



## Safety Data Sheet

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

#### Product identifier:

Product name: Ethylenediaminetetraacetic acid

SDS No. : 2910E-3

#### 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.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

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### Section 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Reproductive toxicity: Category 2

Specific target organ toxicity – repeated exposure: Category 1(kidney)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Causes eye irritation

Suspected of damaging fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure(kidney)

Harmful to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

##### Response

Get medical advice/attention if you feel unwell.

IF exposed or concerned: 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.

##### Disposal



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

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### Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Ethylenediaminetetraacetic acid

Content (%):98(min)

Chemical formula:(HOOCCH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>COOH)<sub>2</sub>

Chemicals No, Japan:2-1263

CAS No.:60-00-4

MW:292.25

ECNO:200-449-4

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

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### Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention 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.

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.

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### 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.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

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.



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**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.

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**Section 7. Handling and storage**

## Precautions for safe handling

## Preventive measures

(Exposure Control for handling personnel)

Do not breathe 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

Wear protective gloves, protective clothing or 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.

Do not eat, drink or smoke when using this product.

## 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

Polyethylene

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**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.

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## Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals or powder

Color: Colorless or white

Odor: Odourless

Melting point/Freezing point data is not available.

Boiling point or initial boiling point: (Ethylenediaminetetraacetic acid)(decomposes) 220 through 245°C

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 data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Very poor (0.05 g/100 ml, 20°C)

n-Octanol/water partition coefficient: log Pow-3.34; -5.01

Vapor pressure data is not available.

Density and/or relative density: 0.86

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

Particle characteristics data is not available.

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## Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with air.

Decomposes on heating. This produces toxic fumes of nitrous oxides. Reacts with strong oxidants. Attacks some forms of metals and rubber. (ICSC 0886)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides, Nitrous oxides

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## Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]



(Ethylenediaminetetraacetic acid)  
rat LD50 > 2000mg/kg (EU-RAR 49, 2004)

**Irritant properties**

Skin corrosion/irritation data is not available.

**Serious eye damage/irritation**

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethylenediaminetetraacetic acid)

rabbit symptom disappear after 8 days (EU-RAR 49, 2004)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

**Reproductive toxicity**

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethylenediaminetetraacetic acid)

cat. 2; Teratogenic 12th, 2007

**Specific target organ toxicity (STOT)**

STOT-single exposure data is not available.

STOT-repeated exposure

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(Ethylenediaminetetraacetic acid)

kidneys (NITE Initial Risk Assessment Report Ver.1.1, 14, 2007)

Aspiration hazard data is not available.

**Information on other hazards**

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

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**Section 12. Ecological Information****Toxicity****Aquatic toxicity**

[Data for components of the product]

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Ethylenediaminetetraacetic acid)

Fish (bluegill) LC50=41mg/L/96hr (EU-RAR, 2005)

**Water solubility**

(Ethylenediaminetetraacetic acid)

very poor (0.05 g/100 ml, 20°C) (ICSC, 2008)

**Persistence and degradability**

[Data for components of the product]

(Ethylenediaminetetraacetic acid)

BOD\_Degradation : 0% (METI existing chemical safety inspections)

**Bioaccumulative potential**

[Data for components of the product]

(Ethylenediaminetetraacetic acid)

BCF=123 (Check & Review, Japan)

**Mobility in soil**

Mobility in soil data is not available.

**Other adverse effects**



Ozone depleting chemical data is not available.

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**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.

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**Section 14. Transport Information**

UN No. or ID No.: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Ethylenediaminetetraacetic acid

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**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

Other regulatory information

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

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**Section 16. Other information**

GHS classification and labelling

Serious eye damage/eye irritation, Category 2B: H320 Causes eye irritation

Reproductive toxicity, Category 2: H361 Suspected of damaging fertility or the unborn child

STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

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, 2018 Edition (Incorporating Amendment 39-18)

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).