

Manganese

ACCORDING TO UK-REGULATIONS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Manganese
 Trade Name AF Manganese
 CAS No. Not applicable.
 Registration number(s) Not known.

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

Identified Use(s) Fertiliser
 Uses Advised Against Not known.

1.3 Details of the supplier of the safety data sheet

Manufacturer
 Company Identification AIVA LTD (Aiva Fertiliser)
 Address of Manufacturer Old Farm Offices
 Manor Farm,
 Ginge,
 Oxfordshire,
 United Kingdom
 Postal code OX12 8QS
 Telephone: 01234 834 997
 Fax Not known.
 E-mail office@aivafertiliser.co.uk
 Office hours Office hours: Monday - Friday 0830 - 1700
 Supplier
 Company Identification AIVA LTD (Aiva Fertiliser)
 Address of Supplier Old Farm Offices
 Manor Farm,
 Ginge,
 Oxfordshire,
 United Kingdom
 Postal code OX12 8QS
 Telephone: 01234 834 997
 Fax Not known.
 E-mail office@aivafertiliser.co.uk
 Office hours Office hours: Monday - Friday 0830 - 1700

1.4 Emergency telephone number

Emergency Phone No. 01235834997
 Contact Call 111

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

United Kingdom Regulations Eye Dam. 1 :Causes serious eye damage.
 STOT RE 2 :May cause damage to organs through prolonged or repeated exposure.
 Aquatic Chronic 2 :Toxic to aquatic life with long lasting effects.

2.2 Label elements

According to UK-regulations

Product Name Manganese

Hazard Pictogram(s)



GHS05



GHS08



GHS09

Signal Word(s) Danger

Hazard Statement(s)
 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.

Precautionary Statement(s)
 P101: If medical advice is needed, have product container or label at hand.
 P103: Read label before use.
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.

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P270: Do not eat, drink or smoke when using this product.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310: Immediately call a POISON CENTER/doctor.
 P314: Get medical advice/attention if you feel unwell.
 P391: Collect spillage.
 P501: Dispose of contents in accordance with local, state or national legislation.

2.3 Other hazards

None known.

2.4 Additional Information

For full text of H/P Statements see section 16.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / Registration number(s)	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
manganese sulphate	7785-87-7	232-089-9	30-45	Eye Dam. 1 H318 STOT RE 2 H373 Aquatic Chronic 2 H411	GHS05 GHS08 GHS09
citric acid	77-92-9	201-069-1	<2	Eye Irrit. 2 H319	GHS07

For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation Get medical advice/attention if you feel unwell.
 Skin Contact Get medical advice/attention if you feel unwell.
 Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
 Ingestion Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER/doctor. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media As appropriate for surrounding fire.
 Unsuitable extinguishing media None.

5.2 Special hazards arising from the substance or mixture

May decompose in a fire, giving off toxic and irritant vapours.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Dike fire control water for later disposal.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Absorb spillages onto sand, earth or any suitable adsorbent material. Contain

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spillages with sand, earth or any suitable adsorbent material. Earth may be shovelled to contain spillage and to avoid contamination of sewers and watercourses.

6.4 Reference to other sections

See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. When using do not eat, drink or smoke. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature

Ambient. Protect from frost.

Storage life

Stable under normal conditions. Protect from sunlight.

Incompatible materials

None known.

7.3 Specific end use(s)

Fertiliser

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Manganese and its inorganic compounds (as Mn) - Inhalable fraction	7785-87-7		0.2			
Manganese and its inorganic compounds (as Mn) - Respirable fraction	7785-87-7		0.05			

Region United Kingdom Source UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark Notes

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use with ventilation, local exhaust ventilation or breathing protection. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection

Wear eye protection with side protection (EN166).



Skin protection

Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection

A suitable mask with filter type A (EN14387 or EN405) may be appropriate.



Thermal hazards

None known.

8.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

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Appearance	Liquid.
Colour	Colour : Pink
Odour	Not known.
Odour threshold	Not known.
pH	< 2.1.
Melting point/freezing point	Not known.
Initial boiling point and boiling range	Not known.
Flash Point	Not known.
Evaporation rate	Not known.
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.
Vapour density	Not known.
Density (g/ml)	1.48g/cm ³
Relative density	Not known.
Solubility(ies)	Solubility (Water) : Not known. Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	Not known.
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidising properties	Not known.
9.2 Other information	None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	None anticipated.
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known if used for its intended purpose.
10.4 Conditions to avoid	None anticipated.
10.5 Incompatible materials	Not known.
10.6 Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity - Ingestion	Not classified.
Acute toxicity - Skin Contact	Not classified.
Acute toxicity - Inhalation	Not classified.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Calculation method : Causes serious eye damage.
Skin sensitization data	Not classified.
Respiratory sensitization data	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Calculation method : May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified.
11.2 Other information	Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Toxic to aquatic life with long lasting effects.
Toxicity - Aquatic invertebrates	Not known.
Toxicity - Fish	Not known.

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Toxicity - Algae	Not known.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.
12.2 Persistence and degradability	Not known.
12.3 Bioaccumulative potential	Not known.
12.4 Mobility in soil	Not known.
12.5 Results of PBT and vPvB assessment	Not known.
12.6 Other adverse effects	Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of contents in accordance with local, state or national legislation. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point. Dispose at suitable refuse site.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

UN No. 3082

14.2 UN proper shipping name

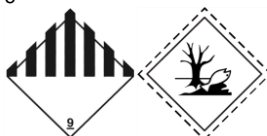
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

14.3 Transport hazard class(es)

ADR/RID	
ADR/RID Class	9
ADR Classification Code	M6
Special Provisions	274 335 375 601
Limited Quantities	5 L
Excepted Quantities	E1
Emergency Action Code	•3Z
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	PP1
Mixed Packing Instructions for Packages	MP19
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 TP29
Tank Code for Tanks	LGBV
Special Provisions for Tanks	
Vehicle for Tank Carriage	AT
ADR Transport Category	3
Tunnel Restriction Code	-
Special Provisions for Carriage - Packages	V12
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	CV13
Special Provisions for Carriage - Operation	
ADR HIN	90
IMDG	
IMDG Class	9
Special Provisions	274 335 375 601
Limited Quantities	5 L
Excepted Quantities	E1
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	PP1
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 TP29
IMDG EMS	F-A S-F
Stowage and Handling	Category A
Segregation	
Marine Pollutant	

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ICAO/IATA	
IATA Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Excepted Quantities	E1
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y964
Passenger and Cargo Aircraft Limited Quantities Max net Qty	30Kg G
Passenger and Cargo Aircraft Packing Instructions	964
Passenger and Cargo Aircraft Max net Qty	450L
Cargo Aircraft Packing Instructions	964
Cargo Aircraft Max net Qty	450L
Special Provisions	A97, A158 A197
Emergency Response Guidebook (ERG) Code	9L
Labels	
Labels	9



14.4 Packing group

Packing group

III

14.5 Environmental hazards

Environmental hazards

Classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user

Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

SECTION 15: REGULATORY INFORMATION

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

United Kingdom Regulations Not known.

National regulations

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles manganese sulphate (7785-87-7), citric acid (77-92-9)

Community Rolling Action Plan (CoRAP) Regulation (EC) N° 850/2004 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

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GHS05



GHS08



GHS09

Hazard Pictogram(s)

Manganese

	GHS07: GHS: Exclamation mark
Hazard classification	Eye Dam. 1 : Serious eye damage/irritation, Category 1 Eye Irrit. 2 : Serious eye damage/irritation, Category 2 STOT RE 2 : Specific target organ toxicity — repeated exposure, Category 2 Aquatic Chronic 2 : Hazardous to the aquatic environment, Chronic, Category 2
Hazard Statement(s)	H318: Causes serious eye damage. H319: Causes serious eye irritation. H373: May cause damage to organs through prolonged or repeated exposure. H411: Toxic to aquatic life with long lasting effects.
Precautionary Statement(s)	P101: If medical advice is needed, have product container or label at hand. P103: Read label before use. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER/doctor. P314: Get medical advice/attention if you feel unwell. P391: Collect spillage. P501: Dispose of contents in accordance with local, state or national legislation.
Acronyms	ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road ATE : Acute Toxicity Estimate CAS : Chemical Abstracts Service DNEL : Derived No Effect Level EC : European Community EINECS : European Inventory of Existing Commercial Chemical Substances IATA : International Air Transport Association IBC : Intermediate Bulk Container ICAO : International Civil Aviation Organization IMDG : International Maritime Dangerous Goods LTEL : Long term exposure limit PBT : Persistent, Bioaccumulative and Toxic PNEC : Predicted No Effect Concentration REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals RID : Regulations concerning the International Carriage of Dangerous Goods by Rail STEL : Short term exposure limit STOT : Specific Target Organ Toxicity UN : United Nations vPvB : very Persistent and very Bioaccumulative
Key literature references and sources for data used to compile the SDS	United Kingdom Regulations
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