

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

REACH Registration Number: 01-2119486762-27-XXXX
CAS No: 10378-23-1
EC No: 200-573-9

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

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
ACD
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
Telefax: 0203/5194-290
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
Telephone: 0203/5194-107/117
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H332
Acute Tox. 4; H302
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:



Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 2 of 11

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Sum formula: C₁₀H₁₂N₂Na₄O₈ · 2 H₂O
Molecular weight: 416,2 g/mol

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate			100 %
	200-573-9		01-2119486762-27	
	Acute Tox. 4, Acute Tox. 4, Eye Dam. 1; H332 H302 H318			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
10378-23-1	200-573-9	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate	100 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: LD50 = 1913 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off immediately all contaminated clothing and wash it before reuse.

After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 3 of 11

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant, Cough

Vomiting, Dyspnoea

Gastrointestinal complaints

Risk of serious damage to eyes.

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

No data available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible solids

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Suppress gases/vapours/mists with water spray jet.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 4 of 11

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Avoid dust formation.

Do not breathe dust.

Read label before use.

Use extractor hood (laboratory).

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Store in a dry place.

Unsuitable container/equipment material: Aluminium

Hints on joint storage

national regulations

Further information on storage conditions

Keep container tightly closed.

storage temperature: +15°C - 25°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 5 of 11

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate			
Worker DNEL, long-term		inhalation	local	1,5 mg/m³
Worker DNEL, acute		inhalation	local	3 mg/m³
Consumer DNEL, long-term		inhalation	local	0,6 mg/m³
Consumer DNEL, acute		inhalation	local	1,2 mg/m³
Consumer DNEL, long-term		oral	systemic	25 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate	
Freshwater	2,2 mg/l	
Freshwater (intermittent releases)	1,2 mg/l	
Marine water	0,22 mg/l	
Micro-organisms in sewage treatment plants (STP)	43 mg/l	
Soil	0,72 mg/kg	

8.2. Exposure controls**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 6 of 11

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet <(>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Respiratory protection necessary at: dust formation

Filtering device with filter or ventilator filtering device of type: P 2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	white
Odour:	odourless
Odour threshold:	not determined
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	>100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	>240 °C
pH-Value (at 23 °C):	10,7 - 11,7 (10 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	580 g/l
Solubility in other solvents	not determined
Dissolution rate:	not determined
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	not determined
Vapour pressure:	not determined
Density:	1,67 g/cm ³
Relative density:	not determined
Bulk density:	700-860 kg/m ³
Relative vapour density:	not determined
Particle characteristics:	not determined

9.2. Other information**Information with regard to physical hazard classes**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 7 of 11

Explosive properties

Danger of dust explosion.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

not determined

Gas:

not applicable

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

not determined

Solid content:

100%

Sublimation point:

not determined

Softening point:

not determined

Pour point:

not determined

not determined:

Viscosity / dynamic:

not determined

Flow time:

not determined

Further Information

not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

Danger of dust explosion.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent, strong

Strong acid

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Aluminium

10.6. Hazardous decomposition productsIn case of fire may be liberated: Nitrogen oxides (NO_x)**Further information**

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 8 of 11

Acute toxicity

Harmful if inhaled.

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate				
	oral	LD50 1913 mg/kg	Rat	Study report (1983)	BASF-TEST: In principle, the methods des
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards**Endocrine disrupting properties**

No data available

Other information

No data available

Further information

Irritant, Cough

Vomiting, Dyspnoea

Gastrointestinal complaints

Risk of serious damage to eyes.

SECTION 12: Ecological information**12.1. Toxicity**

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 9 of 11

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate					
	Acute fish toxicity	LC50 41 mg/l	96 h	Lepomis macrochirus	Bull. Environm. Contam. Toxicol. 24: 543	The static water acute toxicity tests fo
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2001)	OECD Guideline 201
	Acute crustacea toxicity	EC50 140 mg/l	48 h	Daphnia magna	Study report (1989)	other: DIN 38412, part 11
	Fish toxicity	NOEC >= 25,7 mg/l	35 d	Danio rerio	Study report (2001)	OECD Guideline 210
	Crustacea toxicity	NOEC 25 mg/l	21 d	Daphnia magna	Study report (1998)	other: EEC Guideline XI/681/86, Draft 4:

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential**BCF**

CAS No	Chemical name	BCF	Species	Source
10378-23-1	Ethylenediaminetetraacetic acid tetrasodium salt dihydrate	ca. 1,8	Lepomis macrochirus	Proc. 3rd. Ann. Symp

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Do not mix with other wastes.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 10 of 11

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,12.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Tetrasodium ethylenediaminetetraacetate dihydrate (Na₄-EDTA-2H₂O) for analysis

Revision: 22.09.2025

Product code: 19316

Page 11 of 11

Abbreviations and acronyms

Acute Tox. 4: Acute toxicity, hazard category 4

Eye Dam. 1: Serious eye damage, hazard category 1

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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H302+H332 Harmful if swallowed or if inhaled.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users