

Ethylenediaminetetraacetic Acid

Section 1 - Chemical Product and Company Identification

TRADE NAMES : Ethylenediaminetetraacetic Acid

Recommended use : Not available

Restriction of use : Not available

Company Identification

Company : OCI Company Ltd.

Address : 230, Dokbae-ro, Nam-gu, Incheon, KOREA

Tel No. : 82 - 32 - 860 - 6114

Section 2 - Hazards Identification

- 1) Hazard Classification Serious eye damage / Eye irritation : 2
Reproductive toxicity : 2
Specific target organ toxicity following repeated exposure : 1
Hazardous to the aquatic environment (Chronic hazard) : 2

2) Warning signal

Symbol



Signal word Danger

Hazard statement H319 Causes serious eye irritation
H361 Suspected of damaging fertility or the unborn child
H372 Causes damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects

Prevention precautionary statements

- P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container to the related laws.

3) NFPA

Health Rating	2
Flammability Rating	1
Reactivity Rating	0

Section 3 - Composition, Information on Ingredients

COMPONENT: Ethylenediaminetetraacetic Acid

CAS No.: 60-00-4

PERCENTAGE: 100

Section 4 - First Aid Measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Causes serious eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

Section 5 - Fire Fighting Measures

General Fire Hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and Storage

Precautions for safe handling: Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place. Store locked up.

Section 8 - Exposure Controls, Personal Protection

Control Parameters

Occupational Exposure Limits None of the components have assigned exposure limits.

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory Protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

Section 9 - Physical and Chemical Properties

Physical state: Solid
Color: White
Odor: Odorless
Odor threshold: No data available
pH: No data available
Melting point/freezing point: 245 °C
Initial boiling point and boiling range: No data available
Flash Point: Not applicable
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper/lower limit on flammability or explosive limits: No data available
Vapor pressure: No data available
Vapor density: No data available
Relative density: 0.086
Solubility: 0.05 g/100ml (25 °C) in water
Partition coefficient (n-octanol/water): -3.86
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Molecular weight: 292.28 g/mol (C₁₀H₁₆N₂O₈)

Section 10 - Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical Stability: Material is stable under normal conditions.
Possibility of Hazardous Reactions: Hazardous polymerization does not occur.
Conditions to Avoid: Excessive heat. Contact with incompatible materials.
Incompatible Materials: Strong oxidizing agents. Amines.
Hazardous Decomposition Products: Oxides of Carbon. Nitrogen Oxides

Section 11 - Toxicological Information

Information on likely routes of exposure

Ingestion: May irritate and cause stomach pain, vomiting and diarrhoea.

Inhalation: Mist or vapors may cause irritation.

Skin Contact: May cause irritation.

Eye contact: Causes eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: No data available.

Dermal Product: No data available.

Inhalation Product: No data available.

Repeated Dose Toxicity Product: No data available.

Skin Corrosion/Irritation Product: May cause skin irritation.

Serious Eye Damage/Eye Irritation Product: Causes serious eye irritation.

Respiratory or Skin Sensitization Product: Not a skin sensitizer.

Carcinogenicity Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro Product: No mutagenic components identified

In vivo Product: No mutagenic components identified

Reproductive Toxicity Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure Product: No data available.

Aspiration Hazard Product: Not classified

Other Effects: None known.

Section 12 - Ecological Information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

EDETIC ACID LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 34 - 62 mg/l Mortality

LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 44.2 - 76.5 mg/l Mortality

Aquatic invertebrates

Product: No data available.

Specified substance(s):

EDETIC ACID EC 50 (Water flea (*Daphnia magna*), 48 h): 113 mg/l Intoxication

LC 50 (Water flea (*Daphnia magna*), 24 h): 625 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish Product: No data available.

Aquatic invertebrates Product: No data available.

Toxicity to Aquatic Plants Product: No data available.

Persistence and degradability

Biodegradation Product: There are no data on the degradability of this product.

BOD/COD ratio Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow) Product: Log Kow: -3.86

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: Harmful to aquatic life with long lasting effects.

Section 13 - Disposal Considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport Information

UN number : UN3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Hazard class : 9

Packing group : III

Section 15 - Regulatory Information

US federal regulations**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

EDETIC ACID Reportable quantity: 5000 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)**Hazard categories**

X Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity	RQ
EDETIC ACID	5000 lbs.

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
EDETIC ACID	500lbs

SARA 313 (TRI reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

EDETIC ACID Reportable quantity: 5000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations

US. California Proposition 65 No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act No ingredient regulated by NJ Right-to-Know

Law present.

US. Massachusetts RTK - Substance List No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia AICS: On or in compliance with the inventory

Canada DSL Inventory List: On or in compliance with the inventory

EINECS, ELINCS or NLP: On or in compliance with the inventory

Japan (ENCS) List: On or in compliance with the inventory

China Inv. Existing Chemical Substances: On or in compliance with the inventory

Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory

Canada NDSL Inventory: Not in compliance with the inventory.

Philippines PICCS: On or in compliance with the inventory

US TSCA Inventory: On or in compliance with the inventory

New Zealand Inventory of Chemicals: On or in compliance with the inventory

Japan ISHL Listing: On or in compliance with the inventory

Japan Pharmacopoeia Listing: Not in compliance with the inventory.

Section 16 - Other Information

Sources : KOSHA, National Emergency Management Agency

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