

Revision: 2.1

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Section 1. Identification

1.1 Product Identifier 1611

Product Name MANGANESE (II) SULPHATE H₂O pure

CAS Number 10034-96-5

REACH Registration No 01-2119456624-35-XXXX

Molecular Formula $MnSO_4 \cdot H_2O = 169.01$

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

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



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Phone 44 0113 2362811
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Email safety@viclabs.co.uk
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1.4 Emergency Telephone (08:00-16:30) +44(0) 113 2362811 (24hr) 112 (Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Serious eye damage/irritation, category 1
Spec target organ tox - repeat, category 2
Hazard to aquatic environment, category 2

H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary Statements Do not breathe dust. Avoid release to the environment.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Manganese Dioxide	1313-13-9	215-202-6		>87%	Acute Tox. 4 (O), Acute Tox. 4 (I), STOT RE 2

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Thoroughly wash off skin with soap and water. Remove contaminated clothing immediately and wash before re-use.
Inhalation	Remove from exposure.
Ingestion	Wash out the patients mouth thoroughly with water. If conscious give plenty of water to drink. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Consider what other flammable materials are present and act accordingly.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	May evolve toxic fumes if involved in a fire.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Avoid breathing dust.
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6.2 Environmental precautions

Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
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6.3 Methods and material for containment and cleaning up

Major Spillage	Shovel/sweep up into container for removal Wash area down with copious amounts of water.
Minor Spillage	Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains dust concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage .

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)	Short Term 15min period		
Manganese Dioxide	1313-13-9	>87%	-	-	0.5 ppm	-

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.

Hand Protection Wear gloves.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Pink/purple crystalline solid.
Odour	Odourless.
pH	Not applicable
Boiling Point	Not available
Melting Point	>450 °C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	2.9500
Water Solubility	450 g/L Very soluble in water.

9.2 Other information

No data available.

Section 10. Stability & 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	No specific conditions.
10.5 Incompatible Materials	No specific materials to avoid.
10.6 Hazardous Decomposition Products	May produce hazardous fumes if involved in a fire.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Causes serious eye damage.
Skin	Contact with the solid or solution may be irritating to the skin.
LD50 Skin	Not available
Ingestion	Ingestion may cause nausea, vomiting, gastric pain and diarrhoea.
LD50 Oral	1470 mg/Kg Rat
Inhalation	Inhalation may cause tissue damage and pneumonia.
LD50 Inhalation	>4.45 mg/L Rat
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.

Section 12. Ecological

12.1 Toxicity	Toxic to aquatic species and may cause long term adverse effects in the aquatic environment. Do not allow to enter drinking water supplies, waste water, or soil.
LC50 Algal	61 mg/L Algae (72 hours)
LC50 Crustacea	3 mg Mn/L (96 hours)
LC50 Fish	49.9 mg/L Fish (96 hours)
12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

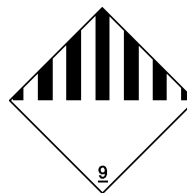
Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Do not dispose of as domestic waste.
Contaminated Packaging	Wash out containers with water.

Section 14. Transport Information

14.1 UN Number	3077
14.2 Proper Shipping Name	Environmentally hazardous substance, solid, N.O.S. (Manganese Sulphate Monohydrate)
14.3 Transport classes	
UN classification	9
Subsidiary hazard(s)	None
Transport category	3
ADR Hazard ID	90
Tunnel Restriction Code	E
Single packs and combination packages containing inner packs of up to 5L or 5Kg are excluded from regulation (ADR 2.2.9.1.10, IMDG code 2.10.3).	
14.4 Packing Group	III
14.5 Environment hazards	Marine pollutant.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Serious eye damage/irritation, category 1; Spec target organ tox - repeat, category 2; Hazard to aquatic environment, category 2
Signal word	Danger
Hazard Pictograms	
Hazard Statements	H318, H373, H411 Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.
Precautionary Statements	P260, P273 Do not breathe dust. Avoid release to the environment.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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