



Safety Data Sheet

Product
Code:X400 Rapid Dose
Version: 4Page 1 of 6
Date Prepared: August 2014**1. IDENTIFICATION**

Identification of the substance/preparation **X400 Rapid Dose**
 Use of the substance/preparation **Sludge remover for central heating systems**

| | | |
|-----------------------------------|--|--|
| Company Identification | Manufactured by | Distributed by |
| | Sentinel Performance Solutions Ltd. | Douglas Products and Packaging |
| Address | 7650 Daresbury Park Warrington Cheshire, WA4 4BS UK | 1550 East Old 210 Highway Liberty Missouri, 64068 USA |
| Telephone for further information | +44 (0) 1928 704 330 | (816)-781-4250 (8am - 5pm) |
| Emergency Phone No. | +44 (0) 1928 704 339 (24/7) | Chemtrec (800) 424-9300 (24/7) |
| Fax: | +44 (0) 1928 562 070 | (816)-781-1043 |

2. HAZARD IDENTIFICATION**GHS-US Classification**

Not classified as hazardous under HCS 2012

GHS-US labeling

Hazard pictograms (GHS-US) : None required
 Signal word (GHS-US) : None required
 Hazard statements (GHS-US) : None required
 Precautionary statements (GHS-US) : None required

Special labeling for Aerosols : Pressurized container: Do not pierce or burn, even after use.
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical description**

Neutral solution of synthetic organic polymer.

Hazardous component(s)

| Ingredient | CAS Number | EC Number | w/w % | Classification (67/548/EEC) | Classification (GHS) |
|---|------------|-----------|-------|-----------------------------|----------------------|
| No hazardous ingredients above GHS reporting thresholds | | | | | |



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4. FIRST-AID MEASURES

| | |
|----------------------|--|
| Inhalation | Remove patient to fresh air, allow to rest and keep warm. Seek medical attention if symptoms develop. |
| Skin contact | Wash with plenty of water. Remove any contaminated clothing and launder before reuse. Seek medical attention if symptoms develop. |
| Eye contact | Flush immediately with plenty of water for at least 15 minutes, keeping eyelids open. Seek medical attention if symptoms develop. |
| Ingestion | DO NOT induce vomiting! Rinse mouth out with water, but do not give anything to drink. Seek medical attention if symptoms develop. |
| Personal precautions | Ensure that those giving first aid treatment do not get contaminated by product spills, etc. Wear suitable protective clothing, gloves and eye protection. See also Section 8. |

Prolonged or repeated exposure may cause transient skin, eye or respiratory tract irritation. Ingestion of large amounts may cause slight gastrointestinal irritation.

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| - Suitable | Water spray, foam, carbon dioxide, dry powder. |
| - Not to be used | Water jet. |
| Special exposure hazards | Exposure to heat may cause bursting of aerosol containers. Oxides of carbon, nitrogen and sulphur evolved in fire. |
| Special protective equipment for fire fighters | Protective clothing and self-contained breathing apparatus. |
| Flash point | Not flammable. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|--|
| Personal precautions | Wear suitable protective clothing, gloves and eye protection. See Section 8 for details. Keep unnecessary personnel away. |
| Environmental precautions | Prevent from entering sewers or the immediate environment. Accidental release of large quantities into the aquatic environment may harm aquatic organisms. In case of large spill, inform local authorities. |
| Methods for cleaning up | |
| - on soil | Collect undamaged containers. In case of liquid spills, absorb onto inert material such as earth, soil or specialist absorbent. Collect and place into sealed container for safe disposal (see Section 13). |



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- on water Collect undamaged containers.

7. HANDLING AND STORAGE

| | |
|----------|---|
| Handling | Avoid contact with skin and eyes. Do not ingest or inhale vapors, mists or spray. Do not eat, drink or smoke during work. Wash hands thoroughly after use. |
| Storage | Keep in original containers. Store in cool, well ventilated area below 50 °C/122 °F. Keep away from heat and sources of ignition. Keep away from direct sunlight. Protect from frost. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|---|--|
| Recommended engineering controls | Ensure good ventilation. Arrange for eye wash possibility. |
| Control parameters: | None set |
| Monitoring procedures | Not required |
| Personal protection Always check applicability with your supplier of protective equipment. | |
| - Respiratory protection | In case of insufficient ventilation, wear full face or half face mask fitted with filter suitable for liquid particulates. |
| - Skin protection | Laboratory coat or overalls if splashing or repeated contact with product is likely. |
| - Eye protection | Chemical goggles. |
| - Hand protection | Plastic, impervious gloves for protection against unintentional short-term contact. However, since glove performance is governed by many variables, it is strongly recommend that specialist advice on the selection and use of protective gloves is sought. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|---|
| Appearance | Aerosol can containing clear light brown aqueous liquid |
| Odor | Mild |
| Odor threshold | No information available |
| pH (concentrated product) | 6.4 |
| Melting point (°C) | Approx 0 [32°F] |
| Boiling point/range (°C) | Approx 100 [212°F] |
| Flash point | Not flammable |
| Evaporation rate (ether=1) | No information available |



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| | |
|---------------------------------------|--------------------------|
| Flammability (solid/gas) | Not relevant |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Explosive properties | None |
| Relative Density | 1.058 |
| Solubility in water (% by weight) | Completely miscible |
| Partition coefficient (Octanol/water) | Not relevant |
| Autoignition temperature | Not flammable |
| Decomposition temperature | No information available |
| Viscosity | No information available |
| Oxidizing properties | None |

Note: These are typical values and do not constitute a specification.

10. STABILITY AND REACTIVITY

| | |
|----------------------------------|---|
| Stability | Stable under normal conditions of use. |
| Conditions to avoid | Do not expose to heat or flames. Protect from freezing. |
| Materials to avoid | None known. |
| Hazardous decomposition products | Oxides of carbon, nitrogen and sulphur evolved in fire. |

11. TOXICOLOGICAL INFORMATION

| | |
|--|--|
| Test data: | No data available on product. |
| Calculated from ingredient data: | |
| - Oral LD ₅₀ rat (mg/kg) | > 30,000 - Not considered hazardous under the GHS classification system. |
| - Dermal LD ₅₀ rabbit (mg/kg) | > 14,000 - Not considered hazardous under the GHS classification system. |
| Exposure hazard: | |
| - Inhalation | Prolonged or repeated exposure may cause transient irritation. |
| - Skin contact | Prolonged or repeated exposure may cause transient irritation. |
| - Eye contact | Prolonged or repeated exposure may cause transient irritation. |
| - Ingestion | Likely symptoms are slight gastrointestinal irritation. |
| Other data | None available. |



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12. ECOLOGICAL INFORMATION

Aquatic toxicity:

Calculated data based on ingredients

- Daphnia Magna (mg/l) EC₅₀ 48 Hr:

No data available on product.

>7,000

Persistence and degradability

All organic components are biodegradable.

Bioaccumulative potential

- Bioaccumulation

Not bioaccumulating

Mobility in soil

No information available

Summary

Environmental effects:

Not classified as hazardous to the environment under the GHS classification system.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

14. TRANSPORTATION INFORMATION

UN number

1950

UN proper shipping name

Aerosols, Non-toxic, non-flammable gas

Transport hazard class

2.2

Packing group

Not Applicable

Environmental hazards

None

Special precautions for user

None

Limited quantity

1 litre.

15. REGULATORY INFORMATION

Inventory Status

TSCA

All ingredients of this product are listed unless specifically exempted.

California Proposition 65

Does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



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EU All ingredients of this product are listed in EINECS or ELINCS, unless specifically exempted under EU Directive 67/548/EEC (as amended).

Right to know classification: None are listed in CA, PA, MN, MA, MI, FL and NJ.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions, which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

| Hazardous Material Information (HMIS) | | National Fire Protection Association (NFPA) | |
|---------------------------------------|---|---|-------------|
| Health | 0 | 0 | Health |
| Flammability | 0 | 0 | Fire |
| Physical | 1 | 0 | Instability |
| Personal Protection | B | | NA |

| | | | | | |
|----------------------|------------------|------------------|-------------|-------------------|-----------------|
| Health | 4 Deadly | 3 Extreme Danger | 2 Dangerous | 1 Slight hazard | 0 No hazard |
| Flammability/Fire | 4 < 73 °F | 3 < 100 °F | 2 < 200 °F | 1 >200 °F | 0 Will not burn |
| Physical/Instability | 4 - May detonate | 3 Explosive | 2 Unstable | 1 Normally stable | 0 Stable |

Version number 4
Date prepared August 2014
Supersedes Version 3 dated June 2013
Nature of revision Updated to HCS 2012.

R-phrases used in Section 3 None

H-statements used in Section 3 None

Based on HSC 2012 and EU Regulation 1907/2006



Material

Safety Data Sheet



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1. PRODUCT AND COMPANY INFORMATION

| | |
|---|---|
| Identification of the substance/preparation Use of the substance/preparation | Sentinel X400 Sludge Remover for hydronic heating systems |
| Company Identification Manufactured by Address and Telephone No. | Sentinel Performance Solutions Ltd. Douglas Products and Packaging 1550 East Old 210 Highway Liberty Missouri, 64068 USA |
| Telephone for further information: Emergency Phone No. Fax: | (816)-781-4250 (8am - 5pm) Chemtrec (800) 424-9300 (24/7) (816)-781-1043 |

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and odour:

| | |
|------------|------------------------|
| Appearance | Yellow to brown liquid |
| Odour | Mild odour |

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Statements of Hazard

None

Potential Health Effects

Primary routes of entry by skin or eye contact.

Eye contact - prolonged or repeated exposure may cause transient irritation. Skin contact - prolonged or repeated exposure may cause transient irritation. Inhalation - prolonged or repeated exposure may cause transient irritation. Ingestion of large amounts may cause slight gastrointestinal irritation.



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical description

Neutral solution of synthetic organic polymer.

Hazardous component(s)

| Ingredient | CAS Number | EC Number | % | Symbol | Risk Phrases |
|-----------------------------------|------------|-----------|---|--------|--------------|
| No hazardous ingredients above 1% | | | | | |

4. FIRST-AID MEASURES

| | |
|----------------------|--|
| Inhalation | Remove patient to fresh air, allow to rest and keep warm. Seek medical attention if symptoms develop. |
| Skin contact | Wash with plenty of water. Remove any contaminated clothing and launder before reuse. Seek medical attention if symptoms develop. |
| Eye contact | Flush immediately with plenty of water for at least 15 minutes, keeping eyelids open. Seek medical attention if symptoms develop. |
| Ingestion | DO NOT induce vomiting! Rinse mouth out with water, but do not give anything to drink. Seek medical attention if symptoms develop. |
| Personal precautions | Ensure that those giving first aid treatment do not get contaminated by product spills, etc. Wear suitable protective clothing, gloves and eye protection. See also Section 8. |

5. FIRE-FIGHTING MEASURES

| | |
|--|---|
| - Suitable | Water, foam, carbon dioxide, dry powder. |
| - Not to be used | None. |
| Special exposure hazards | Oxides of carbon, nitrogen and sulphur evolved in fire. |
| Special protective equipment for fire fighters | Protective clothing and self-contained breathing apparatus. |
| Flash point | Not flammable. |



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6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|---|
| Personal precautions | Wear suitable protective clothing, gloves and eye protection. See Section 8 for details. Keep unnecessary personnel away. |
| Environmental precautions | Prevent from entering sewers or the immediate environment. In case of large spill, inform local authorities. |
| Methods for cleaning up | |
| - on soil | Absorb onto inert material such as earth, soil or specialist absorbent. Collect and place into sealed container for safe disposal (see Section 13). |
| - on water | None known. |

7. HANDLING AND STORAGE

| | |
|----------|--|
| Handling | Avoid contact with skin and eyes. Do not ingest or inhale vapours or spray. |
| Storage | Keep in original containers. Keep container tightly closed. Store in cool, well ventilated area. Protect from freezing and from high temperatures. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|--|--|
| Recommended engineering controls | Ensure good ventilation. Arrange for eye wash possibility. |
| Control parameters: | None set. |
| Monitoring procedures | Not required. |
| Personal protection | |
| Always check applicability with your supplier of protective equipment. | |
| - Respiratory protection | In case of insufficient ventilation, wear full face or half face mask fitted with filter suitable for liquid particulates. |
| - Skin protection | Laboratory coat or overalls if splashing or repeated contact with product is likely. |
| - Eye protection | Chemical goggles or full face visor. |
| - Hand protection | Plastic, impervious gloves for protection against unintentional short-term contact. However, since glove performance is governed by many variables, it is strongly recommend that specialist advice on the selection and use of protective gloves is sought. |

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9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------------|------------------------|
| Appearance | Yellow to brown liquid |
| Odour | Mild |
| pH (concentrated product) | 6.6 |
| Melting point (°C) | Approx 0 [32°F] |
| Boiling point/range (°C) | Approx 100 [212°F] |
| Flash point (Pensky Martens) (°C) | Not flammable |
| Explosive properties | None |
| Oxidising properties | None |
| Density at 20°C (kg/m ³) | 1033 |
| Solubility in water (% by weight) | Completely miscible |
| Viscosity at 20°C (mPas) | 10 |
| Relative vapour density (air=1) | < 1 |
| Evaporation rate (ether=1) | < 1 |

Note: These are typical values and do not constitute a specification.

10. STABILITY AND REACTIVITY

| | |
|----------------------------------|---|
| Stability | Stable under normal conditions of use. |
| Conditions to avoid | Protect from freezing. |
| Materials to avoid | None known. |
| Hazardous decomposition products | Oxides of carbon, nitrogen and sulphur evolved in fire. |

11. TOXICOLOGICAL INFORMATION

| | |
|--|--|
| Test data: | No data available on product. |
| Calculated from ingredient data: | |
| - Oral LD ₅₀ rat (mg/kg) | > 30,000 |
| - Dermal LD ₅₀ , rabbit (mg/kg) | > 14,000 |
| Exposure hazard: | |
| - Inhalation | Prolonged or repeated exposure may cause transient irritation. |
| - Skin contact | Prolonged or repeated exposure may cause transient irritation. |
| - Eye contact | Prolonged or repeated exposure may cause transient irritation. |
| - Ingestion | Likely symptoms are slight gastrointestinal irritation. |

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Other data None available.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: No data available on product.

Calculated data based on ingredients

- Daphnia Magna (mg/l) EC₅₀ 48 Hr: >7,000

Environmental effects: Not classified as hazardous to the environment under the EU classification system.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

14. TRANSPORTATION INFORMATION

Not classified as dangerous for transport.

15. REGULATORY INFORMATION

The label shows a CAUTION. Keep Out of Reach of Children. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Names of the ingredients given on the label: None

R phrases: None.

S 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 water.

Inventory Status

TSCA

All ingredients of this product are listed unless specifically exempted.

California Proposition 65

Does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

EU

All ingredients of this product are listed in EINECS or ELINCS, unless specifically exempted under EU Directive 67/548/EEC (as amended).

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Right to know classification: None are listed in CA, PA, MN, MA, MI, FL and NJ.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions, which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

| Hazardous Material Information (HMIS) | | National Fire Protection Association (NFPA) | |
|---------------------------------------|---|---|-------------|
| Health | 0 | 0 | Health |
| Fire | 0 | 0 | Fire |
| Reactivity | 0 | 0 | Instability |
| Personal Protection | G | | NA |

| | | | | | |
|------------------------|------------------|------------------|-------------|-------------------|-----------------|
| Health | 4 Deadly | 3 Extreme Danger | 2 Dangerous | 1 Slight hazard | 0 No hazard |
| Fire | 4 < 73 °F | 3 < 100 °F | 2 < 200 °F | 1 >200 °F | 0 Will not burn |
| Reactivity/Instability | 4 - May detonate | 3 Explosive | 2 Unstable | 1 Normally stable | 0 Stable |

EU labelling information

- Symbol(s) None required

- R-Phrase(s) None assigned

- S-Phrase(s)

| | |
|-------|--|
| 2 | Keep out of the reach of children |
| 24/25 | Avoid contact with skin and eyes |
| 26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice |
| 28 | After contact with skin, wash immediately with plenty of water |

Version number 1
Date prepared August 2009
Supersedes Version Not applicable
Nature of revision First issue to OSHA standard.

R-phrases used in Section 3 None

Based on ANSI Z4000.1-2004 and EU Regulation 1907/2006