

1. IDENTIFICATION

Product Name Ethoxy Propyl Acetate (EPA)

Other Names 2-ethoxy-1-methylethyl acetate; 2-Propanol, 1-ethoxy-, acetate; Ethyl Proxitol Acetate

Uses Manufacture of substances; Coatings; Cleaning agents; Specialty solvent.

Chemical Family No Data Available

Chemical Formula C7H14O3

Chemical Name 1-Ethoxy-2-propyl acetate

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 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

+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 Flammable Liquids - Category 3

Specific Target Organ Toxicity (Single Exposure) - Category 3

Pictograms





Signal Word Warning

Hazard Statements H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

Precautionary Statements Prevention P261 Avoid breathing mist/vapours/spray.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting and all other equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P280 Wear protective gloves/eye protection/face protection.

P235 Keep cool.

P271 Use only outdoors or in a well-ventilated area.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

Response P370 + P378 In case of fire: Alcohol resistant foam is the preferred fire-fighting medium but, if it

is not available, normal foam can be used.

P312 Call a POISON CENTER or doctor if you feel unwell.

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

water or shower.

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

Storage P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up

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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications Physical **3.1C** Flammable liquid - medium hazard

Hazards

Health Hazards 6.9B

Substances that are harmful to human target organs or systems

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
1-Ethoxy-2-propyl acetate	C7H14O3	54839-24-6	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth thoroughly with water. Do not induce vomiting. Get medical advice/attention immediately. If

vomiting occurs, the head should be kept low to prevent aspiration. Keep affected person under observation.

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

the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye

irritation persists, get medical advice/attention.
*Splash in eye requires examination by eye specialist.

Skin IF ON SKIN (or hair): Remove and isolate contaminated clothing and shoes. Immediately flush skin and hair with running

water for at least 15 minutes. Wash skin with soap and water. If skin irritation occurs, get medical advice/attention. Wash

contaminated clothing and shoes before reuse.

*In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if

adhering to skin.

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

doctor/physician for advice. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Keep affected person under observation.

Advice to Doctor Treat symptomatically. Keep victim calm and warm. Effects may be delayed. Show this Safety Data Sheet (SDS) to the

medical personnel. 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 Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. For

massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away

from tanks engulfed in fire.

Flammability Conditions FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.

Extinguishing MediaUse dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use water jet as an

extinguisher, as this will spread the fire. Alcohol resistant foam is the preferred firefighting medium but, if it is not

available, normal foam can be used.

*CAUTION: This product has a very low flash point: Use of water spray when fighting fire may be inefficient.

Fire and Explosion Hazard Risk of violent reaction or explosion! Vapours may form explosive mixtures with air. Vapours may travel to source of

ignition and flash back. Most vapours are heavier than air; They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapour explosion hazard indoors, outdoors or in sewers. Containers may explode

when heated. Many liquids are lighter than water.

Hazardous Products of

Combustion

Fire may produce irritating, toxic and/or corrosive gases, including oxides of Carbon, acrid smoke or fumes.

Special Fire Fighting Instructions Contain runoff from fire control water - Runoff may cause pollution. Runoff to sewer may create fire or explosion hazard!

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only

provide limited protection.

Flash Point 53 °C [Closed cup]

Lower Explosion Limit1%Upper Explosion Limit9.8 %Auto Ignition Temperature325 °CHazchem Code•3Y

6. ACCIDENTAL RELEASE MEASURES

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

flares, sparks or flame). All equipment used in handling the product must be earthed. Do not touch or walk through spilled material - Take care as floors and other surfaces may become slippery! Avoid breathing vapours and 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 (see SECTION 13).

*Use clean, non-sparking tools to collect absorbed material. Containers with collected spillage must be properly labelled

with correct contents and hazard symbol.

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

*A vapour-suppressing foam may be used to reduce vapours. Water spray may reduce vapour, but may not prevent

ignition in closed spaces.

Decontamination Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in

designated containers, labelled with their contents.

Environmental Precautionary

Measures

Spillages and decontamination runoff should be prevented from entering drains and watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other

appropriate regulatory body.

Evacuation Criteria Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher

ground.

Personal Precautionary Measures Use personal protective equipment as required (see SECTION 8).

*If ventilation is inadequate, suitable respiratory protection must be worn.

7. HANDLING AND STORAGE

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

adequate ventilation - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required; In case of inadequate ventilation, wear respiratory protection (see SECTION 8). FLAMMABLE LIQUID & VAPOUR: Keep away from heat, hot surfaces, sparks, open flames and ignition sources - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take action to prevent static discharges. Restrict line velocity during pumping. Avoid splash

filling. Do not use compressed air for filling, discharging or handling operations.

Storage Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Avoid exposure to air,

light and moisture. Keep away from heat, hot surfaces, sparks, open flames and ignition sources - No smoking. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible materials (see SECTION 10). Store locked

up. Storage facilities should be bunded to avoid release to the environment.

Container Keep in the original container or suitable/compatible material, i.e. Carbon steel, mild steel, stainless steel. Only store in

correctly labelled containers.

*Do not store in Aluminium; May attack some plastics, rubber and coatings.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General No specific exposure standards are available for this product.

Derived no-effect levels (DNELs) for Workers:

Inhalation, short-term, systemic effects: 608 mg/m3.
Inhalation, long-term, systemic effects: 302 mg/m3.

- Dermal, long-term, systemic effects: 103 mg/m3.

Exposure Limits No Data Available

Biological Limits Predicted no-effect concentrations (PNECs):

Freshwater: 1.3 mg/l
Marine water: 0.13 mg/l
Freshwater sediment: 6.4 mg/kg

- Marine water sediment: 0.64 mg/kg

Soil: 1.34 mg/kgSTP: 62.5 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. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protection Equipment - Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended filter type: A (organic vapour). Respirator selection must be based on exposure levels, the hazards of the product and the safe working

limits of the selected respirator. When spraying, wear a suitable supplied-air respirator.

- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Safety goggles; If risk of

splashing, wear face shield.

- Hand protection: Wear protective gloves. Recommended: For exposure up to 8 hrs, wear Butyl rubber or Nitrile rubber gloves. For short-term/splash protection, Polyvinyl chloride (PVC) gloves are suitable. Check during use that the gloves

are retaining their protective properties and change them as soon as any deterioration is detected.

- Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Impervious

protective clothing. Wear antistatic and flame-retardant clothing, if a local risk assessment deems it so.

Special Hazards Precaustions Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour

concentrations.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and

using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Contaminated

clothing should be placed in a closed container for disposal or decontamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Appearance Liquid

Odour Characteristic, ester

Colour Colourless

pH No Data Available

Vapour Pressure 2.3 hPa (@ 20 °C)

Relative Vapour Density No Data Available

Boiling Point 153 - 160 °C (1013 hPa)

Melting Point No Data Available

Freezing Point -89 °C

Solubility Soluble in water (69.6 g/l) - Soluble in organic solvents 20°C

Specific Gravity 0.941 g/cm3 [ASTM D4052]

Flash Point 53 °C [Closed cup]

Auto Ignition Temp 325 °C

Evaporation RateNo Data AvailableBulk Density0.941 g/cm3

Corrosion Rate No Data Available No Data Available **Decomposition Temperature** No Data Available Density **Specific Heat** No Data Available **Molecular Weight** 146.2 g/mol **Net Propellant Weight** No Data Available **Octanol Water Coefficient** log Pow: 0.76 **Particle Size** No Data Available **Partition Coefficient** No Data Available **Saturated Vapour Concentration** No Data Available Vapour Temperature No Data Available 1.33 mm2/s (@ 40 °C) Viscosity

Additional Characteristics Electrical conductivity: >10,000 pS/m

Potential for Dust Explosion Not applicable.

Fast or Intensely Burning

Characteristics

Volatile Percent

VOC Volume

Risk of violent reaction or explosion!

Flame Propagation or Burning No information available.

Rate of Solid Materials

No Data Available

No Data Available

Non-Flammables That Could Contribute Unusual Hazards to a

Fire

No information available.

Properties That May Initiate or

Contribute to Fire Intensity

Vapours

FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.

Reactions That Release Gases or

Release of Invisible Flammable Vapours and Gases

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Vapours may form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information Contact with air and light may form explosive peroxides!

Chemical Stability Stable at normal ambient temperatures and when used as recommended.

Conditions to Avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid exposure to air, light and

moisture.

Materials to Avoid Incompatible/reactive with oxidising agents, strong acids, strong alkalis, Aluminium, Copper. May attack some plastics,

rubber and coatings.

Hazardous Decomposition

Products

A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and

unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative

degradation.

No information available. **Hazardous Polymerisation**

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Low toxicity if swallowed, in contact with skin and if inhaled. Liquid irritates mucous membranes and may cause abdominal pain if swallowed. Ingestion may cause irritation and gastrointestinal symptoms, including upset stomach. Symptoms following overexposure may include stomach pain, nausea, vomiting, diarrhoea, headache, dizziness

and intoxication.

- Skin corrosion/irritation: Not irritating to skin. Prolonged and frequent contact may cause redness and irritation. Product has a defatting effect on skin Repeated exposure may cause skin dryness or cracking. May cause allergic contact eczema.
- Eye damage/irritation: Not irritating to eyes. Symptoms following overexposure may include redness, pain, visual disturbances, blurred vision. Repeated exposure may cause chronic eye irritation. Vapour or spray in the eyes may cause irritation and smarting.
- Respiratory/skin sensitisation: Not sensitising.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: No evidence that the product can cause cancer.
- Reproductive toxicity: No evidence of toxicity to reproduction.
- STOT (single exposure): May cause drowsiness or dizziness. Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include headache, fatigue, nausea, vomiting. Prolonged inhalation of high concentrations may damage respiratory system. The product contains organic solvents. Overexposure may depress the central nervous system, causing dizziness and intoxication.
- STOT (repeated exposure): Not classified as a specific target organ toxicant after repeated exposure. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
- Aspiration toxicity: Not an aspiration hazard. Based on available data, the classification criteria are not met.

Acute

Ingestion Acute toxicity (Oral):

- LD50, Rat: >5,000 mg/kg [Supplier's SDS].

Other Acute toxicity (Dermal):

- LD50, Rabbit: >5,000 mg/kg [Supplier's SDS].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:

- LCO, Fish (Onchorhynchus mykiss (Rainbow trout)): 140 mg/l (96 h). - EC50, Aquatic invertebrates (Daphnia magna): 110 mg/l (48 h).

- EC50, Algae/aquatic plants (Selenastrum capricornutum): >100 mg/l (72 h).

- NOEC, Aquatic invertebrates: >100 mg/l

Persistence/Degradability Readily biodegradable. Oxidises rapidly by photochemical reactions in air.

Mobility The product is water-soluble and may spread in water systems. If product enters soil it will be mobile and may

contaminate groundwater.

Environmental Fate The product components are not classified as environmentally hazardous. However, large or frequent spills may have

hazardous effects on the environment.

Bioaccumulation Potential Not expected to bioaccumulate significantly.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Recover or recycle, if possible. Dispose of contents/container via a licensed waste disposal contractor and in accordance

with local/regional/national regulations.

Special Precautions for Land Fill Contaminated packages must be completely emptied before sending away for laundering and re-use. When handling

waste, the safety precautions applying to handling of the product should be considered.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

EPG 14 Liquids - Highly Flammable

UN Number 3272
Hazchem •3Y
Pack Group III

Special Provision No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

EPG 14 Liquids - Highly Flammable

 UN Number
 3272

 Hazchem
 3Y

 Pack Group
 III

Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

EPG 14 Liquids - Highly Flammable

 UN Number
 3272

 Hazchem
 3Y

 Pack Group
 III

Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

ERG 127 Flammable Liquids (Polar / Water-Miscible)

UN Number 3272
Hazchem •3Y
Pack Group III

Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

UN Number 3272
Hazchem •3Y
Pack Group III

Special Provision No Data Available

EMS F-E, S-D Marine Pollutant No

Air Transport

IATA DGR

Proper Shipping Name ESTERS, N.O.S. (2-ethoxy-1-methylethyl acetate)

Class 3 Flammable Liquids
Subsidiary Risk(s) No Data Available

UN Number 3272
Hazchem •3Y
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 HSR002495

National/Regional Inventories

Australia (AIIC) Listed

Canada (DSL) Listed

Canada (NDSL) Not Determined

China (IECSC) Listed

Europe (EINECS) 259-370-9

Europe (REACh) 01-2119475116-39-

Japan (ENCS/METI) Listed

Korea (KECI) Listed

Malaysia (EHS Register) Not Determined

New Zealand (NZIoC) Listed

Philippines (PICCS) Listed

Switzerland (Giftliste 1) Not Determined

Switzerland (Inventory of Notified

Substances)

Not Determined

Taiwan (NCSR) Not Determined

USA (TSCA) Listed

16. OTHER INFORMATION

Related Product Codes ETPRAC1000, ETPRAC2100, ETPRAC2101, ETPRAC2200, ETPRAC2201, ETPRAC2300, ETPRAC3000

Revision 4

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square CentimetresCO2 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
inH2O 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 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

mmH20 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