

**Safety Data Sheet**  
 acc. to OSHA HCS

Page 1/8

Printing date 05/07/2017  
 Reviewed on 05/07/2017  
 Version number: 2

## 1 Identification

- **Product identifier**
- **Trade name:** EDTA tetrasodium salt dihydrate
- **Article number:** A1105
- **CAS Number:**  
10378-23-1
- **EC number:**  
200-573-9
- **Application of the substance / the mixture** Laboratory chemical
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt
- **Information department:** Dept. Compliance
- **Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

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 msds@applichem.com

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 Acute Tox. 4 H302 Harmful if swallowed.  
 Acute Tox. 4 H332 Harmful if inhaled.  
 Eye Dam. 1 H318 Causes serious eye damage.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements**  
 The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**  
 H302+H332 Harmful if swallowed or if inhaled.  
 H318 Causes serious eye damage.  
 H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**  
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear eye protection / face protection.  
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/doctor.

(Contd. on page 2)

US

**Trade name: EDTA tetrasodium salt dihydrate**

(Contd. of page 1)

P314 Get medical advice/attention if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 0  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = \*2  
Fire = 0  
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
10378-23-1 EDTA tetrasodium salt dihydrate
- **Identification number(s)**
- **EC number:** 200-573-9

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**  
Immediately rinse with water.  
Cover wound with a sterile dressing.  
Seek medical treatment.
- **After eye contact:**  
Rinse opened eye for several minutes under running water.  
Call a doctor immediately.
- **After swallowing:**  
Rinse out mouth.  
make victim drink water (maximum of 2 drinking glasses)  
Seek medical treatment.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
Breathing difficulty  
Gastric or intestinal disorders
- **Danger** Danger of impaired breathing.
- **Indication of any immediate medical attention and special treatment needed**  
In cases of irritation to the lungs, initial treatment with Dexamethason metered aerosol.

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(Contd. on page 3)

Trade name: EDTA tetrasodium salt dihydrate

(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Fire-extinguishing powder  
Foam
- **For safety reasons unsuitable extinguishing agents:** Carbon dioxide
- **Special hazards arising from the substance or mixture**  
Combustible.  
In case of fire, the following can be released:  
Nitrogen oxides (NOx)  
CO, CO2
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Do not inhale dust.  
Avoid substance contact.  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid generation of dusts.  
Dispose contaminated material as waste according to item 13.  
Clean up affected area.
- **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.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 82 mg/m3
- **PAC-2:** 900 mg/m3
- **PAC-3:** 5,500 mg/m3

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Any deposit of dust which cannot be avoided must be regularly removed.  
Prevent formation of dust.  
Do not inhale substance.
- **Information about protection against explosions and fires:**  
Dust can combine with air to form an explosive mixture.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Store only in the original receptacle.  
Keep receptacles tightly sealed.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

Trade name: EDTA tetrasodium salt dihydrate

(Contd. of page 3)

- **Further information about storage conditions:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep container sealed.
- **Recommended storage temperature:** +15 - +25 °C
- **Storage class:** 11
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Vacuum clean contaminated clothing. Do not blow or brush off contamination.  
Avoid contact with the eyes.
- **Breathing equipment:** Filter P2
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.4$  mm  
Value for the permeation: Level  $\geq 480$  min
- **Eye protection:** Gauze goggles
- **Body protection:**  
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## 9 Physical and chemical properties

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

Form:	Solid
Color:	White
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** 10.5-12.5
- **Change in condition**

Melting point/Melting range:	Undetermined.
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(Contd. on page 5)

Trade name: EDTA tetrasodium salt dihydrate

(Contd. of page 4)

<b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Product is not flammable.
· <b>Ignition temperature:</b>	>200 °C (>392 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure at 25 °C (77 °F):</b>	6 hPa (5 mm Hg)
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water at 20 °C (68 °F):</b>	750 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** Reacts with light alloys in the presence of moisture to form hydrogen.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Moisture
- **Possibility of hazardous reactions** Risk of dust explosion.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Light metals
- **Hazardous decomposition products:** In the event of fire: See chapter 5

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**  
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
Oral LD50		1780 mg/kg (rat)	

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.

(Contd. on page 6)

Trade name: EDTA tetrasodium salt dihydrate

(Contd. of page 5)

- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
EC50/72 h	>100 mg/l	(Aquatic plants)	
EC50/48 h	>100 mg/l	(Aquatic Invertebrata)	
LC50	>1 mg/l	(rat)	
LC50/96 h	>100 mg/l	(fish)	
NOEC (21 d)	25 mg/l	(daphnia magna)	

- **Persistence and degradability**  
Evidence of biological degradation processes is available.  
Not easily biodegradable
- **Behavior in environmental systems:**
- **Bioaccumulative potential** Non significant accumulation in organisms
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

## 14 Transport information

• <b>UN-Number</b>	
• <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
• <b>UN proper shipping name</b>	
• <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
• <b>Transport hazard class(es)</b>	
• <b>DOT, ADR, ADN, IMDG, IATA</b>	
• <b>Class</b>	Void
• <b>Packing group</b>	
• <b>DOT, ADR, IMDG, IATA</b>	Void

(Contd. on page 7)

Trade name: EDTA tetrasodium salt dihydrate

(Contd. of page 6)

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|--|-----------------|
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**  
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**  
H302+H332 Harmful if swallowed or if inhaled.  
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P310 Immediately call a POISON CENTER/doctor.  
P314 Get medical advice/attention if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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(Contd. on page 8)

**Trade name: EDTA tetrasodium salt dihydrate**

(Contd. of page 7)

## 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 SDS:** Dept. Compliance
- **Contact:** Mr. Th. Stöckle
- **Date of preparation / last revision** 05/07/2017 / 1
- **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

- **\* Data compared to the previous version altered.**

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