PRODUCT SAFETY DATA SHEET

This generic SDS is provided by MGS Ltd to give information to assist with material handling of the products listed which are according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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SECTION 1: Identification of the substance / mixture and of the company / undertaking	
1.1 Product Identifier	
Product Name:	Sentinel R500
Chemical Name:	N/A
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Recommended Use:	Heat transfer fluid for ground source heat pump circuits
Restriction on Use:	None
Physical Properties:	Blue liquid
1.3 Details of the supplier of the Safety Data Sheet	
Name:	MGS Ltd
Address:	Rougham Industrial Estate, Bury St Edmunds, IP30 9ND
Country:	UK
Phone N°:	+44 1359 271167
Email:	info@mgs.co.uk
Website:	www.mgs.co.uk
1.4 Emergency telephone number	
Emergency telephone at the company:	+44 7738 197 517
Available outside office hours:	Yes
Language of the phone service:	English
E-mail of competent person responsible:	darren.portway@mgs.co.uk
National contact:	Darren Portway
SECTION 2: Hazard Identification	
2.1 Classification of the substance or mixture	
Not classified. **Adverse physicochemical, human health and environmental effects** To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.	
2.2 Label elements	
No labelling applicable.	
2.3 Other hazards	
No additional information available.	
SECTION 3: Composition / Information on Ingredients	
3.1 Substances	
Not applicable.	
3.2 Mixtures	
This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II.	
SECTION 4: First Aid Measures	
4.1 Description of first aid measures	
General:	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water.

Eye contact:	Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion:	Do NOT induce vomiting. Rinse mouth. Call a poison centre or a doctor if you feel unwell.
Inhalation:	Remove person to fresh air and keep comfortable for breathing.

4.2 Most important symptoms and effects, both acute and delayed

No additional information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Protect container with water spray. Water spray. Dry powder. Foam. Carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Toxic fumes may be released. Carbon monoxide. Carbon dioxide. Nitrogen oxides. Phosphorus oxides.

5.3 Advice for fire fighters

Firefighting instructions:
Use water spray or fog for cooling exposed containers. Do not allow run-off from firefighting to enter drains or water courses.
Protection during firefighting:
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Emergency procedures
Ventilate spillage area. Evacuate unnecessary personnel.
Protective equipment
Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
Take up liquid spill into absorbent material.
Other information:
Dispose of materials or solid residues at an authorized site.

6.4 Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling & Storage

7.1 Precautions for safe handling

Precautions for safe handling:
Ensure good ventilation of the workstation. Wear personal protective equipment.
Hygiene measures:
Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:
Store in a well-ventilated place. Keep cool. Store in original container. Keep container closed when not in use.
Packaging materials:
Polyethylene.

7.3 Specific end use(s)

Heat transfer fluid for ground source heat pump circuits

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

1,2-propanediol (57-55-6)

United Kingdom	Local name	Propane-1,2-diol
United Kingdom	WEL TWA (mg/m³)	474 mg/m³ Propane-1,2-diol total vapour and particulates; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005); Propane-1,2-diol particulates; 10 mg/m³; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	150 ppm Propane-1,2-diol total vapour and particulates; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)

1,2-propanediol (57-55-6)

United Kingdom	WEL STEL (mg/m³)	1422 mg/m³ (calculated-total particulate and vapour) 30 mg/m³ (calculated-particulate) United Kingdom WEL STEL (ppm) 450 ppm (calculated-total particulate
United Kingdom	WEL STEL (ppm)	450 ppm (calculated-total particulate and vapour)

8.2 Exposure controls

8.2.1. Engineering Controls

Ensure good ventilation of the workstation.

8.2.2 Individual protection measures, such as personal protective equipment:	
Chemical goggles or safety glasses. EN 166	
In case of insufficient ventilation, wear suitable respiratory equipment	
Protective gloves. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer	
Wear suitable protective clothing	

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Blue
Appearance	Aqueous solution
Odour	Odourless
Odour threshold	No data available
pH	8.5 @ 20°C
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable, not flammable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	1.03 @ 20°C
Solubility	completely miscible.
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Product is not explosive

Oxidising properties	Non oxidizing.
Explosive limits	No data available

9.2 Other information

No additional information available

SECTION 10: Stability and Reactivity

10.1 Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4 Conditions to avoid

Extremely high or low temperatures.

10.5 Incompatible materials

No additional information available

10.6 Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Phosphorus oxides.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion / irritation	Not classified – pH: 8.5 @ 20°C
Serious eye damage / irritation	Not classified– pH: 8.5 @ 20°C
Respiratory or skin sensitisation	Not classified
Germ cell mutation	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT – single exposure	Not classified
STOT – repeated exposure	Not classified
Aspiration hazard	Not classified

SECTION 12: Ecological Information

12.1 Toxicity

The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

12.2 Persistence and degradability

No additional information available.

12.3 Bio accumulative potential

No additional information available.

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

No additional information available.

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Waste treatment methods:
Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations:
Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transportation Information

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable. No supplementary information available.

14.6 Special precaution for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory Information

15.1 Safety, health, and environmental regulations / legislation specific for the substance or mixture

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.2 Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other Information

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bio accumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bio accumulative

Disclaimer:

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability of completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their own particular use.