

#### 1. IDENTIFICATION

Product Name Tetrasodium EDTA 40% Solution

Other Names EDTA-4Na 40%

Uses Chelating agent; household and industrial cleaning, detergents, pulp and paper bleaching.

Chemical Family No Data Available
Chemical Formula Unspecified

Chemical Name Tetrasodium ethylenediamine tetraacetate, solution

Product Description No Data Available

## **Contact Details of the Supplier of this Safety Data Sheet**

 Organisation
 Location
 Telephone

 Redox Ltd
 2 Swettenham Road
 +61-2-97333000

Minto NSW 2566 Australia

Redox Ltd 11 Mayo Road +64-9-2506222

Wiri Auckland 2104 New Zealand

Redox Inc. 3960 Paramount Boulevard +1-424-675-3200

Suite 107

Lakewood CA 90712

USA

Redox Chemicals Sdn Bhd Level 2, No. 8, Jalan Sapir 33/7 +60-3-5614-2111

Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam

40400 Shah Alam Sengalor, Malaysia

## **Emergency Contact Details**

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420

## 2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

+1-703-527-3887



### **Globally Harmonised System**

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of

Chemicals (GHS)

Hazard Categories Corrosive to Metals - Category 1

Acute Toxicity (Oral) - Category 4

Acute Toxicity (Inhalation) - Category 4

Skin Corrosion/Irritation - Category 1B

Serious Eye Damage/Irritation - Category 1

Carcinogenicity - Category 2

Specific Target Organ Toxicity (Repeated Exposure) - Category 2

**Pictograms** 







Signal Word Danger

Hazard Statements H290 May be corrosive to metals.

**H302 + H332** Harmful if swallowed or if inhaled.

**H314** Causes severe skin burns and eye damage.

**H351** Suspected of causing cancer.

**H373** May cause damage to organs through prolonged or repeated inhalation exposure.

Precautionary Statements Prevention P260 Do not breathe fume/gas/mist/vapours/spray.

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

**P201** Obtain special instructions before use.

P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.

Response P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

**P310** Immediately call a POISON CENTER or doctor.

**P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

**P301 + P330 + P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**P363** Wash contaminated clothing before reuse.

**P304 + P340** IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

P308 + P313 IF exposed or concerned: Get medical attention.
P390 Absorb spillage to prevent material-damage.

Storage **P405** Store locked up.

**P406** Store in corrosive resistant container with a resistant inner liner.

Disposal P501 Dispose of contents/container in accordance with local / regional / national /

international regulations.

## **National Transport Commission (Australia)**

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification**Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by

Road & Rail (ADG Code)

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Tetrasodium ethylenediamine tetraacetate	C10H16N2O8.4Na	64-02-8	39 - 41 %
Trisodium NTA (Impurity)	C6H9NO6.3Na	5064-31-3	<=2 %
Water	H20	7732-18-5	Balance %

## 4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

**Swallowed** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice.

Never give anything by mouth to an unconscious person.

IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting Eye

the upper and lower lids. Immediately call a Poison Centre or doctor/physician for advice. Remove contact lenses if

present and easy to do. Continue rinsing for at least 15 minutes.

Skin IF ON SKIN (or hair): Immediately flush skin with running water for at least 15 minutes, while removing contaminated

> clothing and shoes. Wash skin with soap and water. Immediately call a Poison Centre or doctor/physician for advice. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing and shoes before reuse.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison

Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with

a one-way valve or other proper

respiratory medical device. Administer oxygen if breathing is difficult.

**Advice to Doctor** In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet, if

> possible). Treat symptomatically. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to

protect themselves.

Medical Conditions Aggravated by No information available.

**Exposure** 

## **5. FIRE FIGHTING MEASURES**

**General Measures** If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.

Dike fire-control water for later disposal; do not scatter the material.

Flammability Conditions Non-combustible; however, after evaporation of the aqueous component under fire conditions, the residual material may

decompose and/or burn.

**Extinguishing Media** If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.

When heated, vapours may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards! Contact Fire and Explosion Hazard

with metals may evolve flammable hydrogen gas. Containers may explode when heated.

**Hazardous Products of** Combustion

Thermal decomposition may produce irritating, corrosive and/or toxic gases, including Ammonia, Carbon oxides (COx),

Nitrogen oxides (NOx).

**Special Fire Fighting Instructions** Contain runoff from fire control or dilution water - Runoff may be corrosive and/or toxic and cause pollution.

**Personal Protective Equipment** Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide

little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations

ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Flash Point No Data Available

Lower Explosion LimitNo Data AvailableUpper Explosion LimitNo Data AvailableAuto Ignition TemperatureNo Data Available

Hazchem Code 2X

### **6. ACCIDENTAL RELEASE MEASURES**

General Response Procedure Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking,

flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Do not breathe vapours and

prevent contact with eyes, skin and clothing.

Clean Up Procedures Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal (see

SECTION 13).

**Containment** Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.

**Decontamination** Wash away remainder with plenty of water.

**Environmental Precautionary** 

Measures

Spillages and decontamination runoff should be prevented from entering drains and watercourses.

Evacuation Criteria Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away.

Keep upwind and to higher ground.

Personal Precautionary Measures Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

\*Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill

situations where direct contact with the substance is possible.

### 7. HANDLING AND STORAGE

**Handling** Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure

adequate ventilation, especially in confined areas. Use only outdoors or in a well-ventilated area. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapours/spray and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Absorb spillage to prevent material damage (see SECTION 6).

Storage Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container upright and tightly closed - Check

regularly for leaks. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and

incompatible materials (see SECTION 10). Store locked up.

**Container** Keep only in original packaging or store in a corrosion resistant container with a resistant inner liner.

\*May be corrosive to metals - Avoid Copper, Aluminium, Zinc, Copper alloys, Nickel.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the

region specific regulatory bodies.

Derived no-effect level (DNEL) for EDTA-4Na (CAS No. 64-02-8):

- Worker, Inhalative (short-term, local effect): 3 mg/m3 - Worker, Inhalative (long-term, local effect): 1.5 mg/m3

- Consumer, Inhalative (short-term, local effect): 1.2 mg/m3

- Consumer, Inhalative (long-term, local effect): 0.6 mg/m3

- Consumer, Oral (long-term, systemic effect): 25 mg/kg bw/day

**Exposure Limits** No Data Available

**Biological Limits** Predicted no-effect concentration (PNEC) for EDTA-4Na (CAS No. 64-02-8):

Freshwater: 2.2 mg/LSea water: 0.22 mg/L

- Intermittent releases: 0.72 mg/L
- Soil: 0.72 mg/L
- Sewage treatment plant: 43 mg/L

#### **Engineering Measures**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing

dispersion of it into the general work area.

**Personal Protection Equipment** 

- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Suitable mist/particulate filter respirator (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Safety goggles.
- Hand protection: Wear protective gloves. Recommended: Chemically-resistant gloves, e.g. Nitrile rubber (suitable for intermittent contact).
- Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended:

Chemically-resistant clothing, apron.

**Special Hazards Precaustions** 

Do not allow into any sewer, on the ground or into any body of water.

**Work Hygienic Practices** 

Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical StateLiquidAppearanceClear liquidOdourSlight ammoniaColourLight yellowpH11.0 - 12.0

Vapour Pressure No Data Available
Relative Vapour Density No Data Available

**Boiling Point** 107 °C

**Melting Point** No Data Available

Freezing Point <-18 °C

**Solubility** Miscible with water

No Data Available

**Specific Gravity** 1.26 - 1.35

**Flash Point** 

**Auto Ignition Temp** No Data Available **Evaporation Rate** No Data Available **Bulk Density** No Data Available **Corrosion Rate** No Data Available **Decomposition Temperature** No Data Available Density 1.26 - 1.35 g/cm3 **Specific Heat** No Data Available **Molecular Weight** No Data Available **Net Propellant Weight** No Data Available

Octanol Water Coefficient <0

Particle Size
No Data Available
Partition Coefficient
No Data Available
Saturated Vapour Concentration
Vapour Temperature
No Data Available
Viscosity
20 mPa.s (@ 20 °C)
Volatile Percent
No Data Available
VOC Volume
No Data Available

**Additional Characteristics** No information available.

**Potential for Dust Explosion** 

Not applicable.

Fast or Intensely Burning

Characteristics

No information available.

Flame Propagation or Burning

Rate of Solid Materials

No information available.

**Non-Flammables That Could** 

Contribute Unusual Hazards to a

Fire

No information available.

**Properties That May Initiate or Contribute to Fire Intensity** 

Non-combustible; however, after evaporation of the aqueous component under fire conditions, the residual material may decompose and/or burn.

Reactions That Release Gases or

Thermal decomposition may produce irritating, corrosive and/or toxic gases, including Ammonia, Carbon oxides (COx), Nitrogen oxides (NOx).

**Vapours** 

Release of Invisible Flammable Vapours and Gases

When heated, vapours may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards! Contact with metals may evolve flammable hydrogen gas.

#### 10. STABILITY AND REACTIVITY

**General Information** May be corrosive to metals. **Chemical Stability** Stable under normal conditions.

**Conditions to Avoid** Keep away from heat and sources of ignition.

Incompatible/reactive with strong oxidising agents, Copper, Aluminium, Zinc, Copper alloys, Nickel. Materials to Avoid

**Hazardous Decomposition** 

**Products** 

Thermal decomposition may produce irritating, corrosive and/or toxic gases, including Ammonia, Carbon oxides (COx),

Nitrogen oxides (NOx).

No information available. **Hazardous Polymerisation** 

#### 11. TOXICOLOGICAL INFORMATION

**General Information** - Acute toxicity: Harmful if swallowed and if inhaled.

- Skin corrosion/irritation: Causes severe skin burns and eye damage.

- Eye damage/irritation: Causes serious eye damage.

- Respiratory/skin sensitisation: No sensitisation responses were observed.

- Germ-cell mutagenicity: Not classified.

- Carcinogenicity: Suspected of causing cancer. IMPURITY: Trisodium NTA (CAS No. 5064-31-3): Suspected of causing

cancer.

- Reproductive toxicity: Not classified. - STOT (single exposure): Not classified.

- STOT (repeated exposure): COMPONENT: Tetrasodium EDTA (CAS No. 64-02-8): May cause damage to organs through

prolonged or repeated exposure (analogue substance Na2H2EDTA) [ECHA].

- Aspiration toxicity: Not classified.

Acute

Ingestion Acute toxicity (Oral):

COMPONENT: Tetrasodium EDTA (CAS No. 64-02-8):

- LD50, Rat (male/female): >1,780 - <2,000 mg/kg bw. [Supplier's SDS].

**Carcinogen Category** Cat. 2

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Aquatic toxicity:

COMPONENT: Tetrasodium EDTA (CAS No. 64-02-8):

- LC50, Fish (Lepomis macrochirus): 41 mg/L (96 h) [Supplier's SDS].
- EC50, Crustacea (Daphnia magna): 610 mg/L (24 h) [Supplier's SDS].

- EC50, Algae/aquatic plants (Desmodesmus subspicatus): 2.77 mg/L (72 h) [Supplier's SDS].

Persistence/Degradability
No information available.

Mobility
No information available.

**Environmental Fate** Prevent entry into drains and waterways.

\*This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

**Bioaccumulation Potential** Material does not bioaccumulate.

**Environmental Impact** No Data Available

#### 13. DISPOSAL CONSIDERATIONS

**General Information** Dispose of waste from residues/unused product in accordance with applicable local/regional/national regulations.

Special Precautions for Land Fill Contaminated packaging: Empty containers should be taken for local recycling, recovery or waste disposal.

### 14. TRANSPORT INFORMATION

## Land Transport (Australia)

ADG Code

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

**EPG** 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

Special Provision No Data Available

## Land Transport (Malaysia)

ADR Code

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

EPG 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

Special Provision No Data Available

## Land Transport (New Zealand)

NZS5433

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances

Subsidiary Risk(s) No Data Available

**EPG** 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

**Special Provision** No Data Available

## **Land Transport (United States of America)**

**US DOT** 

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

ERG 153 Substances - Toxic and/or Corrosive (Combustible)

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

**Special Provision** No Data Available

### **Sea Transport**

IMDG Code

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

Special Provision No Data Available

EMS F-A, S-B
Marine Pollutant No

## **Air Transport**

IATA DGR

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Contains Tetrasodium EDTA)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

 UN Number
 3267

 Hazchem
 2X

 Pack Group
 III

**Special Provision** No Data Available

# National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by

Road & Rail (ADG Code)

### 15. REGULATORY INFORMATION

General Information No Data Available
Poisons Schedule (Aust) Not Scheduled

## **Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code Additives Process Chemicals and Raw Materials Corrosive Carcinogenic Group Standard 2020 HSR002493

**National/Regional Inventories** 

Australia (AIIC) Listed

Canada (DSL) Listed

Canada (NDSL) Not Listed

China (IECSC) Listed

**Europe (EINECS)** 200-573-9

225-768-6

Europe (REACh) Listed

Japan (ENCS/METI) 2-1265

2-1277

Korea (KECI) KE-13654

KE-25937

Malaysia (EHS Register) Listed

New Zealand (NZIoC) Listed

Philippines (PICCS) Listed

Switzerland (Giftliste 1) Not Determined

**Switzerland (Inventory of Notified** 

Substances)

Not Determined

Taiwan (NCSR) Listed

USA (TSCA) Listed

## **16. OTHER INFORMATION**

Related Product Codes EDTATL7800, EDTATL7801, EDTATL7802, EDTATL7803, EDTATL7805, EDTATL7806, EDTATL7900

Revision 3

**AICS** Australian Inventory of Chemical Substances

atm Atmosphere

**CAS** Chemical Abstracts Service (Registry Number)

cm<sup>2</sup> Square Centimetres

CO2 Carbon Dioxide

**COD** Chemical Oxygen Demand

deg C (°C) Degrees Celcius

EPA (New Zealand) Environmental Protection Authority of New Zealand

deg F (°F) Degrees Farenheit

**g** Grams

g/cm³ Grams per Cubic Centimetre

g/I Grams per Litre

**HSNO** Hazardous Substance and New Organism

**IDLH** Immediately Dangerous to Life and Health

immiscible Liquids are insoluable in each other.

inHg Inch of Mercury

inH20 Inch of Water

K Kelvin

kg Kilogram

kg/m³ Kilograms per Cubic Metre

**Ib** Pound

**LC50** LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

**LD50** LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

Itr or L Litre

m<sup>3</sup> Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m3 Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH20 Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

 $\mbox{\bf NIOSH}$  National Institute for Occupational Safety and Health

**NOHSC** National Occupational Heath and Safety Commission

**OECD** Organisation for Economic Co-operation and Development

Oz Ounce

**PEL** Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

**psi** Pounds per Square Inch

**R** Rankine

**RCP** Reciprocal Calculation Procedure

**STEL** Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

**TWA** Time Weighted Average

ug/24H Micrograms per 24 Hours

**UN** United Nations

wt Weight