

Material Safety Data Sheet

According to 91/155 EEC

Printing date 29.07.2005

Reviewed on 29.07.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Manganese LR 1
- **Catalog number:** 00516089, (4)516080, (4)516081, (4)516083
- **Supplier:**
Tintometer GmbH
Schleefstraße 8a-12
D - 44287 Dortmund
Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**
Poison Center Berlin, Germany
phone: +49(0)30 19240

phone: +49(0)231 94510-0

* 2 Composition/Data on components:

- **Description:** Mixture of the substances listed below with harmless additions.

Dangerous components:

CAS: 12125-02-9 EINECS: 235-186-4 EC Number: 017-014-00-8	ammonium chloride	<input checked="" type="checkbox"/> Xn; R 22-36	45-50%
CAS: 62479-72-5 EINECS: 222-440-4	formaldehyde oxime trimer hydrochloride	<input checked="" type="checkbox"/> Xi; R 36/37/38	2.5-5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

Hazard designation:

Xn Harmful

Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 22 Harmful if swallowed.

R 36 Irritating to eyes.

Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **After inhalation** Supply fresh air and call for doctor for safety reasons.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Induce vomiting.
- **The following symptoms may occur:**
after inhalation:
coughing
mucous membrane irritation
after swallowing:
headache
breathing difficulty
irritation
sickness
vomiting

* 5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Development of hazardous combustion gases or vapours possible in the event of fire.
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)
Hydrogen cyanide (HCN)
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.

* 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
- **Measures for cleaning/collecting:**
Collect mechanically.
Dispose of contaminated material as waste according to item 13.

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Prevent formation of dust.
- **Information about protection against explosions and fires:** The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.

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- **Storage class** Not required.

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

12125-02-9 ammonium chloride

OES (Great Britain)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P2

- **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves**

nitrile

Recommended thickness of the material: ≥ 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 6 (480 min)

- **Eye protection:** Tightly sealed safety glasses.

- **Body protection:** Protective work clothing.

* 9 Physical and chemical properties:

· Form:	Tablets
· Colour:	White
· Odour:	Odourless

- **Melting point/Melting range:** Not determined

- **Boiling point/Boiling range:** 1461°C

- **Flash point:** Not applicable

- **Ignition temperature:** 400°C

- **Self-inflammability:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive.

- **Density** Not determined

- **Solubility in / Miscibility with Water:** Partly soluble

- **pH-value (12.2 g/l) at 20°C:** 2.7

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· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - alkali metals
 - alkali compounds
 - acids
 - halogen compounds
 - chlorine
 - oxidizing agents
 - > forms heat
- **Dangerous products of decomposition:** see chapter 5

* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
7647-14-5 sodium chloride		
Oral	LD50	3000 mg/kg (rat)
Dermal	LD50	> 10000 mg/kg (rabbit)
12125-02-9 ammonium chloride		
Oral	LD50	1440 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

 - Harmful
 - Irritant

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.

· Behaviour in environmental systems:	
12125-02-9 ammonium chloride	
log P(o/w)	-4.37 (.)
· Ecotoxicological effects:	
· Aquatic toxicity:	
7647-14-5 sodium chloride	
EC50	1000 mg/l/48h (Daphnia magna)
LC50	7650 mg/l/96h (Pimephales promelas)

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12125-02-9 ammonium chloride
LC50 725 mg/l/96h (Lepomis macrochirus)

· Remark:

Toxic for fish:

NH₄⁺ > 0.3 mg/l**· General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

* 13 Disposal considerations

· Product:**· Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

· European waste catalogue

16 05 06 | laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

· Uncleaned packagings:**· Recommendation:** Disposal must be made according to official regulations.**· Recommended cleaning agent:** Water, if necessary with cleaning agent.

* 14 Transport information

· Land transport ADR/RID (cross-border)**· ADR/RID-GGVS/E Class:** -**· Maritime transport IMDG:****· IMDG Class:** -**· Marine pollutant:** No**· Air transport ICAO-TI and IATA-DGR:****· ICAO/IATA Class:** -**· Transport/Additional information:** Not dangerous according to the above specifications.

* 15 Regulatory information

· Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· Code letter and hazard designation of product:

Xn Harmful

· Hazard-determining components of labelling:

ammonium chloride

· Risk phrases:

22 Harmful if swallowed.

36 Irritating to eyes.

· Safety phrases:

22 Do not breathe dust.

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26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

60 This material and its container must be disposed of as hazardous waste.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

22 Harmful if swallowed.

36 Irritating to eyes.

36/37/38 Irritating to eyes, respiratory system and skin.

· **Department issuing data specification sheet:** Technical Department

· *** Data compared to the previous version altered.**
