

1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name: Ethylenediaminetetraacetic acid disodium manganese (II) salt, dihydrate \geq 93%, for synthesis

Article number: 6510

CAS Number:

73637-20-4

EC number:

239-407-5

Registration number

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

No further relevant information available.

Application of the substance / the preparation

Laboratory chemical

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Carl Roth GmbH + Co.KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

e-mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

2 Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

Eye Irrit. 2 H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36: Irritating to eyes.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning

(Contd. on page 2)

Trade name: Ethylenediaminetetraacetic acid disodium manganese (I) salt, dihydrate ≥ 93%, for synthesis

(Contd. of page 1)

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

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.

P337+P313 If eye irritation persists: Get medical advice/attention.

Additional information:

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2.3 Other hazards

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

3.1 Chemical characterization: Substances**CAS No. Description**

73637-20-4 Ethylenediaminetetraacetic acid disodium manganese (I) salt, dihydrate

Identification number(s)**EC number:** 239-407-5**Formula:** C₁₀H₁₂MnNa₂N₂O₈ · 2H₂O**Molar mass [g/mol]:** 425,16

4 First aid measures

**4.1 Description of first aid measures****General information:**

Remove any clothing soiled by the product.

After inhalation:

Supply fresh air; if there is any trouble seek medical help.

After skin contact:

Rinse with warm water.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for 10 minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and drink a glass of water. Do not induce vomiting.

If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Irritations

(Contd. on page 3)

**Trade name: Ethylenediaminetetraacetic acid disodium manganese (II) salt, dihydrate $\geq 93\%$, for synthesis**

(Contd. of page 2)

After swallowing:

Nausea

Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:**

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

metal oxides

Carbon monoxide and carbon dioxide

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Avoid formation of dust.

Wear protective clothing.

Do not breathe dust.

Avoid contact with the eyes and skin.

6.2 Environmental precautions

Do not allow to enter sewers/ground water or penetrate the soil.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection:

No special measures required.

(Contd. on page 4)

Trade name: Ethylenediaminetetraacetic acid disodium manganese (II) salt, dihydrate $\geq 93\%$, for synthesis

(Contd. of page 3)

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

Information about storage in one common storage facility:

Store away from foodstuffs.

Further information about storage conditions:

Keep container tightly sealed.

Recommended storage temperature: 15 - 25 °C**7.3 Specific end use(s)**

No further relevant information available.

8 Exposure controls/personal protection**Additional information about design of technical facilities:**

No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:** Not required.**Additional information:**

The lists valid during the making were used as basis.

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not breathe dust.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

Particle filter required when dusts are generated.

Filter P2 (colour code: white)

Protection of hands:

Protective gloves

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

(Contd. on page 5)

Trade name: Ethylenediaminetetraacetic acid disodium manganese (II) salt, dihydrate ≥ 93%, for synthesis

(Contd. of page 4)

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Nitrile, thickness: ≥ 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.

Penetration time of glove material

Value for the permeation: Level ≥ 6

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

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, thickness: ≥ 0.11 mm

Value for the permeation: Level ≥ 6

Eye protection:

Tightly sealed goggles

Body protection:

Protective work clothing

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Powder
Colour:	Pink
Odour:	Odourless
Odour threshold:	No information available.

pH-value (10 g/l) at 20 °C: ~7

Change in condition

Melting point/Melting range:	No information available.
Boiling point/Boiling range:	No information available.

Flash point: No information available

Flammability (solid, gaseous): No information available

Ignition temperature: No information available

Decomposition temperature: No information available

Self-igniting: No information available

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	No information available.
Upper:	No information available.

Oxidizing properties: No information available.

Vapour pressure: No information available

(Contd. on page 6)

Safety data sheet

according to Regulation (EC) No. 1907/2006



Printing date 24.07.2013

Version number 1

Revision: 24.07.2013

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(Contd. of page 5)

Density:	
Relative density	No Information available.
Vapour density	No information available
Evaporation rate	No information available
Solubility in / Miscibility with water at 20 °C:	900 g/l
Partition coefficient (n-octanol/water):	No information available
Viscosity:	
Dynamic:	No information available.
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

10 Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Strong reaction possible with:

Strong oxidants

10.4 Conditions to avoid

Strong Heating. (decomposition)

10.5 Incompatible materials:

Aluminium

10.6 Hazardous decomposition products:

In case of fire: see item 5.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

Oral	LD50	> 5000 mg/kg (rat) (3rd party MSDS)
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Specific symptoms in biological assay:

No information available.

Primary irritant effect:

on the skin:

Slight irritations.

on the eye:

Irritating effect.

after inhalation:

Irritations in the respiratory tract.

(Contd. on page 7)



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(Contd. of page 6)

Sensitization:

No sensitizing effects known.

CMR effects:**Germ cell mutagenicity:**

No known significant effects or critical hazards.

Carcinogenicity:

No known significant effects or critical hazards.

Reproductive toxicity:

No known significant effects or critical hazards.

Aspiration hazard:

No aspiration toxicity classification.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:

After swallowing irritations in the mouth, throat, oesophagus and gastrointestinal tract.

Nausea

Vomiting

Further information:

The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

12.1 Toxicity**Aquatic toxicity:****Fish toxicity:**

LC50	100 mg/l/48 h (Daphnia magna) (3rd party MSDS)
	100 mg/l/96 h (fis)

Algal toxicity:

EC50	30 mg/l/ 96 h (algae)
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12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:**Remark:**

Do not allow to enter waters, waste water, or soil!

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

No further relevant information available.

(Contd. on page 8)

Safety data sheet

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(Contd. of page 7)

13 Disposal considerations

Waste treatment methods

Recommendation

This material and its container must be disposed of as hazardous waste. The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:

Disposal according to official regulations.

14 Transport information

14.1 UN-Number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA Class	Void
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	-

15 Regulatory information

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

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Breakdown regulations:

Waterhazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

(Contd. on page 9)

Safety data sheet
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(Contd. of page 8)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Department: Health, Safety and Environment

Contact: Herr Dr. Hagel

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50*: Lethal Dose, 50 percent (Not relevant for classification)

LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

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