



Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Ethylenediaminetetraacetic acid trisodium salt,n-hydrate

SDS No. : 2931E-1

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

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

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Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 3

Hazardous to the aquatic environment, long-term (chronic): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Warning

HAZARD STATEMENT

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

May cause respiratory irritation

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Wear eye protection/face protection.

Response



Ethylenediaminetetraacetic acid trisodium salt, n-hydrate, 2931E-1, 2023/01/06

Call a POISON CENTER/doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name: Ethylenediaminetetraacetic acid trisodium salt, n-hydrate

Content (%): 98(min)

Chemical formula: $C_{10}H_{13}N_2O_8Na_3 \cdot nH_2O$

Chemicals No, Japan: 2-1265

CAS No.: 85715-60-2

Note: The figures shown above are not the specifications of the product.

Impurities

Trisodium 2,2',2''-nitriilotriacetate $\leq 0.30\%$ (CAS No. 5064-31-3)

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Call a POISON CENTER/doctor/physician if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER/doctor/physician if you feel unwell.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Advice for firefighters



Ethylenediaminetetraacetic acid trisodium salt, n-hydrate, 2931E-1, 2023/01/06

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Avoid breathing dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene

**Section 8. Exposure controls/personal protection**

Control parameters

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Powder

Color: White

Odor data is not available.

Melting point/Freezing point: $\geq 300^{\circ}\text{C}$

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 7.0~8.0(1w/v%sol, 25°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Not available.

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Oxidizing agents

Hazardous decomposition products



Carbon oxides, Nitrogen oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Trisodium 2,2',2''-nitrilotriacetate)

rat LD50=1100mg/kg (MOE risk assessment vol.4, 2005)

Irritant properties

Skin corrosion/irritation

[Data for components of the product]

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Category 2

Serious eye damage/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Trisodium 2,2',2''-nitrilotriacetate)

rabbit irritation (IUCLID, 2000)

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Category 2A

Sensitization

Skin sensitization

[Data for components of the product]

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Category 1

Mutagenic effects data is not available.

Carcinogenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Trisodium 2,2',2''-nitrilotriacetate)

cat.2; IARC Gr. 2B (IARC 73, 1999 et al.)

[IARC]

(Trisodium 2,2',2''-nitrilotriacetate)

Group 2B : Possibly carcinogenic to humans

[EU]

(Trisodium 2,2',2''-nitrilotriacetate)

Category 2; Substances suspected human carcinogens

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]

[cat.3 (respiratory tract irritation)]

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Respiratory tract irritation

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

Information on other hazards



Ethylenediaminetetraacetic acid trisodium salt,n-hydrate,2931E-1,2023/01/06

May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[GHS Cat. Japan, base data]

(Trisodium 2,2',2''-nitrilotriacetate)

Crustacea (Gammaridea) EC50=98mg/L/48hr; Fish (rainbow trout) LC50=98mg/L/96hr (EU, 2005)

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Category 3

Hazardous to the aquatic environment, long-term (chronic)

[Company proprietary data]

(Ethylenediaminetetraacetic acid trisodium salt,n-hydrate)

Category 3

Water solubility

(Trisodium 2,2',2''-nitrilotriacetate)

93 g/100 ml (20°C) (ICSC, 2003)

Persistence and degradability

[Data for components of the product]

(Trisodium 2,2',2''-nitrilotriacetate)

Rapidly degradable (DOC_Degradation : 100% (EU, 2005))

Bioaccumulative potential

[Data for components of the product]

(Trisodium 2,2',2''-nitrilotriacetate)

log Pow=-2.62 (cal.) (ICSC, 2003)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment.

Dispose of contents/container in accordance with local/national regulation.

Section 14. Transport Information

UN Number or ID Number : Not applicable

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : Not applicable

IATA (Dangerous Goods Regulations)

UN Number or ID Number : Not applicable

Environmental hazards

Marine pollutants (yes/no) : no

**Section 15. Regulatory Information**

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

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Ethylenediaminetetraacetic acid trisodium salt,n-hydrate; Trisodium
2,2',2''-nitrilotriacetate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

GHS classification and labelling

Skin corrosion/irritation, Category 2: H315 Causes skin irritation

Serious eye damage/eye irritation, Category 2: H319 Causes serious eye irritation

Skin sensitization, Category 1: H317 May cause an allergic skin reaction

STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

Hazardous to the aquatic environment, short-term (acute), Category 3: H402 Harmful to aquatic life

Hazardous to the aquatic environment, long-term (chronic), Category 3: H412 Harmful to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).