

**SAFETY DATA SHEET**  
MANGANESE(II) SULPHATE MONOHYDRATE

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Compilation date: 24/11/2008  
Revision date: 29/09/2014  
Revision No: 2

**Section 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

**Product name:** MANGANESE(II) SULPHATE MONOHYDRATE

**CAS number:** 10034-96-5

**Product code:** IN2536

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

**1.3. Details of the supplier of the safety data sheet**

**Company name:** Apollo Scientific Ltd

Units 3 & 4

Parkway

Denton

Manchester

M34 3SG

UK

**Tel:** 0161 337 9971

**Fax:** 0161 336 6932

**Email:** david.tideswell@apolloscientific.co.uk

**1.4. Emergency telephone number**

**Section 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification under CHIP:** Xn: R48/20/22; N: R51/53

**Classification under CLP:** Aquatic Chronic 2: H411; STOT RE 2: H373

**Most important adverse effects:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

**Label elements under CLP:**

**Hazard statements:** H373: May cause damage to organs through prolonged or repeated exposure.

H411: Toxic to aquatic life with long lasting effects.

**Signal words:** Warning

**Hazard pictograms:** GHS08: Health hazard

GHS09: Environmental



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**Precautionary statements:** P260: Do not breathe dust.  
P273: Avoid release to the environment.  
P312: Call a POISON CENTER or doctor if you feel unwell.

**Label elements under CHIP:**

**Hazard symbols:** Dangerous for the environment.  
Harmful.



**Risk phrases:** 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.

**Safety phrases:** S22: Do not breathe dust.  
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**2.3. Other hazards**

**PBT:** This substance is not identified as a PBT substance.

**Section 3: Composition/information on ingredients**

**3.1. Substances**

**Chemical identity:** MANGANESE(II) SULPHATE MONOHYDRATE  
**CAS number:** 10034-96-5

**Section 4: First aid measures**

**4.1. Description of first aid measures**

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin.  
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

**Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.

**Ingestion:** Wash out mouth with water. Do not induce vomiting. Consult a doctor.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

[cont...]

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**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.

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

**Section 5: Fire-fighting measures**

**5.1. Extinguishing media**

**Extinguishing media:** Carbon dioxide, dry chemical powder, foam. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

**5.2. Special hazards arising from the substance or mixture**

**Exposure hazards:** In combustion emits toxic fumes. Sulphur oxides (SO<sub>x</sub>). Manganese oxides.

**5.3. Advice for fire-fighters**

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

**Section 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel.

**6.2. Environmental precautions**

**Environmental precautions:** Do not discharge into drains or rivers.

**6.3. Methods and material for containment and cleaning up**

**Clean-up procedures:** Transfer to a closable, labelled salvage container for disposal by an appropriate method.

**6.4. Reference to other sections**

**Section 7: Handling and storage**

**7.1. Precautions for safe handling**

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of dust in the air. Only use in fume hood.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids. Product is hygroscopic. Take precautions to avoid contact with atmospheric moisture. Store under Argon. Recommended storage temp 2-8 °C.

**Suitable packaging:** Must only be kept in original packaging.

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**7.3. Specific end use(s)**

**Specific end use(s):** No data available.

**Section 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Workplace exposure limits:** No data available.

**DNEL / PNEC** No data available.

**8.2. Exposure controls**

**Engineering measures:** Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

**Section 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**State:** Solid

**Relative density:** 2.95

**9.2. Other information**

**Other information:** No data available.

**Section 10: Stability and reactivity**

**10.1. Reactivity**

**Reactivity:** Stable under recommended transport or storage conditions.

**10.2. Chemical stability**

**Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.

**10.4. Conditions to avoid**

**Conditions to avoid:** Heat. Moist air. Humidity.

**10.5. Incompatible materials**

**Materials to avoid:** Strong oxidising agents. Strong acids.

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**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In combustion emits toxic fumes. Manganese oxides. Sulphur oxides (SO<sub>x</sub>)

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicity values:**

Route	Species	Test	Value	Units
ORAL	RAT	LD50	2150	mg/kg

**Relevant hazards for substance:**

Hazard	Route	Basis
STOT-repeated exposure	-	Based on test data

**Symptoms / routes of exposure**

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity values:** No data available.

**12.2. Persistence and degradability**

**Persistence and degradability:** No data available.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No data available.

**12.4. Mobility in soil**

**Mobility:** No data available.

**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This substance is not identified as a PBT substance.

**12.6. Other adverse effects**

**Other adverse effects:** Toxic to aquatic organisms.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal operations:** MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

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**Disposal of packaging:** Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## Section 14: Transport information

### 14.1. UN number

**UN number:** UN3077

### 14.2. UN proper shipping name

**Shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

### 14.3. Transport hazard class(es)

**Transport class:** 9

### 14.4. Packing group

**Packing group:** III

### 14.5. Environmental hazards

**Environmentally hazardous:** Yes

**Marine pollutant:** No

### 14.6. Special precautions for user

**Tunnel code:** E

**Transport category:** 3

## Section 15: Regulatory information

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

### 15.2. Chemical Safety Assessment

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: Other information

### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* Data predicted using computational software. Toxtree - Toxic Hazard Estimation by decision tree approach. [http://ecb.jrc.ec.europa.eu/qsar/qsar-tools/index.php?](http://ecb.jrc.ec.europa.eu/qsar/qsar-tools/index.php?c=TOXTREE)  
c=TOXTREE

~ Data predicted using computational software ACD/ToxSuite v 2.95.1 Copyright 1994-2009 ACD/labs, Copyright 2001-2009 Pharma Algorithms, Inc, Advanced Chemistry Development, Inc (ACD/Labs). [http://www.acdlabs.com/products/pc\\_admet/tox/tox/](http://www.acdlabs.com/products/pc_admet/tox/tox/)

**Phrases used in s.2 and 3:** H373: May cause damage to organs <or state all organs affected, if known> through

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prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H411: Toxic to aquatic life with long lasting effects.

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.

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