

## MANGANESE SULFATE MONOHYDATE

### SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

Product Name: Manganese Sulfate Monohydate  
Product Code: CM 23231  
CAS#: 10034-96-5  
Synonym: Not available  
Chemical Name: Not available  
Chemical Formula:  $MnSO_4 \cdot H_2O$   
Formula weight : 169.02

### SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Composition:  
Name: Manganese Sulfate Monohydate  
Toxicological Data on Ingredients: Eye Dam. 1; STOT RE 2;  
Aquatic Chronic 2; H318, H373, H411

### SECTION 3: HAZARD IDENTIFICATION

Classification of the substance or mixture  
STOT RE 2; Aquatic  
Potential Acute Health Effects:  
Acute Tox. 3; Eye Dam. 1;  
Potential Chronic Health Effects  
Chronic 2; H301, H318, H373, H411  
Carcinogenic Effects: Not available.  
Mutagenic Effects: Not available.  
Teratogenic Effects: Not available.  
Developmental Toxicity: Not Available

### SECTION 4: FIRST AID MEASURES

Description of first aid measures  
General advice Consult a physician. Show this safety data sheet to the doctor in attendance.  
If inhaled If breathed in: Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
In case of skin contact Wash off with soap and plenty of water. Consult a physician.  
In case of eye contact: Flush eyes with water as a precaution.  
If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
Most important symptoms and effects, both acute and delay: No data available  
Indication of any immediate medical attention and special treatment needed: No data available

### SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing media  
Suitable extinguishing media :  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Special hazards arising from the substance or mixture  
Sulfur oxides



Manganese/manganese oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions Do not let product enter drains.

Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers.

#### SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Work under hood. Do not inhale substance/mixture.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Storage Class:

Storage class (TRGS 510): 13: Non Combustible Solids.

Specific end use(s) A part from the uses:

No other specific uses are stipulated.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Do not let product enter drains.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form	:Solid
Colour	:Not available
Odour	:Pink
Odour Threshold	:Not available
pH	:Not available
Melting point/freezingpoint	:> 449°C
Initial boiling point and boiling range	:Not available
Flash point	:Not available



Evaporation rate	:Not available
Flammability (solid,gas)	:Not available
Upper/lower flammabilityorexposivelimits	:Not available
Vapour pressure	:Not available
Vapour density	:Not available
Relative density	:2.95 g/cm <sup>3</sup> at 20 °C
Water solubility	:762 g/l at 20 °C :Not available
Partition coefficient	available
Auto-ignition temperature	:Not available

#### SECTION 10: STABILITY AND REACTIVITY DATA

Reactivity no data available

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Not available

Conditions to avoid :

no data available

Incompatible materials

Metals, Light metals

Hazardous decomposition products Other decomposition products - In the event of fire

#### SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity:

LD50 Oral - Rat - male and female - 2.150 mg/kg

Remarks: (anhydrous substance)

Symptoms: After uptake of large quantities:, Nausea, Vomiting, Diarrhea, gastric pain,

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

LC50 Inhalation - Rat - male and female - 4 h - > 4,45 mg/l

Remarks: (anhydrous substance)

Symptoms: Possible damages:, mucosal irritations, tissue damage, Pneumonia

Serious eye damage/eye irritation no data available

Respiratory or skin sensitization no data available

Carcinogenicity no data available

#### SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Toxicity to algae

static test NOEC - *Desmodesmus subspicatus* (green algae) - 1 mg/l - 72 h

static test ErC50 - *Desmodesmus subspicatus* (green algae) - 61mg/l - 72 h

Persistence and degradability:

no data available

Bioaccumulative potential :

no data available

Mobility in soil no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available

Other adverse affects no data available

#### SECTION 13: DISPOSAL CONSIDERATIONS



Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging Dispose of as unused product.

#### SECTION 14: TRANSPORT INFORMATION

UN number:

ADR/RID: 3077

IMDG: 3077

IATA: 3077

UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Manganese Sulfate Monohydrate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Manganese Sulfate Monohydrate)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Manganese Sulfate Monohydrate)

Transport hazard class(es):

ADR/RID: 9

IMDG: 9

IATA: 9

Packaging group:

ADR/RID: III

IMDG: III

IATA: III

Environmental hazards:

ADR/RID: Yes

IMDG Marinepollutant: Yes

IATA: Yes

#### SECTION 15: OTHER REGULATORY INFORMATION

Regulatory information This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### SECTION 16: OTHER INFORMATION

References: Full text of H AND R-Statements.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

H411 Toxic to aquatic life with long lasting effects.

Special Considerations: Not available

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