



Safety Data Sheet

EDTA 4Na

Revision date :5-1-2015
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1. Identification

Product identifier used on the label

Tetrasodium Ethylenediaminetetraacetate

Recommended use of the chemical and restriction on use

Recommended use*: Chemical

Suitable for use in industrial sector: chemical industry

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

Global Chemical Resources
1925 Nebraska Avenue
Toledo, OH 43607

Telephone: 419-242-1004

Emergency telephone number

CHEMTREC: 1-800-424-9300

Other means of identification

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

Classification of the product

| | | |
|------------------|-----------------------|-----------------------------------|
| Acute Tox. | 4 (Inhalation - dust) | Acute toxicity |
| Acute Tox. | 4 (oral) | Acute toxicity |
| Eye Dam./Irrit. | 1 | Serious eye damage/eye irritation |
| Combustible Dust | Combustible Dust (1) | Combustible Dust |

Label elements

Pictogram:

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Signal Word:
Danger

Hazard Statement:

| | |
|------|---|
| H318 | May form combustible dust concentration in air. |
| H332 | Causes serious eye damage. |
| H302 | Harmful if inhaled. |
| | Harmful if swallowed. |

Precautionary Statements (Prevention):

| | |
|------|---|
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear eye/face protection. |
| P261 | Avoid breathing dust. |
| P270 | Do not eat, drink or smoke when using this product. |
| P264 | Wash with plenty of water and soap thoroughly after handling. |

Precautionary Statements (Response):

| | |
|--------------------|--|
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P330 | Rinse mouth. |

Precautionary Statements (Disposal):

| | |
|------|---|
| P501 | Dispose of contents/container to hazardous or special waste collection point. |
|------|---|

According to Regulation 1994 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

Emergency overview

WARNING:

Causes eye irritation.

MAY CAUSE RESPIRATORY TRACT IRRITATION.

MAY CAUSE SKIN IRRITATION.

MAY BE HARMFUL IF SWALLOWED.

Causes serious eye damage.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Wear NIOSH-certified chemical goggles.

Wear protective clothing.

Wear chemical resistant protective gloves.

Eye wash fountains and safety showers must be easily accessible.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

| <u>CAS Number</u> | <u>Content (W/W)</u> | <u>Chemical name</u> |
|-------------------|----------------------|----------------------|
|-------------------|----------------------|----------------------|

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64-02-8 80.0 - 90.0 % tetrasodium ethylenediaminetetraacetate

According to Regulation 1994 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

| <u>CAS Number</u> | <u>Content (W/W)</u> | <u>Chemical name</u> |
|--------------------------|-----------------------------|---|
| 64-02-8 | 80.0 - 90.0 % | tetrasodium ethylenediaminetetraacetate |
| 139-13-9 | 0.1 % | nitrilotriacetic acid |

| <u>CAS Number</u> | <u>Content (W/W)</u> | <u>Chemical name</u> |
|--------------------------|-----------------------------|-----------------------------|
| 139-13-9 | 0.1 % | nitrilotriacetic acid |

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eyespecialist.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: difficulty breathing, corneal injury, gastrointestinal complaints, irritation of the mucous membranes

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, foam

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Unsuitable extinguishing media for safety reasons:
carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
harmful vapours, nitrogen oxides, carbon oxides
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Further accidental release measures:
Forms slippery surfaces with water.

Further accidental release measures:
Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures see, section 8.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
Dispose of absorbed material in accordance with regulations.

Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling

Closed containers should only be opened in well-ventilated areas.

Protection against fire and explosion:

Avoid dust formation. Take precautionary measures against static discharges.

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Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure Controls/Personal Protection

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing.

9. Physical and Chemical Properties

| | | |
|------------------|---------------------|------------------------------|
| Form: | powder | |
| Odour: | product specific | |
| Odour threshold: | | No data available. |
| Colour: | white | |
| pH value: | approx. 10.7 - 11.7 | (10 g/l, 23 °C) (DIN 19268) |

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| | | |
|---|-------------------------------------|--|
| Melting point: | | The substance / product decomposes therefore not determined. |
| decomposition point: | > 150 °C | The substance / product decomposes. Literature data. |
| : | | (other) not applicable |
| Flash point: | | Study scientifically not justified. |
| Flammability: | not highly flammable | |
| Autoignition: | > 200 °C | (DIN 51794) |
| Vapour pressure: | 6 hPa | (approx. 25 °C) (measured) contains water, Literature data. |
| Density: | 1.67 g/cm ³ | (20 °C) Literature data. |
| Bulk density: | approx. 760 - 930 kg/m ³ | (DIN ISO 697) |
| Vapour density: | | not determined |
| Partitioning coefficient n-octanol/water (log Pow): | -13 | (20 °C) |
| Thermal decomposition: | not determined | |
| Viscosity, dynamic: | | Study scientifically not justified. |
| Particle size: | | (measured) |
| Solubility in water: | approx. 700 g/l | |
| Solubility (qualitative): | soluble | |
| | solvent(s): polar solvents, | |
| Evaporation rate: | | The product is a non-volatile solid. |

10. Stability and Reactivity

Reactivity

Corrosion to metals:

Corrodes metals in the presence of water or moisture.

Formation of flammable gases: Remarks:

Forms no flammable gases in the presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions.

Conditions to avoid

Avoid dust formation. Avoid humidity.

Incompatible materials

amphoteric metals, light metals

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
not determined

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11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Of moderate toxicity after short-term inhalation.

Oral

Type of value: LD50

Species: rat

Value: 1,000 - 2,000 mg/kg (BASF-Test)

Inhalation

Type of value: LC50

Species: rat

Value: (OECD Guideline 403)

Exposure time: 6 h

Analogous: Assessment derived from products with similar chemical character.

Dermal

Type of value: LD50

Study scientifically not justified.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation /corrosion

Assessment of irritating effects: Not irritating to the skin. May cause severe damage to the eyes.

Information on: tetrasodium ethylenediaminetetraacetate

Assessment of irritating effects: Not irritating to the skin. May cause severe damage to the eyes.

Skin

Species: rabbit

Result: non-irritant

Method: BASF-Test

Eye

Species: rabbit

Result: Irritant.

Method: BASF-Test

Sensitization

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

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The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration Hazard

Not relevant.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated inhalation exposure may affect certain organs. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Genetic toxicity

Assessment of mutagenicity: In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays.

Carcinogenicity

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Symptoms of Exposure

difficulty breathing, corneal injury, gastrointestinal complaints, irritation of the mucous membranes

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) > 100 mg/l, *Lepomis macrochirus* (OPP 72-1 (EPA-Guideline), static)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates

EC50 (48 h) > 100 mg/l, *Daphnia magna* (DIN 38412 Part 11, static)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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Aquatic plants

EC50 (72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (Directive 88/302/EEC, part C, p. 89, static)
Nominal concentration.

Chronic toxicity to fish

No observed effect concentration (35 d) \geq 36.9 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 25 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Soil living organisms

Toxicity to soil dwelling organisms:

LC50 (14 d) 156 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to terrestrial plants

No observed effect concentration 84 mg/kg, terrestrial plants (other)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other terrestrial non-mammals

Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge, domestic/EC20 (30 min): > 500 mg/l

Nominal concentration. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Not readily biodegradable (by OECD criteria).

Was found to be potentially biodegradable.

Assessment of stability in water

According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Bioaccumulation potential

Bioconcentration factor: approx. 1.8 (28 d), Lepomis macrochirus

Does not significantly accumulate in organisms.

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Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

Sum parameter

Theoretical Oxygen Demand (ThOD): 602 mg/g

Other ecotoxicological advice:
Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Cosmetic TSCA, US released / exempt

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

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State regulations

State RTK

MA, NJ, PA

CAS Number

139-13-9

Chemical name

nitrilotriacetic acid

CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:

Health : 3 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 3 Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:

SDS Prepared on: 5-1-2015

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