

SAFETY DATA SHEET

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with this material, as well as describing potential risks to the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material.

This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, in CLP Regulation (EC) No 1272/2008 and in Annex I of the Commission Regulation (EU) No 2015/830.

SECTION 1. Identification of the substances/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: **Potassium Permanganate for fluorescent TB Stain (0.1% w/v aqueous)**
Product Number: **HS137**
Brand: **TCS Biosciences**
IUPAC name: **not determined**

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

Identified uses: For professional use only.

1.3 Details of the supplier of the safety data sheet

Company: TCS Biosciences Ltd
Botolph Claydon, Buckingham,
MK18 2LR, UK
Telephone: +44 (0) 1296 714222
Email address: sales@tcsgroup.co.uk
Web address: www.tcsbiosciences.co.uk

1.4 Emergency telephone number

+44 (0)1296 71422205 only available during the following office hours:
Monday – Thursday 8:30 – 17:00 GMT/BST
Friday 9:00 – 15:00 GMT/BST

SECTION 2. Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 Classification in accordance with the Classification Labelling and Packaging Regulation EC (no) 1272/2008:

This mixture is not classified as hazardous according to regulation (EC) No. 1272/2008

2.2 Label Elements

2.2.1 Labelling in accordance with Classification Labelling and Packaging Regulation (EC) No 1272/2008

This mixture is not considered hazardous and is not required to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards: Dyes and Stains by their physical nature may result in permanent staining if in contact with skin and clothing.

No substance contained in this product meets the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII; and, no substance within this product is identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100.

SECTION 3. Composition/Information on Ingredients

- 3.2 Mixtures** Potassium Permanganate 0.1%
Synonyms: None
Form: Liquid

Component	EC-No	CAS-No	Concentration	Classification in accordance with Regulation (EC) No 1272/2008
Potassium Permanganate	231-760-3	7722-64-7	0.1%	Ox. Sol. 2; H272, Repr. 2: H361d, Acute Tox. 4: H302, Aq. Acute 1; H400, Aq. Chronic 1; H410

For full text of the H-Statements mentioned in this section please refer to Section 16

SECTION 4. First Aid Measures

4.1 Description of first aid measures

If exposed keep patient calm and seek immediate medical attention. Show this safety data sheet to doctor/physician in attendance.

If inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.

In case of skin contact

Note: Dyes and Stains by their physical nature may result in permanent staining in contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

In case of 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.

If swallowed

Do NOT induce vomiting. Rinse out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of immediate medical attention and special treatment needed

No data available.

SECTION 5. Fire-Fighting Measures

5.1 Suitable extinguishing media

Use alcohol-resistant foam or fine water spray, dry chemical powder or carbon dioxide

5.2 Special hazards arising from the substance or mixture

Potassium oxides, Manganese/manganese oxides.

5.3 Precautions for fire-fighters

Wear self-contained breathing apparatus. Wear protective clothing. Avoid contact with skin and eyes.

5.4 Further information

The product itself does not burn.

SECTION 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. Wash hands thoroughly after handling.

6.2 Environmental precautions

May create a hazard to drinking water sources when very large quantities get into groundwater. Do not let undiluted product or large quantities enter drains or water course. Prevent further leakage or spillage where safe to do so. Inform responsible authorities as appropriate.

6.3 Methods and materials for containment and cleaning up

Absorb spillage with appropriate absorbent material e.g. vermiculite or sand; and dispose into suitably labelled closed containers for disposal according to local regulations. Wash spillage site with water and appropriate detergent.

6.4 Reference to other sections

For disposal refer to section 13.

SECTION 7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with eyes and skin. Wear appropriate personal protective equipment provided. Avoid prolonged or repeated exposure. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated place. Replace container lid after use and keep container tightly closed to prevent leakage.

7.3 Specific end uses

Recommend restriction to professional users only.

SECTION 8. Exposure Controls//Personal Protection

8.1 Control parameters

Components with workplace control parameters

TWA Time Weighted Average Concentration (Long Term Exposure Limit)

STEL Short Term Exposure Limit

LTEL Long Term Exposure Limit

Component	CAS-No	Value	Control Parameters	Basis
Potassium Permanganate	7722-64-7	TWA LTEL – 8h STEL – 15mins	0.5 mg/m ³ 0.15 mg/m ³	UK.EH40 WEL- Workplace Exposure limit

8.1.3 DNEL's Workers

Component	Route of Exposure	Acute Effects local	Acute Effects systemic	Chronic Effects local	Chronic Effects systemic
Potassium Permanganate CAS-No 7722-64-7	Oral	na			
	Inhalation	na	na	na	0.2mg/m ³
	Dermal	1.25 mg/kg bw/day	na	na	na

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

8.2.2 Personal protective equipment

8.2.2.1 Eye/face protection

Avoid exposure to sprays/mist/aerosols. Use safety goggles for eye protection complying with appropriate government standards such as EN166 (EU).

8.2.2.2 Skin and Body Protection

Handle with chemical-resistant, impervious gloves complying with appropriate government standards: EU Directive 89/686/EEC; standard EN 374. Inspect gloves prior to use to ensure adequate protection. Use proper glove removal technique to avoid skin contact with substance/mixture. Dispose of contaminated gloves after use in accordance with local and national applicable laws and good laboratory practises. Wash and dry hands thoroughly after handling. Promptly remove any contaminated clothing and clean appropriately before reuse. Use chemically resistant protective clothing with closed cuffs and closed neck, appropriate to the concentration /amount of the dangerous substance at the specific workplace.

8.2.2.3 Respiratory protection

Respiratory protection is not required. For nuisance aspirators use a full-face respirator or air hood be used where local exhaust ventilation is inadequate; use respirator and components tested and approved to appropriate government standards such as NIOSH (US) or EN 143 / EN 14387 (EU).

8.2.2.4 Thermal Hazards

No specific thermal hazard. Product is stored at room temperature.

8.2.3 Environmental Exposure Controls

See section 12.

SECTION 9. Physical and Chemical Properties

The physical/chemical properties of this product has not been fully investigated. Judgements have been made based upon consideration of its major component(s).

9.1 Information on basic physical and chemical properties

- | | |
|--|-------------------|
| a) Physical state: | Liquid. |
| b) Colour: | Dark violet |
| c) Odour: | no obvious odour |
| d) Melting/freezing point | No data available |
| e) Initial boiling point /boiling range: | No data available |
| f) Flammability: | No data available |
| g) Upper/lower explosion limits: | No data available |
| h) Flash point: | No data available |
| i) Auto-ignition temperature: | No data available |
| j) Decomposition temperature: | No data available |
| k) pH: | 7.6 apprx |
| l) Kinematic viscosity: | No data available |
| m) Solubility at 20°C: Water | Miscible |
| | Fat |
| | No data available |
| n) Partition coefficient n-octanol/water
(log value): | Not applicable |
| o) Vapour pressure: | No data available |
| p) Density and/or relative density: | No data available |
| q) Relative vapour density: | No data available |
| r) Particle characteristics: | Not applicable |

9.2 Other information

9.2.1. Information with regard to physical hazard classes

Potassium Permanganate CAS No. 7722-64-7

Oxidising Solid

9.2.2. Other safety characteristics

Not applicable.

SECTION 10. Stability and Reactivity

This product has not been tested. Judgements on the expected stability/reactivity of this product have been made based upon consideration of its major components.

10.1	Reactivity	No data available
10.2	Chemical stability	Stable under specified conditions of use and storage
10.3	Possibility of hazardous reactions	No data available
10.4	Conditions to avoid	No data available.
10.5	Incompatible materials	No data available
10.6	Hazardous decomposition products	The nature of released decomposition products has not been determined.

SECTION 11. Toxicological Information

11.1 Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

Toxicokinetics - Mixture

- (a) Acute toxicity Based on available data; the classification criteria are not met.
Potassium Permanganate – CAS No. 7722-64-7
LD50, Oral – Rat = 1,090 mg/kg
- (b) Skin corrosion/irritation Based on available data; the classification criteria are not met.
- (c) Serious eye damage/eye irritation Based on available data; the classification criteria are not met.
- (d) Respiratory or skin sensitization Based on available data; the classification criteria are not met.
- (e) Germ cell mutagenicity Based on available data; the classification criteria are not met.
- (f) Carcinogenicity Based on available data, the classification criteria are not met.
- Tumourigenic **RTECS criteria:** Based on available data, the classification criteria are not met.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC or EC.
- (g) Reproductive toxicity Based on available data; the classification criteria are not met.
Potassium Permanganate – CAS No. 7722-64-7
Suspected of damaging the unborn child.
- (h) STOT Specific target organ toxicity
- single exposure Based on available data; the classification criteria are not met.
- (i) STOT Specific target organ toxicity
- repeated exposure Based on available data; the classification criteria are not met.
- (j) Aspiration hazard Based on available data; the classification criteria are not met.

Potential health effects

- Inhalation** Maybe harmful if inhaled. Contains components which may cause irritation to mucous membranes and upper respiratory tract.
- Ingestion** Maybe harmful if ingested. Contains components which may cause vomiting or other adverse effects such as diarrhoea.
- Skin** May cause irritation on contact with skin.
- Eyes** May cause irritation.
- Signs and Symptoms of Exposure** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.2 Information on other hazards

- 11.2.1 **Endocrine disrupting properties:** No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.
- 11.2.2 **Other information:** RTECS - Potassium Permanganate – SD6475000.
- 11.2.3

SECTION 12. Ecological Information

The toxicological properties of this product has not been fully investigated. Judgements have been made based upon consideration of major component(s).

12.1	Aquatic Toxicity	Not classified as acutely toxic to aquatic organisms. Potassium Permanganate – CAS No. 7722-64-7 M=10
	Toxicity to fish	LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 0.3-0.6mg/l - 96h
	Toxicity to daphnia and other aquatic invertebrates	EC50 – <i>Daphnia magna</i> (water flea) – 0.084 mg/l – 48h
	Toxicity to Algae	EbC50 = 0.43mg/l. ErC50 = 0.80mg/l – 72h
12.2	Persistence and degradability	No data available
12.3	Bioaccumulative potential	Adverse ecological effects cannot be excluded in the event of improper handling or disposal. Do not let undiluted product or large quantities enter drains or water course. Inform responsible authorities as appropriate.
12.4	Mobility in soil	No data available.
12.5	Results of PBT and vPvB assessment	This mixture does not contain any substances that are assessed to be a PBT or a vPvBs
12.6	Endocrine disrupting properties	No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.
12.7	Other adverse effects	No data available.

SECTION 13. Disposal Considerations

13.1	Waste treatment methods	
13.1.1	Product	Dispose of as hazardous waste and offer non-recyclable solutions to a licensed waste material processor. Comply with local regulations.
	Contaminated Packaging	Dispose of as unused product.

SECTION 14. Transport Information

Not regulated as dangerous goods under ADR/RID, IMDG, or IATA

	ADR/RID	IMDG	IATA
14.1	UN-Number	n/a	n/a
14.2	UN proper shipping name	n/a	n/a
14.3	Transport hazard class(es)	n/a	n/a
14.4	Packing group	n/a	n/a
14.5	Environmental hazards	No	Marine pollutant: No
14.6	Special precautions for users	No data available	No
14.7	Maritime transport in bulk according to IMO instruments:	No data available	

SECTION 15. Regulatory information

This Safety Data Sheet complies with the requirements of Regulations (EC) No. 1907/2006 and its amendments (EU) No. 453/2010 & (EU) No. 2015/830; and (EC) No. 1272/2008.

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture
	All components are listed as existing substances in Europe
15.2	Chemical Safety Assessment
	A Chemical Safety Assessment has not been carried out for this product.

SECTION 16. Other information**Further information**

The information herein is provided in good faith and is correct to the best of our knowledge but makes no representation as to its completeness or accuracy. This safety data sheet is intended for use only as a guide for the appropriate precautionary handling of material by suitably trained persons.

TCS Biosciences Ltd shall not be held liable for any loss, injury or damage which may result from its use.

Additional information from Sections 3.Hazard Statement(s)

- H302 Harmful if swallowed.
- H272 May intensify fire; oxidiser.
- H361d Suspected of damaging the unborn child.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

V1: created 02.04.2014

V2: created 01.04.2017, removal of classification and labelling according to Directive 1999/45/EEC & 67/548/EEC, addition of StainHD logo

Version 3 created 12.01.2023, format updated to comply with Annex II of REACH.

HS137 end