

Safety Data Sheet

According to the International Organization for Standardization, ISO 11014:2009

www.kimleigh.com

TEL: | +27 18 293 1028: | +27 18 285 1014



Reg. No. 1974/000531/07

PO Box 1097 | Potchefstroom | 2520 | South Africa

11 Jasper vd Westhuizen Str | Potchindustria | Potchefstroom | 2531

Trade name: Manganese Sulphate Monohydrate

Product range:



SECTION 1: Chemical Product and Company Identification

1.1 Product identifier:

Product name : Manganese Sulphate Monohydrate
Chemical formula : $MnSO_4 \cdot H_2O$
Chemical Family : Transition metal sulphates

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

Animal feeds, fertilizers, pesticides, and food additive.

1.3 Details of the supplier of the safety data sheet:

Kimleigh Chemicals SA (Pty) Ltd

11 Jasper van der Westhuizen Street, Potchindustria, Potchefstroom, North West Province, 2531, South Africa

Tel no: +27 (18) 293-1028

Fax no: +27 (18) 294-4079

Web : www.kimleigh.com



E-mail : sheq@kimleigh.co.za

1.4 Emergency telephone number:

Kimleigh Chemicals SA (Pty) Ltd: Tel: +27 (18) 293-1028

SECTION 2: Hazards Identification

2.1. Classification of the substance:

Classification according to the Global Harmonized System (GHS):	Code:	Pictogram:	Signal word:
Health hazards: May cause damage to organs through prolonged or repeated exposure	H373	 GHS08	Warning
Environmental hazards: Toxic to aquatic life with long lasting effect.	H411	 GHS09	

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Precautionary statements:

P260 Do not breathe dust/fume/vapours/spray/gas.
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.2 Potential health effects:

Routes of entry: Eye contact, inhalation, ingestion, absorbed through skin.

Eyes: May cause eye irritation and local inflammation. Possible corneal burn symptoms include stinging, tearing and redness.

Skin: May cause skin irritation. May be harmful if absorbed through skin.

Inhalation: Inhalation of dust may cause respiratory tract irritation. Other symptoms can include irritation of nasal passages, sore throat, shortness of breath, and coughing.

Ingestion: May cause irritation and/or burning sensation in the mouth, pharynx, oesophagus, and gastrointestinal tract. Symptoms may include abdominal pain, nausea, vomiting, and diarrhoea.

SECTION 3: Composition/Information on Ingredients

3.1 Substance:

Substance name: Manganese Sulphate Monohydrate
Appearance: White/slightly pink powder
Active ingredients: $MnSO_4 \cdot H_2O$
Molar mass: 169.01 g/mol
CAS number: 10034-96-5
EC number: 232-089-9
EC Index Number: 025-003-00-4

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General information

Consult a physician. Show this material safety data sheet to doctor in attendance.

Following inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

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Following skin contact

In case of contact, immediately flush skin with soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.

Following eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Remove contact lenses if present and easy to do so. Get medical attention immediately.

Following ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

SECTION 5: Firefighting Measures

5.1 Products of combustion:

Oxides of sulphur and manganese.

Explosion hazards in presence of various substances:

Risk of explosion of the product in the presence of static discharge: **NO**.

Risk of explosion of the product in presence of mechanical impact: **NO**.

Fire hazards in presence of various substances:

When heated to decomposition it emits toxic fumes of sulphur oxides (SO_x) and manganese oxides.

5.2 Firefighting media and instructions: Use alcohol-resistant foam, water spray, dry chemical or carbon dioxide.

Protective clothing (Fire): Wear NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

Special remarks on fire hazards: Prevent fire-fighting water from entering surface water or groundwater.

Special remarks on explosion hazards: Not available.

SECTION 6: Accidental Release Measures

Personal protection:

Hands: Nitrile rubber gloves.

Eyes: Splash goggles.

Body: Protective work clothing.

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Feet: Safety boots.

Wear appropriate respiratory and personal protection equipment. Isolate spill area and provide ventilation. Avoid dust formation. Avoid breathing vapours, mist or gas. Scoop or vacuum up spill using a vacuum system equipped with a high efficiency particulate air (HEPA) filtration system and place in a properly labeled closed container for further handling and disposal.

6.2 Small spill:

Use appropriate tools and personal protective equipment. Pick up spillage. Dispose of in a waste disposal container. Do not allow to enter sewerage system.

6.3 Large spill:

Use appropriate tools and personal protective equipment. Contain material. Take up spillage limiting generation of dust. Dispose of in a waste disposal container. Do not allow to enter sewerage system.

6.4 Environmental precautions:

Do not allow to enter drains or to be released to the environment.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures

Advice on safe handling

Handle in a well-ventilated area in an enclosed, controlled process. Avoid creating dust. Ensure adequate ventilation if dusts are created. Do not breathe dust or fumes. Wash thoroughly before eating or smoking. See section 8 for information on personal protection equipment.

Advice on safe storage

Store in a cool, dry area. Store material tightly sealed in properly labeled containers. Protect from moisture. Store under lock and key and keep out of reach of children, uninformed persons and animals. Access to water and eye wash facility should be available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Engineering controls:

Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure

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limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

8.2 Personal Protection:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of substance handled.

Respiratory Protection: Use MSHA/NIOSH respirator when dust or fumes are present.

Eye Protection: Safety glasses

Skin Protection: Impermeable gloves, protective work clothing as necessary.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practices. Remove and wash contaminated clothing. Wash hands after use and before eating or smoking. Wash promptly if skin becomes contaminated or wet.

Protection in case of large spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state:	Powder
Colour:	White/slightly pink
Odour:	Odourless

9.2 Other information:

Boiling point:	850°C
Melting point:	700°C
Vapour density:	Not available
Flammability/explosive limits:	Not available
Bulk density:	2,950 kg/m ³
Relative density (20°C):	2.95 g/m ³
Solubility:	> 100g/100 ml
pH (50 g/ℓ):	3.0 – 5.0

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SECTION 10: Stability and Reactivity

10.1 Reactivity and stability

The product is stable under recommended conditions of storage and use.

10.2 Conditions of instability

Avoid contact with moisture, product is hygroscopic.

10.3 Hazardous decomposition products

Toxic sulphur dioxide fumes. Manganese oxides.

10.4 Incompatibility with various substances

Not available,

10.5 Hazardous polymerization

Will not occur.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

	Effect dose / concentration	Value(s)	Species
Acute oral toxicity	LD50	2,150 mg/kg	Rat

11.2 Other information:

Acute and chronic effects on humans: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Following inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Following skin contact

In case of contact, immediately flush skin with soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.

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Following eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Remove contact lenses if present and easy to do so. Get medical attention immediately.

Following ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness, and weakness in the legs. A solid mask like appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to the dust of fume of some manganese compounds.

Carcinogenicity:

No component of this product presented at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Toxicity to reproductive system:

Not available.

SECTION 12: Ecological Information

12.1 Ecotoxicity:

Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Daphnia: *Daphnia magna* EC50: Not available.

Algae: *Scenedesmus quadricauda*: IC50: Not available.

12.2 Mobility:

Do not allow to enter water or soil.

SECTION 13: Disposal Considerations

13.1 Treatment:

Consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal site (TDS) to assure compliance with all current, local, national, and governmental regulations.

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SECTION 14: Transport Information

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	3077	3077	3077	3077
14.2 UN Proper shipping name	Environmental hazardous substance, Solid, n.o.s. (Manganese Sulphate Monohydrate)	Environmental hazardous substance, Solid, n.o.s. (Manganese Sulphate Monohydrate)	Environmental hazardous substance, Solid, n.o.s. (Manganese Sulphate Monohydrate)	Environmental hazardous substance, Solid, n.o.s. (Manganese Sulphate Monohydrate)
14.3 Transport hazard class(es)	Class 9	Class 9	Class 9	Class 9
Hazard label(s)	  GHS08 GHS09			
14.4 Packing group	III	III	III	III
14.5 Transport label				

Section 15: Regulatory Information

15.1 Republic of South Africa Regulations:

National Water Act 36 of 1998. Occupational Health and Safety Act, 1993. Environmental Conservation Act 73 of 1989. Hazardous Substances Act, 1973. Provincial Ordinances and Local By-laws.

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






















Product range:















SECTION 16: Other Information

16.1 Hazardous material identification system:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HAZARD INDEX		PERSONAL PROTECTION INDEX	
4	Severe Hazard	A	
3	Serious Hazard	B	
2	Moderate Hazard	C	
1	Slight Hazard	D	
0	Minimal Hazard	E	
* An asterisk or other designation corresponds to additional information on a data sheet or separate chronic effects notification		F	
HEALTH		G	
0	3	H	
FLAMMABILITY		I	
0	0	J	
PHYSICAL HAZARD		K	
0	0	L	
Personal Protection		M	
		N	
		O	
		P	
		Q	
		R	
		S	
		T	
		U	
		V	
		W	
		X	

A	n	o	p	q	r
					
S	t	u	w	y	z
					

16.2 Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with the International Organization for Standardization.

16.3 Disclaimer:

KIMLEIGH CHEMICALS SA (Pty) Ltd provides the information contained herein in good faith but does not assume any liability whatsoever for its accuracy or completeness. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.