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 R700
Chemical Name:	N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use:	Biocide for use in systems to deter, or control harmful organisms
Restriction on Use:	None
Physical Properties:	Colourless 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

Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects
May cause an allergic skin reaction. Causes serious eye irritation.

2.2 Label elements

Signal word (CLP): **Warning**
Contains : Tetrakis(Hydroxymethyl)Phosphonium Sulfate

Hazard statements (CLP):
H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.

Precautionary statements (CLP):
P261 - Avoid breathing spray, vapours, mist.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, face protection, protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.



GHS07

2.3 Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition / Information on Ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetrakis(Hydroxymethyl) Phosphonium Sulfate (Active substance (Biocide))	(CAS-No.) 55566-30-8 (EC-No.) 259-709-0 (REACH-no) 01-2120761569-40	1-10	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 3 (Inhalation), H331 (ATE=0.5 mg/l/4h) Eye Dam. 1, H318 Skin Sens. 1A, H317 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Skin contact:	Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion:	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

Symptoms/effects after skin contact:
May cause an allergic skin reaction.
Symptoms/effects after eye contact:
Eye irritation.

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 powder. Foam. Carbon dioxide. Protect container with water spray.
Unsuitable extinguishing media:
Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire:
Toxic fumes may be released.

5.3 Advice for firefighters

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

6.1.1 For non-emergency personnel

Emergency procedures

Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing spray, vapours, mist.

6.1.2. For emergency responders

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. Avoid contact with skin and eyes. Avoid breathing spray, vapours, mist. Wear personal protective equipment.

Hygiene measures:

Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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.

Incompatible materials: Metals

Packaging materials:

Polyethylene.

7.3 Specific end use(s)

Biocide for use in systems to deter, or control harmful organisms.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

No additional 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	

Environmental exposure controls:
Avoid release into the environment.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	Characteristic
Odour threshold	No data available
pH	2 - 5
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	1.01
Solubility	Miscible in all proportions.
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available

Explosive properties	No data available
Oxidising properties	No data available
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

Heat.

10.5 Incompatible materials

Strong oxidizing agent. Strong acids.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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
Tetrakis(Hydroxymethyl)Phosphonium Sulfate (55566-30-8)	
LD50 dermal rat	> 1500 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:
ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (gases)	700 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
Dust / mist	0.5 mg/L/4h
Skin corrosion / irritation	Not classified – pH: 2-5
Serious eye damage / irritation	Causes serious eye irritation - pH: 2-5
Respiratory or skin sensitisation	May cause an allergic skin reaction
Germ cell mutation	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT – single exposure	Not classified
STOT – repeated exposure	Not classified
Tetrakis(Hydroxymethyl)Phosphonium Sulfate (55566-30-8)	
LOAEL (oral, rat, 90 days)	22.65 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD

	Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	4.53 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
Aspiration hazard	Not classified

SECTION 12: Ecological Information

12.1 Toxicity

Ecology - general

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

Hazardous to aquatic environment – short-term (acute)

Not classified

Hazardous to aquatic environment – long-term (chronic)

Not classified

Tetrakis(Hydroxymethyl)Phosphonium Sulfate (55566-30-8)

LC50 fish 1	94 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	71 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	15 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	11.3 mg/l Test organisms (species): Daphnia magna

EC50 96h - Algae [1]	0.652 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	0.492 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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.

Disposal must be done according to official regulations.

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

15.1.1. EU Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on	Entry title or description
3(b)	Sentinel R700; Tetrakis(Hydroxymethyl)Phosphonium Sulfate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Tetrakis(Hydroxymethyl)Phosphonium Sulfate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants
Directive 2012/18/EU (SEVESO III)
Seveso Additional information: Not subject to the Seveso III Directive
15.1.2. National regulations
No additional information available

15.2 Chemical safety assessment		
No chemical safety assessment has been carried out		
SECTION 16: Other Information		
Data Sources:	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.	
Full text of H and EUH Statements		
Acute Tox. 3 (Inhalation)	Acute Tox. 3 (Inhalation)	
Acute toxicity (inhal.), Category 3	Acute toxicity (inhal.), Category 3	
Acute Tox. 4 (Oral)	Acute Tox. 4 (Oral)	
Aquatic Chronic 2	Aquatic Chronic 2	
Hazardous to the aquatic environment – Chronic Hazard, Category 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
Eye Dam. 1	Eye Dam. 1	
Serious eye damage/eye irritation, Category 1	Serious eye damage/eye irritation, Category 1	
Eye Irrit. 2	Eye Irrit. 2	
Serious eye damage/eye irritation, Category 2	Serious eye damage/eye irritation, Category 2	
H302	H302	
Harmful if swallowed.	Harmful if swallowed.	
H317	H317	
May cause an allergic skin reaction.	May cause an allergic skin reaction.	
H318	H318	
Causes serious eye damage.	Causes serious eye damage.	
H319	H319	
Causes serious eye irritation.	Causes serious eye irritation.	
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Irrit. 2	Eye Irrit. 2	Eye Irrit. 2
H319	H319	H319

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