

Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Productname:	MANGANESE SULPHATE SOLUTION		
Synonyms:	SULFURIC ACID, MANGANESE(2+) SALT (1:1), MONOHYDRATE SOLUTION; MANGANESE SULPHATE, MONOHYDRATE SOLUTION; SPOOR MANGANESE; FERVENT MANGANESE ;		
Type:	Substance in aqueous solution		
CAS no:	10034-96-5	Formula:	MnSO ₄ .H ₂ O
EINECS no:	232-089-9	Molecular weight:	169.02
CLP Index No.:	025-003-00-4	EC-FERTILISER:	E.1.5. (e)
NFPA-code:	2-0-0(*)	Fertilizer formula:	Mn 11,7%
		REACH Reg. No.:	-

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

Relevant identified uses:	Use as a trace-fertilizer in horticulture.
Uses advised against:	None

1.3 Details of the supplier of the safety data sheet

Name:	Van Iperen International BV
Address:	Smidweg 24
Postal code:	3273 LK
Residence:	Westmaas
Country:	The Netherlands
Telephone no:	+31 (0)186 57 88 88
Fax no:	+31 (0)181 57 34 52
e-Mail:	info@iperen.com
reach-contact:	reach-int@iperen.com

1.4 Emergency telephone number

UK	: +44 (0) 870 600 6266 (UK National poisons emergency number)
IR	: +353 (0) 1 837 99 64 (National Poisons Information Centre)

Exclusively intended to inform doctors at accidental poisonings

2. Hazards identification

2.1 Classification of the substance or mixture

CLASSIFICATION ACCORDING TO REGULATION (EC) 1272/2008 [CLP/GHS]

- | | |
|--|----------|
| - Specific Toxic Organ Toxicity (STOT) | RE cat 2 |
| - Chronic aquatic toxicity | cat 2 |

CLASSIFICATION ACCORDING TO DIRECTIVE 1999/45/EEC

- Noxious
- Environmentally hazardous.

Material Safety Data Sheet

according 1907/2006/EG



MANGANESE SULPHATE SOLUTION

2. Hazards identification (continuation)

2.2 Label elements



Warning

Hazard statements

H373

May cause serious damage to the brain through prolonged or repeated exposure via inhalation.

H411

Toxic to aquatic life with long lasting effects.

Precautionary statements

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P314

Get medical advice/attention if you feel unwell.

P391

Collect spillage.

P501

Dispose of contents/container to manufacturer/competent authority.

Hazardous components for labelling: Manganese sulphate solution

2.3 Other hazards

Contact with eyes may cause irritation.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Name	CAS no EINECS no	Percentage	Labeling 67/548/EEG	Labeling 1272/2008
MANGANESE(II)SULFATE , MONOHYDRATE	10034-96-5 232-089-9	35 - 40	Xn;N	08;09
	R phrases (1)	48/20/22-51/53		
	H phrases (1)	H373-H411		

(1)_Complete text of R/H phrases: see chapter 16

Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

4. First aid measures

COMMONLY: In case of doubt always get medical attention and show the doctor this document.

4.1 Description of first aid measures

AFTER CONTACT WITH THE EYES:

Rinse immediately with plenty of water for 15 minutes. Remove contactlens if possible.

Take victim to an ophthalmologist if irritation persists.

AFTER SKIN-CONTACT:

Rinse with water. Remove polluted clothing and shoes. Soap may be used. Take victim to a doctor if irritation persists.

AFTER INHALATION OF DUST:

Remove the victim into fresh air. Give the victim rest. In case of respiratory problems: consult a doctor/medical service.

AFTER INGESTION:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink.

Call Poison Information Centre (www.big.be/antigif.htm). Do not apply neutralizing agents.

Consult a doctor/medical service if you feel unwell. In case of ingestion of large quantities: immediately go to a hospital.

4.2 Most important symptoms and effects, both acute and delayed

ACUTE EFFECTS/SYMPTOMS

AFTER CONTACT WITH THE EYES: May cause irritation to eyes.

Symptoms may include: lacrimation, redness of the eye tissue.

4.3 Indication of any immediate medical attention and special treatment needed

Follow the advices in chapter 4.1.

5. Firefighting measures

GENERAL: The product isn't flammable.

5.1 Extinguishing media

EXTINGUISHING MEDIA FOR SURROUNDING FIRES :All extinguishing media allowed.

Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours; sulphur oxides and formation of metallic fumes.

5.3 Advice for firefighters

Dilute toxic gases with water spray. Heat/fire exposure: independent compressed air/oxygen apparatus.

Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Care for sufficient ventilation. Keep away from naked flames/heat.

Wear protective gloves/protective clothing/eye protection.

6.2 Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Plug the leak, cut off the supply. Dam up the liquid spill.

Inform the government if the product comes in the sewerage or in open water.

6.3 Methods and material for containment and cleaning up

Take up liquid spill into absorbent material, e.g.: dry sand/earth. Scoop absorbed substance into closing containers.

Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water.

Wash clothing and equipment after handling.

7. Handling and storage

7.1 Precautions for safe handling

Avoid ingestion and inhalation. Use sufficient ventilation. Wear protective gloves/protective clothing/eye protection.

Clean contaminated clothing. Thoroughly clean/dry the installation before use. Collect spillage.

Do not discharge the waste into the drain.

GENERAL OCCUPATIONAL HYGIENE:

Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product.

Wash your hands thoroughly after handling.

Take care that eye wash stations and security showers are available near the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated place. Unauthorized persons are not admitted. Meet the legal requirements.

SUITABLE MATERIAL: synthetic material.

SPECIAL OR ADDITIONAL REQUIREMENTS: closing watertight correctly labelled.

Meet the legal requirements. Secure fragile packagings in solid containers.

7.3 Specific end use(s)

Use as a trace-fertilizer.

Material Safety Data Sheet

according 1907/2006/EG



MANGANESE SULPHATE SOLUTION

8. Exposure controls/personal protection

8.1 Control parameters

	mg/m ³
Legal limit value TWA 8 h:	1(Mn)
Legal limit value STEL 15 min:	3(Mn)
Legal limit value ceiling:	

See chapter 3 for a description of the components

8.2 Exposure controls

RESPIRATORY PROTECTION

Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

HAND PROTECTION

Gloves.

GIVE GOOD RESISTANCE:

butyl rubber, PVC.

EYE PROTECTION

Safety glasses.

SKIN PROTECTION

Protective clothing.

GENERAL OCCUPATIONAL HYGIENE:

Wash your hands, poor and face after use. Do no eat, drink or smoke when using this product.

Care for eyewashstations and security showers at the workplace.



9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:	Liquid
Colour:	Light rose
Odour:	Odorless
Odour threshold:	-
pH value:	1 - 3
Flammability	unflammable
Explosive limit:	n.a.
Relative density:	1.40 kg/l (25°C)
Solubility:	Water infinite
Decomposition temperature:	400 - 450 °C

9.2 Other information

Crystallising point:	-10°C
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Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

10. Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable under recommended storage and treatment circumstances (heading 7).

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid frost. High temperatures.

10.5 Incompatible materials

Keep substance away from: oxidizing agents, water/moisture, magnesium, aluminium.

10.6 Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours sulphur oxides and formation of metallic fumes.

11. Toxicological information

Acute toxicity:

LD50 oral rat:	2150 mg/kg (anhydrous)
LD50 dermal rat:	-
LD50 dermal rabbit:	-
LC50 inhalation rat:	-

Relevant hazard class:

STOT repeated inhalation:

Category:

2

11.1 Information on toxicological effects

ROUTES OF EXPOSURE: INGESTION, INHALATION, EYES AND SKIN

ACUTE EFFECTS/SYMPTOMS

AFTER INHALATION OF DUST

Coughing.

ON HEATING:

Metal fume fever.

AFTER CONTACT WITH THE EYES

May cause irritation to eyes. Symptoms may include: Redness of the eye tissue. Lacrimation.

AFTER ABSORPTION OF HIGH QUANTITIES

Irritation of the gastric/intestinal mucosa. Slight irritation. Red skin. Redness of the eye tissue.

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT

Coughing. Respiratory difficulties. Impairment of the nervous system. Brain affection. Feeling of weakness. Loss of appetite. Behavioural disturbances. Slurred speech. Movement disturbances. Myasthenia. Tremor. Impaired concentration. Emotional instability. Slightly irritant to skin.

CHRONIC EFFECTS

No teratogenic risk at exposure level lower than MAK value.

Not listed in mutagenicity class (EC, MAK).

Not listed in carcinogenicity class (IARC, EC, TLV, MAK).

Prolonged exposure: danger of damage to health if swallowed and through inhalation.

Cumulative effect. Causes damage to the central nervous system.

Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

12. Ecological information

12.1 Toxicity

pH shift. Toxic to invertebrates (Daphnia). Harmful to fishes.

Relevant hazard class:

Chronic aquatic hazard:

LC50 (for fish):

EC50 (for crustacea):

EC50 (for algae):

Category:

2

30,6 - 38,9 mg/L (anhydrous)

0,15 mg/L (anhydrous)

-

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No bioaccumulation data available.

12.4 Mobility in soil

Soluble in water.

12.5 Results of PBT and vPvB assessment: -

12.6 Other adverse effects

Not dangerous for the ozone layer (Council Regulation (EC) No. 1005/2009).

13. Disposal considerations

Name:

MANGANESE(II)SULFATE, MONOHYDRATE SOLUTION

Waste code:

02 01 09

agrochemical waste other than those mentioned in 02 01 08

06 03 14

solid salts and solutions other than those mentioned in 06 03 11

and 06 03 13

Depending on branch of industry and production process, also other EURAL codes may be applicable.

13.1 Waste treatment methods

PROVISIONS RELATING TO WASTE

Use appropriate containment to avoid environmental contamination.

Do not throw away with household rubbish.

DISPOSAL METHODS

Remove to an authorized waste treatment plant. Immobilize. Recycle/reuse.

Material Safety Data Sheet

according 1907/2006/EG

MANGANESE SULPHATE SOLUTION

14. Transport information

Hazard identification: 90
 UN no: 3082 (UN)Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S., (manganese(II)-sulphate solution)

	UN	Road	Rail	Inland navigation	IMDG	Air freight
Class:	9	9	9	9	9	9
Group:	III	III	III	III	III	
Subrisks:						-
Label(s) on tanks:		90				
Label(s) on packaging:		90				
Tunnel restriction code:		E				
Page:						
EMS number:					F-A, S-F	
MFAG number:					-	
Marine pollutant:					-	
1st Instruction:						911/Y911
2nd Instruction:						911



15. Regulatory information

Further information

Classification and labelling according to directive (EC) No. 1272/2008.
 Raw materials are listed in Annex I of directive 67/548/EEC and Annex VI of directive (EG) nr. 1272/2008.
 EG-fertiliser E.1.5. (a).in accordance with regulation (EC) No 2003/2003

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Classified in SEVESO category: 9.ii Dangerous for the environment.

15.2 Chemical safety assessment

Chemical safety assesment is not carried out.

Material Safety Data Sheet

according 1907/2006/EG



MANGANESE SULPHATE SOLUTION

16. Other information

The complete text of the H phrases mentioned in chapter 3:

R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H373	May cause serious damage to the brain through prolonged or repeated exposure via inhalation
H411	Toxic to aquatic life with long lasting effects.

EC-FERTILISER E.1.5. (e)

Manganese sulphate in solution
Manganese (Mn) 11.7% water-soluble.

TRAINING ADVICE:

Before using/handling the product one must read carefully present MSDS.

USED ABBREVIATIONS:

n.a. = not applicable.

Version –information

Datum of mutation:	07-mar-2011
Version:	02.01

List of mutations

Risk of eye irritation included in 2.3. MSDS Layout optimised to 453/2010

Information for the reader

The information provided in this Safety Data Sheet is given in good faith and belief in its accuracy based on our knowledge of the substance/preparation concerned at the date of publication. It does not imply the acceptance of any legal liability or responsibility whatsoever by the company for the consequences of its use or misuse in any particular circumstances.

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