

## SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH) & 1272/2008 (CLP)

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier**  
Product Name: Sentinel X100 Concentrate  
Chemical Name: Mixture. (aqueous solution)  
  
CAS No.: -  
EC No.: -
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Identified use(s): Corrosion and Scale Inhibitor for Central Heating Systems
- 1.3 Details of the supplier of the safety data sheet**  
Company Identification: SENTINEL PERFORMANCE SOLUTIONS LTD  
  
The Heath Business & Technical Park  
Runcorn  
Cheshire  
WA7 4QX  
United Kingdom  
  
Telephone: +44 (0) 1928 588 330 (office hours, Monday - Friday)  
Fax: +44 (0) 01928 588 368  
  
E-Mail (competent person): [info.uk@sentinel-solutions.net](mailto:info.uk@sentinel-solutions.net)
- 1.4 Emergency telephone number**  
Emergency Phone No. (24 h): +44 (0) 1928 588 339 (24 hours/ 7 days)

### 2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture** According to Regulation (EC) No. 1272/2008 (CLP).  
  
Not classified.  
  
According to Directive 67/548/EEC & Directive 1999/45/EC  
  
Not classified.
- 2.2.1 Label elements** According to Regulation (EC) No. 1272/2008 (CLP)  
  
Hazard pictogram(s): None.  
Signal word(s): None.  
Hazard statement(s): None.  
Precautionary statement(s): None.  
Supplemental Hazard Information: None.
- 2.2.2 Label elements** According to Directive 67/548/EEC & Directive 1999/45/EC  
  
Hazard pictogram(s): None.  
Hazard Symbol: None.  
Risk Phrases: None.  
  
Safety Phrases: S2: Keep out of the reach of children.  
S24/25: Avoid contact with skin and eyes.  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28: After contact with skin, wash immediately with plenty of soap and water.

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- 2.3 Other hazards** May cause eye irritation. Repeated and/or prolonged skin contact may cause irritation. Ingestion may cause irritation of the gastrointestinal tract.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixture

EC Classification No. 1272/2008

| Hazardous ingredient(s) | %W/W | CAS No. | EC No.    | REACH Registration No. | Hazard symbol(s) and hazard statement(s)                       |
|-------------------------|------|---------|-----------|------------------------|--|
| Benzotriazole           | 1-10 | 95-14-7 | 202-394-1 | -                      | Acute Tox. 4; H302<br>Acute Tox. 4; H332<br>Eye Irrit. 2; H319 |

EC Classification No. 67/548/EEC

| Hazardous ingredient(s) | %W/W | CAS No. | EC No.    | REACH Registration No. | Hazard Symbol and Risk Phrases |
|-------------------------|------|---------|-----------|------------------------|--------------------------------|
| Benzotriazole           | 1-10 | 95-14-7 | 202-394-1 | -                      | Xn; R20/22<br>Xi; R36          |

(aqueous solution: Neutral.)

### 4. FIRST AID MEASURES

- 4.1 Description of first aid measures**
- Inhalation: Remove patient from exposure, keep warm and at rest. If symptoms persist, obtain medical attention.
- Skin Contact: Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. If symptoms persist, obtain medical attention. Contaminated clothing should be thoroughly cleaned.
- Eye Contact: If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If symptoms persist, obtain medical attention.
- Ingestion: Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. If symptoms persist, obtain medical attention.
- 4.2 Most important symptoms and effects, both acute and delayed** May cause eye irritation. Repeated and/or prolonged skin contact may cause irritation. Ingestion may cause irritation of the gastrointestinal tract.
- 4.3 Indication of the immediate medical attention and special treatment needed** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### 5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media**
- Suitable Extinguishing Media: Water spray, foam, dry powder or CO<sub>2</sub>
- Unsuitable Extinguishing Media: Do not use water jet.
- 5.2 Special hazards arising from the substance or mixture** May give off toxic fumes in a fire. Carbon monoxide, Carbon dioxide, Nitrogen oxides and Phosphorus compounds.

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- 5.3 Advice for fire-fighters** A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep fire exposed containers cool by spraying with water.

### 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapours. Wear suitable protective clothing and gloves. (See Section: 8). Contaminated clothing should be thoroughly cleaned.
- 6.2 Environmental precautions** Large spillages: Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
- 6.3 Methods and material for containment and cleaning up** Adsorb spillages onto sand, earth or any suitable adsorbent material. Wash spill area with soapy water.
- 6.4 Reference to other sections** Personal Protection: See Section: 8.
- Other advice** None.

### 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Ensure adequate ventilation. Avoid inhalation of vapours. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. (See Section: 8).
- Do not eat, drink or smoke at the work place. Wash hands and exposed skin after use. Contaminated clothing should be thoroughly cleaned.
- 7.2 Conditions for safe storage, including any incompatibilities** Keep away from frost. Keep only in the original container in a cool, well-ventilated place.
- 7.3 Specific end use(s)** Corrosion and Scale Inhibitor for Central Heating Systems

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters** No Occupational Exposure Limit assigned.
- 8.2 Exposure controls**
- 8.2.1 Appropriate engineering controls** Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapours are likely to be evolved.
- 8.2.2 Personal Protection**
- Eye/face protection Goggles giving complete protection to eyes. (EN 166)



Skin protection



Protective gloves. Nitrile rubber. (EN 374)

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Respiratory protection



In case of insufficient ventilation, wear suitable respiratory equipment. (EN 141)

Other:

Apron or other light protective clothing, boots and plastic or rubber gloves.

### 8.2.3 Environmental Exposure Controls

Avoid release to the environment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                     |                                 |
|---------------------|---------------------------------|
| Appearance:         | Liquid. (aqueous solution)      |
| Colour:             | Yellow- Colourless.             |
| Odour:              | Slight.                         |
| Boiling Point (°C): | 100                             |
| Melting Point (°C): | 0                               |
| pH (Value):         | 6.9 (6.5; aqueous solution 5%)  |
| Flash Point (°C):   | > 100 (Pensky/Martens)          |
| Specific Gravity:   | 1.385 g/cm <sup>3</sup> (20 °C) |
| Viscosity (mPa.s):  |                                 |
| Solubility (Water): | Miscible.                       |

### 9.2 Other information

No data.

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| 10.1 Reactivity                         | No information available.  |
| 10.2 Chemical stability                 | Stable under normal conditions.  |
| 10.3 Possibility of hazardous reactions | No information available.  |
| 10.4 Conditions to avoid                | Keep away from heat, sources of ignition and direct sunlight. Do not freeze.                                   |
| 10.5 Incompatible materials             | Oxidising agent.   |
| 10.6 Hazardous Decomposition Product(s) | May give off toxic fumes in a fire. Carbon monoxide, Carbon dioxide, Nitrogen oxides and Phosphorus compounds. |

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|   |  |
|---|--|
| <b>Acute toxicity:</b>                    |  |
| Ingestion:                                | LD <sub>50</sub> (oral/rat): > 2000 mg/kg                    |
| Inhalation:                               | No information available.                                    |
| Skin Contact:                             | No information available.                                    |
| Eye Contact:                              | No information available.                                    |
| <b>skin corrosion/irritation:</b>         | Repeated and/or prolonged skin contact may cause irritation. |
| <b>Serious eye damage/irritation:</b>     | May cause eye irritation.                                    |
| <b>respiratory or skin sensitization:</b> | No information available.                                    |
| <b>Mutagenicity:</b>                      | No information available.                                    |
| <b>Carcinogenicity:</b>                   | No information available.                                    |
| <b>Reproductive toxicity:</b>             | No information available.                                    |
| <b>STOT-single exposure:</b>              | No information available.                                    |
| <b>STOT-repeated exposure:</b>            | No information available.                                    |
| <b>Aspiration hazard:</b>                 | No information available.                                    |

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**Other information:** No information available.

### 12. ECOLOGICAL INFORMATION

|      |   |   |
|------|---|---|
| 12.1 | <b>Toxicity</b>                           | WGK:1   |
| 12.2 | <b>Persistence and degradability</b>      | Readily biodegradable.                            |
| 12.3 | <b>Bioaccumulative potential</b>          | The product has no potential for bioaccumulation. |
| 12.4 | <b>Mobility in soil</b>                   | No information available.                         |
| 12.5 | <b>Results of PBT and vPvB assessment</b> | No information available.                         |
| 12.6 | <b>Other adverse effects</b>              | No information available.                         |

### 13. DISPOSAL CONSIDERATIONS

|      |                                |   |
|------|--------------------------------|---|
| 13.1 | <b>Waste treatment methods</b> | Disposal should be in accordance with local, state or national legislation. |
|------|--------------------------------|---|

### 14. TRANSPORT INFORMATION

|      |  |   |
|------|--|---|
| 14.1 | <b>UN number</b>   | Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'. |
| 14.2 | <b>Proper Shipping Name</b>  | None.   |
| 14.3 | <b>Transport hazard class(es)</b>  | None.   |
| 14.4 | <b>Packing Group</b>   | None.   |
| 14.5 | <b>Environmental hazards</b>   | Not classified as a Marine Pollutant.   |
| 14.6 | <b>Special precautions for user</b>  | None.   |
| 14.7 | <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |

### 15. REGULATORY INFORMATION

|      |   |   |
|------|---|---|
| 15.1 | <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> | This Safety Data Sheet was prepared in accordance with EC Regulation (EC) No. 1907/2006., Regulation (EC) No. 1272/2008 (CLP), Directive 67/548/EEC & Directive 1999/45/EC. |
| 15.1 | <b>Chemical Safety Assessment</b>   | -   |

### 16. OTHER INFORMATION

Full text of Hazard statements and Risk phrases for pure substances listed in section 3.

**Hazard Symbol:** H302: Harmful if swallowed.  
H319: Causes serious eye irritation.  
H332: Harmful if inhaled.

**Risk Phrases:** R20/22: Harmful by inhalation and if swallowed.  
R36: Irritating to eyes.

**The following sections contain revisions or new statements:** 1-16.

**Abbreviations:**

CAS = Chemical Abstracts Service;  
CNS = Central Nervous System;  
EINECS = European Inventory of Existing Commercial Chemical Substances;  
EC50 = Effective Concentration 50%;  
IARC = International Agency for Research on Cancer;  
IC50 = Inhibitory Concentration 50%;  
LC50 = Lethal Concentration 50%;



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LD50 = Lethal Dose 50%;  
LTEL = Long Term Exposure Limit;  
STEL = Short Term Exposure Limit;  
TWA = Time Weighted Average;

### References:

### Disclaimer:

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.