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 R800
Chemical Name:	Potassium hydroxide
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Recommended Use:	Cleaning agent for heat pump circuits
Restriction on Use:	None
Physical Properties:	Colourless, odourless 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.

2.2 Label elements

No labelling applicable.

2.3 Other hazards

May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.
This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition / Information on Ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Chemical Name	EC-N0	CAS No	w/w%	Classification (EU Reg 1272/2008)	REACH Registration Number
Potassium hydroxide	215-181-3	1310-58-3	<1	Acute tox. 4 (H302) Skin corr. 1A (H314)*	01-2119487136-33XXXX

For the full text of H-Statements see Section 16.
*Substance with Workplace Exposure Limit – See Section 8.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Skin contact:	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. If symptoms develop, obtain medical attention.
Eye contact:	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms develop obtain medical attention.

Ingestion:	Do NOT induce vomiting. Wash out mouth with water and give 100 – 200 ml of water to drink. If symptoms develop obtain medical attention.
Inhalation:	Remove patient from exposure, keep warm and at rest. If symptoms develop obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable Extinguishing media

Water spray, dry chemical, carbon dioxide (CO_2) or foam

Extinguishing media which shall not be used for safety reasons

Do not use water jet

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating toxic gases and vapours. Carbon monoxide (CO), Carbon Dioxide (CO_2), Nitrogen oxides (NOx), Sulphur Oxides, Chlorine, Phosphorus Oxides.

5.3 Advice for fire fighters

As in any fire, wear self-contained breathing apparatus and full protective gear. Cool containers / tanks with water spray.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation. Avoid contact with the skin and eyes. Avoid breathing vapours or mists. Use personal protective equipment.

6.2 Environmental precautions

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Reference to other sections

Section 8 – Exposure controls/personal protection. Section 13 – disposal considerations.

SECTION 7: Handling & Storage

7.1 Precautions for safe handling

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing vapours and mist.
Remove and wash contaminated clothing before re-use.
Do not eat, drink or smoke during work. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in the original container / package in a cool well-ventilated place.

7.3 Specific end use(s)

Cleaning agent for heat pump circuits.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

Chemical Name	**Potassium hydroxide 1310-58-3**
The United Kingdom	STEL – 2 mg/m^3
France	STEL – 2 mg/m^3
Spain	STEL – 2 mg/m^3

Portugal	Ceiling – 2 mg/m^3
Finland	STEL – 2 mg/m^3 Ceiling – 2 mg/m^3
Denmark	Ceiling – 2 mg/m^3
Austria	TWA – 2 mg/m^3
Switzerland	TWA – 2 mg/m^3
Poland	STEL – 1 mg/m^3 TWA – 0.5 mg/m^3
Norway	Ceiling – 2 mg/m^3
Ireland	STEL – 2 mg/m^3

Derived No Effect Level (DNEL)
No information available
Predicted No Effect Concentration (PNEC)
No information available

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
Appearance	Aqueous solution
Odour	Odourless
Odour threshold	No data available
pH	12.9 @ 25°C
Melting/freezing point	No information available
Freezing point	No information available

Boiling point / boiling range	No information available
Flash point	Not flammable
Evaporation point	No information available
Evaporation rate	No information available
Flammability limits in air upper / lower	No information available
Vapour pressure	No information available
Vapour density	No information available
Relative density	1.01 @ 25°C
Water Solubility	Miscible
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidising properties	Not oxidising

9.2 Other information

No additional information available

SECTION 10: Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

Thermal decomposition can lead to a release of irritating and toxic gases and vapours. Carbon monoxide (CO), Carbon Dioxide (CO_2), Nitrogen oxides (NOx), Sulphur Oxides, Chlorine, Phosphorus Oxides.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Inhalation	No known effect based on information supplied
Eye contact	May cause eye irritation
Skin contact	May cause skin irritation
Ingestion	Ingestion may cause irritation of the gastrointestinal tract

Acute toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	365 mg/kg (Rat)	-	-

Skin corrosion / irritation	Not classified
Serious eye damage / irritation	Not classified
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

WGK Classification 1

12.2 Persistence and degradability

Product is biodegradable

12.3 Bio accumulative potential

Chemical Name	Bioconcentration factor (BDF)	log Pow
Potassium hydroxide	-	0.65 0.83

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating, no toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

No information available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Waste from residues / unused products:
Disposal should be in accordance with local, state or national legislation
Contaminated packaging:
Clean container with water. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transportation Information

14.1 UN number

Not classified as hazardous transport.

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 classified.

14.6 Special precaution for user
No special precautions.
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
This safety data sheet complies with the requirements of Regulations (EC) No. 1907/2006 and No. 830/2015
15.2 Chemical safety assessment
No chemical safety assessment has been carried out
SECTION 16: Other Information
Full text of H-Statements referred to under sections 2 and 3 H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage

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.