



Product
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1. PRODUCT AND COMPANY INFORMATION

Identification of the substance/preparation X100
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

Other information Contains low levels of an oxidising ingredient

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 nitrate	7631-99-4	231-554-3	< 5	O, R8-22-36/37/38	Ox. Solid Cat 3; H272 Acute Tox. Cat 4; H302
Sodium molybdate	7631-95-0	231-551-7	< 5	None	None - has PEL & TLV

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.



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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 laundry 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 and nitrogen 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.



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7. HANDLING AND STORAGE

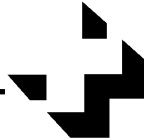
Handling	Avoid contact with skin and eyes. Do not ingest or inhale vapors or spray.
Storage	Keep in original containers. Keep container tightly closed. Store in cool, well ventilated area. Protect from freezing and from high temperatures.

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)	6.4
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
Flammability (solid/gas)	Not relevant
Vapor pressure	No information available
Vapor density	No information available



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Explosive properties	None
Density at 20°C [68°F] (kg/m ³)	1033
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	Protect from freezing.
Materials to avoid	None known.
Hazardous decomposition products	Oxides of carbon and nitrogen 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.



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12. ECOLOGICAL INFORMATION

Aquatic toxicity: No data available on product.

Calculated data based on ingredients

- Fathead minnow (mg/l)	LC ₅₀ 96 Hr:	3680
	NOEL :	1680
- Daphnia Magna (mg/l)	LC50 48 Hr:	4080
	NOEL :	2100

Persistence and degradability

- COD (mgO ₂ /g)	150 (calculated data)
- BOD 5 (mgO ₂ /g)	0 (calculated data)
- BOD 28 (mgO ₂ /g)	1 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	2 (calculated data)
- TOC (mg C/g)	50 (calculated data)

Bioaccumulative potential

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

Mobility in soil No information available

Summary

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

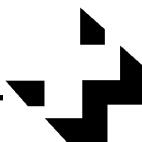
13. DISPOSAL CONSIDERATIONS

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	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.



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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	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

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Nature of revision Updated to HSC 2012.



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R-phrases used in Section 3	8	Contact with combustible material may cause fire
	22	Harmful if swallowed
	36/37/38	Irritating to eyes, respiratory system and skin
H-statements used in Section 3	H272	May intensify fire; oxidiser
	H302	Harmful if swallowed

Based on HSC 2012 and EU Regulation 1907/2006

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