SAFETY DATA SHEET
EDTA TETRASODIUM SALT LIQUID
REVISION 4, DATE 15 JUL 2022

1. IDENTIFICATION

Product Name	**EDTA Tetrasodium Salt Liquid**
Other Names	EDTA Tetrasodium Salt 40% Liq
Uses	Chelating agent; household and industrial cleaning, detergents, pulp and paper bleaching.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Tetrasodium EDTA Solution
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, Malaysia	+60-3-5614-2111

Emergency Contact Details

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

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled

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

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

Precautionary Statements

Prevention	**P260**	Do not breathe mist/vapour/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	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.
	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)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Tetrasodium EDTA	C10H16N2O8.4Na	64-02-8	38 - 42 %
Trisodium NTA (Impurity)	C6H9NO6.3Na	5064-31-3	<=0.5 %
Water	H2O	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.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting 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 Exposure	No information available.

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.
Fire and Explosion Hazard	When heated, vapours may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards! Contact 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 Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No 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/L - Sea 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 State	Liquid
Appearance	Clear liquid
Odour	Slight ammonia
Colour	Light yellow
pH	11.0 - 12.0
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	<-18 °C
Solubility	Miscible with water
Specific Gravity	1.26 - 1.35
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	107 °C
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	No Data Available
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 Vapours	Thermal decomposition may produce irritating, corrosive and/or toxic gases, including Ammonia, Carbon oxides (COx), Nitrogen oxides (NOx).
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.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, Copper, Aluminium, Zinc, Copper alloys, Nickel.
Hazardous Decomposition Products	Thermal decomposition may produce irritating, corrosive and/or toxic gases, including Ammonia, Carbon oxides (COx), Nitrogen oxides (NOx).
Hazardous Polymerisation	No information available.

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 sensitization responses were observed.
- Germ cell mutagenicity: Not classified.
- Carcinogenicity: Not classified. COMPONENT: Trisodium NTA is Suspected of causing cancer. Nitrilotriacetic acid and its salts are Classified by the IARC Monographs as "Possibly carcinogenic to humans" (Group 2B).
- Reproductive toxicity: Not classified.
- STOT (single exposure): Not classified.
- STOT (repeated exposure): 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 None

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	36 Toxic And/Or Corrosive Substances 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	36 Toxic And/Or Corrosive Substances 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	36 Toxic And/Or Corrosive Substances 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	HSR002491

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	Listed
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
Malaysia (List of Classified Substances)	Not Listed
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Taiwan (TCSI)	Listed
USA (TSCA)	Listed
Mexico (INSQ)	Listed

16. OTHER INFORMATION

Related Product Codes	EDTATL1000, EDTATL1001, EDTATL1002, EDTATL1003, EDTATL1004, EDTATL2000, EDTATL2900, EDTATL3000, EDTATL3100, EDTATL3101, EDTATL3102, EDTATL3103, EDTATL3500, EDTATL4000, EDTATL5000, EDTATL6000, EDTATL7000, EDTATL7500, EDTATL7700, EDTATL7720, EDTATL7850, EDTATL8000, EDTATL8001, EDTATL9000, EDTATL9500
Revision	4
Revision Date	15 Jul 2022
Reason for Issue	Updated SDS

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm^2 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/cm^3 Grams per Cubic Centimetre
g/l 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
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m^3 Kilograms per Cubic Metre
lb 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.
ltr or **L** Litre
m^3 Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m^3 Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
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