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

1.1. Product identifier

Trade name : **MANGANESE (II) CHLORIDE (TETRAHYDRATE) PURIFIED** (Manganous Chloride)

Product code : 15590

Identification of the product : MANGANESE (II) CHLORIDE (TETRAHYDRATE) PURIFIED (Manganous Chloride)

CAS No : 13446-34-9

EC No. : 231-869-6

Synonyms : Manganese dichloride

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

Company identification

MOLYCHEM INDIA LLP
Office: Maker Tower 'E', 41-A2, 4th Floor, Above Maker Arcade, Cuffe Parade, Mumbai 400 005 (INDIA)
Tel: +91 22 4066 8111, 2205 7772 .
Email : info@molychem.net
Works: Plot No. B/9, Badlapur M.I.D.C.,
OPP.Shobhavat Textile Co., Kulgaon, Badlapur (E),
Dist.-Thane-421 503.

1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07 GHS09

Signal word (CLP) : Warning

Hazard statements (CLP) : H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P273 - Avoid release to the environment.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents and container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards

No additional information available

3. Composition/information on ingredients

3.1. Substances

Name : MANGANESE (II) CHLORIDE (TETRAHYDRATE) PURIFIED (Manganous Chloride)

CAS-No : 13446-34-9

3.2. Mixtures

Not applicable

4. First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several

		minutes. If eye irritation persists: Get medical advice/attention.
	First-aid measures after ingestion	: Rinse mouth out with water. If you feel unwell, seek medical advice. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after ingestion	: Harmful if swallowed.

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

Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3 Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/ personal protection"
Emergency procedures	: Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage

Methods for cleaning up : Mechanically recover the product. Clear up rapidly by scoop or vacuum.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

7. Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

Storage away from : Direct sunlight. Air contact. Moisture.

7.3. Specific end use(s)

No additional information available

8. Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Eye protection	: Chemical goggles or safety glasses
Hand protection	: Wear protective gloves
Skin protection	: Wear suitable protective clothing
Respiratory protection	: Wear appropriate mask.
Thermal hazards	: No additional information available

8.2.3 Environmental exposure controls

Avoid release to the environment

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: crystals or crystalline powder
Molecular mass	: 197.9 g/mol
Colour	: Pink
Odour	: Odourless.
Odour threshold	: No data available
pH	: 4 – 6 (50 g/l at 25°C)
Relative evaporation rate	: No data available
Melting point	: 58 °C
Freezing point	: Not applicable
Boiling point	: 1980 °C
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available

Relative density	: No data available
Density	: 2.01 g/cm³ at 20°C
Solubility	: Water: 1.98 g/l at 20°C - Completely soluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

No additional information available

10. Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Additional information	: Not classified
Serious eye damage/irritation	: Not classified

Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

12. Ecological information

12.1. Toxicity

Ecology - general	Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5 Results of PBT and vPvB assessment

No additional information available

12.6 Other adverse effects

No additional information available

13. Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

14. Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number

UN-No. (ADR)	: UN 3077
UN-No. (IMDG)	: UN 3077
UN-No. (IATA)	: UN 3077
UN-No. (ADN)	: UN 3077
UN-No. (RID)	: UN 3077

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IATA)	: Environmentally hazardous substance, solid, n.o.s.
Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (RID)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport document description (ADR)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Manganese (II) chloride Tetrahydrate), 9, III, (-)
Transport document description(IMDG)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Manganese (II) chloride Tetrahydrate), 9, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3077 Environmentally hazardous substance, solid, n.o.s. (Manganese (II) chloride Tetrahydrate), 9, III
Transport document description (ADN)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Transport document description (RID)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 9
Danger labels (ADR)	: 9

IMDG :

Transport hazard class(es) (IMDG)	: 9
Danger labels (IMDG)	: 9

IATA

Transport hazard class(es) (IATA)	: 9

	Danger labels (IATA)	: 9
	ADN	
	Transport hazard class(es) (ADN)	: 9
	Danger labels (ADN)	: 9
	RID	
	Transport hazard class(es) (RID)	: 9
	Danger labels (RID)	: 9
14.4.	**Packing group**	
	Packing group (ADR)	: III
	Packing group (IMDG)	: III
	Packing group (IATA)	: III
	Packing group (ADN)	: III
	Packing group (RID)	: III
14.5.	**Environmental hazards**	
	Dangerous for the environment	: Yes
	Marine pollutant	: Yes
	Other information	: No supplementary information available
14.6.	**Special precautions for user**	
	Overland transport	
	Classification code (ADR)	: M7
	Limited quantities (ADR	: 5kg
	Excepted quantities (ADR)	: E1
	Packing instructions (ADR)	: P002, IBC08, LP02, R001
	Mixed packing provisions (ADR)	: MP10
	Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
	Portable tank and bulk container special provisions (ADR)	: TP33
	Tank code (ADR)	: SGAV, LGBV
	Vehicle for tank carriage	: AT
	Transport category (ADR)	: 3
	Hazard identification number (Kemler No.)	: 90
	Tunnel restriction code (ADR)	: -
	EAC code	: 2Z
	Transport by sea	
	Limited quantities (IMDG)	: 5 kg
	Excepted quantities (IMDG)	: E1
	Packing instructions (IMGD)	: LP02, P002
	IBC packing instructions (IMDG)	: IBC08
	Tank instructions (IMDG)	: BK1, BK2, BK3, T1

Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
ERG code (IATA)	: 9L
Inland waterway transport	
Classification code (ADN)	: M7
Limited quantities (ADN	: 5 kg
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, A
Number of blue cones/lights (ADN)	: 0
Rail transport	
Classification code (RID)	: M7
Limited quantities (RID)	: 5kg
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAV, LGBV
Transport category (RID)	: 3
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 90

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

Not applicable

15. Regulatory information

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

15.1.1 EU-Regulations

No REACH Annex XVII restrictions
MANGANESE (II) CHLORIDE TETRAHYDRATE is not on the REACH Candidate List
MANGANESE (II) CHLORIDE TETRAHYDRATE is not on the REACH Annex XIV List
MANGANESE (II) CHLORIDE TETRAHYDRATE is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.
MANGANESE (II) CHLORIDE TETRAHYDRATE is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Water hazard class (WGK)	: WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 494)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: The substance is not listed
	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: The substance is not listed

Denmark

Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

16. Other information

Abbreviations and 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

BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand
COD	Chemical oxygen demand
COD	Chemical oxygen demand
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties
Full text of H- and EUH-statements	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.

H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Safety Data Sheet (SDS), EU This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.