1. PRODUCT AND COMPANY INFORMATION

Identification of the substance/preparation **X100 Concentrate**
Use of the substance/preparation Corrosion inhibitor 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		(816)-781-4250 (8am – 5pm)
Emergency Phone No.		Chemtrec (800) 424-9300 (24/7)
Fax:		(816)-781-1043

2. HAZARDS 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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical description
Neutral solution of inorganic and organic corrosion inhibitors and salts.

Hazardous component(s)

Ingredient	CAS Number	EC Number	w/w %	Classification (67/548/EEC)	Classification (GHS)
Sodium molybdate	7631-95-0	231-551-7	10 - 15	None	None – has PEL & TLV
Benzotriazole	95-14-7	202-394-1	< 2.5	Xn; R22-36-52/53	Acute Tox. 4; H302 Eye Irritant Cat 2; H319 Aquatic Chronic 2; H411

Please refer to Section 16 where the full text of each relevant R phrase and H Statement is listed.
Please refer to Section 8 for details of workplace exposure limit.

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 phosphorus 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. 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 vapors 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:	Molybdenum compounds (as Mo) soluble OSHA PEL - 5 mg/m^3 8 hr TWA ACGIH TLV - 5 mg/m^3 8 hr TWA
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless to yellow liquid
Odor	Mild
Odor threshold	No information available
pH (concentrated product)	6.9
pH (5% aqueous solution)	6.5
Melting point (ºC)	Approx 0 [32°F]
Boiling point/range (ºC)	Approx 100 [212°F]
Flash point	Not flammable
Evaporation rate (ether=1)	No information available
Flammability (solid/gas)	Not relevant
Vapor pressure	No information available

Vapor density	No information available
Explosive properties	None
Density at 20ºC [68°F] (kg/m^3)	1385
Solubility in water (% by weight)	Completely miscible
Partition coefficient (Octanol/water)	Not relevant
Autoignition temperature	Not flammable
Decomposition temperature	No information available
Viscosity at 20°C (mPas)	100
Pour point (°C)	3 [37°F]
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	Protect from freezing.
Materials to avoid	None known.
Hazardous decomposition products	Oxides of carbon, nitrogen and phosphorus evolved in fire.

11. TOXICOLOGICAL INFORMATION

Test data:	No data available on product.
Calculated from ingredient data:	
– Oral LD_{50} rat (mg/kg)	> 5000 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.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: No data available on product.

Persistence and degradability No data available on product.

Bioaccumulative potential
- Bioaccumulation Not bioaccumulating
(Refers to active component Sodium molybdate)

Mobility in soil No information available

Summary
Environmental effects: Does not calculate as an Aquatic hazard under the GHS classification system based on ingredient classifications.

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 None
UN proper shipping name None
Transport hazard class(es) None
Packing group None
Environmental hazards None
Special precautions for user None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Does not fulfil any of the criteria for classification as dangerous for transport.

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.

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	1	1	Health
Fire	0	0	Fire
Reactivity	1	1	Instability
Personal Protection	G		NA

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

Version number	4
Date prepared	June 2015
Supersedes Version	3, dated June 2013
Nature of revision	Updated to HSC 2012.

R-phrases used in Section 3	22	Harmful if swallowed
	36	Irritating to eyes
	52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H-statements used in Section 3	H302	Harmful if swallowed
	H319	Causes serious eye irritation
	H411	Toxic to aquatic life with long lasting effects

Based on HSC 2012 and EU Regulation 1907/2006

End of document
Number of pages = 6