability (solid, gas)	
Flammability Limits in Air	
upper flammability limit	
lower flammability limit	
Vapor pressure	
Vapor density	<1
Relative density	1.03
Water solubility	
Solubility in other solvents	
Partition coefficient: n-octanol/water	
Auto-ignition temperature	
Decomposition temperature	
Viscosity, kinematic	10 mPa·s
Viscosity, dynamic	

#### Remarks • Methods

@ 25 °C
No information available
(ether = 1)
Not applicable
No information available
No information available
(Air = 1.0)
@ 25 °C
Miscible
No information available
No information available
No information available
No information available
@ 20 °C
No information available

Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

### 9.2 Other information

No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>).

## Section 11: TOXICOLOGICAL INFORMATION

<b>Inhalation</b>	No known effect based on information supplied.
<b>Eye contact</b>	May cause eye irritation.
<b>Skin contact</b>	May cause skin irritation.
<b>Ingestion</b>	Ingestion may cause irritation of the gastrointestinal tract.

### 11.1 Information on toxicological effects

#### Acute toxicity

**LD50 Oral:** > 30000 mg/kg (rat) Calculated  
**LD50 Dermal:** > 14000 mg/kg (rabbit) Calculated

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	365mg/kg (Rat)	-	-

**Skin corrosion/irritation** Based on available data, classification criteria are not met.

**Serious eye damage/irritation** Based on available data, classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, classification criteria are not met.

**Mutagenicity** Based on available data, classification criteria are not met.

**Carcinogenicity** Based on available data, classification criteria are not met.

**Reproductive toxicity** Based on available data, classification criteria are not met.

**STOT - Single exposure** Based on available data, classification criteria are not met.

**STOT - Repeated exposure** Based on available data, classification criteria are not met.

**Aspiration hazard** Based on available data, classification criteria are not met.

## Sentinel X400

**Other information** No information available.

### Section 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

EC<sub>50</sub> (Daphnia magna): >7000 mg/l/48h (Estimated)

WGK Classification Not classified

#### 12.2 Persistence and degradability

Some of the components are biodegradable.

#### 12.3 Bioaccumulative potential

Chemical Name	Bioconcentration factor (BCF)	log Pow
Potassium hydroxide	-	0.65 0.83

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

#### 12.6 Other adverse effects

No information available.

### Section 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

**Waste from residues / unused products** Disposal should be in accordance with local, state or national legislation.

**Contaminated packaging** Clean container with water. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Section 14: TRANSPORT INFORMATION**

Not classified as hazardous for transport.

	ADR/RID/ADN	ICAO/IATA	IMDG / IMO
14.1 UN Number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental Hazards	Not Classified	Not Classified	Not Classified
14.6 Special precautions for user	No special precautions are needed in handling this material		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		-	

**Section 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety data sheet complies with the requirements of Regulations (EC) No. 1907/2006 and No. 830/2015

WGK Classification Not classified

**15.2 Chemical Safety Assessment**

Chemical Safety Assessment has not been carried out.

**Section 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

**Issuing Date** 01/06/17

**Revision Date** 27-Jun-2017

**Revision Note** All sections.

**Disclaimer**

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