

1. IDENTIFICATION

Product Name	Ethylenediamine Tetraacetic Acid
Other Names	Glycine, N,N'-1,2-Ethanediybis[N-(Carboxymethyl)-
Uses	As one chelating agent, it can be used in industrial cleaning, personal and household uses, Bleaching of pulp and textiles, Micronutrients for agriculture, Photo processing, Printing, ink manufacturing , Food, Polymer processing and Metal plating etc.
Chemical Family	No Data Available
Chemical Formula	C10H16N2O8
Chemical Name	Ethylenediamine Tetraacetic Acid
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty 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	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, 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	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 +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 Acute Toxicity (Inhalation) - Category 4
Serious Eye Damage/Irritation - Category 2A
Specific Target Organ Toxicity (Repeated Exposure) - Category 2

Pictograms



Signal Word Warning

Hazard Statements

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention	P261	Avoid breathing fumes/gas/mist/vapours/spray.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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 NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Health Hazards	6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
	6.3B	Substances that are mildly irritating to the skin
	6.4A	Substances that are irritating to the eye
Environmental Hazards	9.1C	Substances that are harmful in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ethylenediamine Tetraacetic Acid	No Data Available	60-00-4	>99.2 - <99.6 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed, wash out mouth immediately with plenty of water provided person is conscious. Call a physician. Wash contaminated clothing before reuse.
Eye	In case of contact, immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids, for at least 15 minutes. Check for and remove any contact lenses and continue to rinse for at least 15 minutes. If irritation occurs, seek medical attention.
Skin	In case of contact, Immediately wash with soap and copious amounts of water. If irritation persists, seek medical attention.
Inhaled	If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	No information available on medical conditions which are aggravated from exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	Unsuitable extinguishing media : Carbon dioxide
Flammability Conditions	Product is a non-flammable solid.
Extinguishing Media	Dry extinguishing media, foam.
Fire and Explosion Hazard	Hazardous combustion products: Decomposition products may include the following materials: carbon oxides, nitrogen oxides.
Hazardous Products of Combustion	Non-combustible solid. Incompatible with Strong oxidizing agents, Strong bases, Copper, copper alloys, nickel and sources of ignition. This product emits toxic fumes under fire conditions. These may include carbon monoxide, carbon dioxide and nitrogen oxides.
Special Fire Fighting Instructions	Move fire exposed containers from fire area if it can be done without risk. Cool containers with water spray. Prevent fire fighting water from entering surface water or ground water.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.
Flash Point	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. Not applicable °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilt. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes
Storage	Store in a cool, dry, well-ventilated area. Keep away from sources of heat and ignition. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods by Road and Rail.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).

Exposure Limits

Biological Limits

Material	Type	Limit Info
Ethylenediamine Tetraacetic Acid		

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 RESPIRATOR: Wear a P1 or P2 particulate respirator when handling this product (AS1715/1716).
EYES: Chemical safety goggles (AS1336/1337).
HANDS: Compatible chemical resistant gloves (AS2161).
CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).

Work Hygienic Practices Provide local exhaust or process enclosure ventilation system. Prepare safety shower and eye wash equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystal
Odour	Odourless
Colour	White
pH	No Data Available
Vapour Pressure	2E-012hPa torr (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	In water: 400 mg/l 20°C
Specific Gravity	No Data Available
Flash Point	Not applicable °C
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	1.46 g/cm ³

Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	-3.86
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to Avoid	Avoid excessive heat, generating dust, direct sunlight, moisture, freezing, static discharges and high temperatures.
Materials to Avoid	Incompatible with Strong oxidizing agents, Strong bases, Copper, copper alloys, nickel and sources of ignition.
Hazardous Decomposition Products	No hazardous decomposition products if stored and handled as prescribed/indicated.
Hazardous Polymerisation	Hazardous polymerization has not been reported.

11. TOXICOLOGICAL INFORMATION

General Information	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. RTECS #: AH4025000 Acetic acid, (Ethylenedinitrilo) tetra-toxicity data IPR-RAT LD50:397 MG/KG,AHRTAN 13,295,1962 ORL-MUS LD50:30 MG/KG,FACTOD7 29,845,1991 IPR-MUS LD50:250 MG/KG,NTIS** AD691-490 IVN-MUS LD50:28500 UG/KG,JJPAAZ 63,187,1993 Target organ data: behavioral (convulsions or effect on seizure threshold) only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTEDS for complete information.
EyeIrritant	Irritating to eyes.
Ingestion	May be harmful if swallowed.
Inhalation	Irritating to the respiratory tract. May be harmful by inhalation. Material is irritating to mucous membranes and upper respiratory tract.
SkinIrritant	Irritating to skin. May be harmful by skin absorption.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Acute fish toxicity : LC50 (96 h) : 159mg/L (Lepomis macrochirus) Acute daphnia toxicity : EC50=140mg/L/48hr (Daphnia magna) Acute algae toxicity : EC50>100mg/L/72hr (Pseudokirchnerella subcapitata)
Persistence/Degradability	No information available on persistence/degradability for this product.
Mobility	No information available on mobility for this product.
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product. Bioconcentration factor: 0.8-1.9, 19 (calculated)
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	ETHYLENEDIAMINE TETRAACETIC ACID
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
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	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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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	HSR003060
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	200-449-4
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	EDTAAC1000, EDTAAC1001, EDTAAC1002, EDTAAC1003, EDTAAC1004, EDTAAC1005, EDTAAC1006, EDTAAC1007, EDTAAC1008, EDTAAC1009, EDTAAC1010, EDTAAC1011, EDTAAC1012, EDTAAC1013, EDTAAC1014, EDTAAC1015, EDTAAC1016, EDTAAC1017, EDTAAC1018, EDTAAC1019, EDTAAC1020, EDTAAC1021, EDTAAC1022, EDTAAC1023, EDTAAC1024, EDTAAC1025, EDTAAC1026, EDTAAC1027, EDTAAC1800, EDTAAC1801, EDTAAC1802, EDTAAC1803, EDTAAC1804, EDTAAC1805, EDTAAC1806, EDTAAC1807, EDTAAC1808, EDTAAC1809, EDTAAC1810, EDTAAC1811, EDTAAC1812, EDTAAC1813, EDTAAC2000, EDTAAC3000, EDTAAC3001, EDTAAC3010, EDTAAC3500, EDTAAC3501, EDTAAC4000, EDTAAC5000, EDTAAC6000, EDTAAC6001, EDTAAC6002, EDTAAC7400, EDTAAC7500, EDTAAC7700, EDTAAC7701, EDTAAC7702, EDTAAC7703, EDTAAC7705, EDTAAC7707, EDTAAC9000
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Revision	2
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Revision Date	03 Jun 2015
Reason for Issue	Update SDS
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² 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/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/m³ 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 m³ 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 mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health 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</p>