

1. IDENTIFICATION

Product Name	Ethoxy Propanol
Other Names	1-Ethoxy-2-propanol
Uses	Solvent for Industrial/Professional use.
Chemical Family	No Data Available
Chemical Formula	C5H12O2
Chemical Name	2-Propanol, 1-ethoxy-
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	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

Redox Ltd

Corporate Office Sydney Locked Bag 15 Minto NSW 2566 Australia 2 Swettenham Road Minto NSW 2566 Australia All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

Form 21047, Revision 3, Page 1 of 11, 01-Feb-2024 02:00:18

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Australia Adelaide Brisbane Melbourne Perth UK Sydney

New Zealand Malaysia Auckland Christchurch Kuala Lumpur USA Los Angeles Hawke's Bay Oakland Mexico London Saltillo



Globally Harmonised Syste	m		
Hazard Classification		Hazardous according to Chemicals (GHS)	the criteria of the Globally Harmonised System of Classification and Labelling of
Hazard Categories		Flammable Liquids - Ca	tegory 3
		Serious Eye Damage/Irr	itation - Category 2A
		Specific Target Organ T	oxicity (Single Exposure) - Category 3
Pictograms			!
Signal Word		Warning	
Hazard Statements		H226	Flammable liquid and vapour.
		H319	Causes serious eye irritation.
		H336	May cause drowsiness or dizziness.
Precautionary Statements	Prevention	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		P261	Avoid breathing fumes/mists/vapours/spray.
		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.
		P235	Keep cool.
		P271	Use only outdoors or in a well-ventilated area.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	P370 + P378	In case of fire: Use carbon dioxide (CO2), dry chemical, alcohol resistant foam or water spray for extinction.
		P337 + P313	If eye irritation persists: Get medical advice.
		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.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		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)
 Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Physical Hazards	3.1C	Flammable liquid - medium hazard
	Health Hazards	6.4A	Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients			
Chemical Entity	Formula	CAS Number	Proportion
2-Propanol, 1-ethoxy-	C5H12O2	1569-02-4	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure		
Swallowed	IF SWALLOWED: Rinse mouth with water. Do not induce vomiting. Get immediate medical advice/attention. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. 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. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.	
Skin	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. 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. Inhalation may cause central nervous system effects! Call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.	
Advice to Doctor	Show this safety data sheet (SDS) to the doctor in attendance. Treat symptomatically. Keep victim calm and warm. 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	Evacuate area. Do not attempt to take action without suitable protective equipment. If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out. Contain the extinguishing fluids by bunding.
Flammability Conditions	FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use straight streams. 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, corrosive and/or toxic gases, including Carbon oxides (CO, CO2), Organic compounds.

Special Fire Fighting Instructions	Contain runoff from fire control or dilution 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	40 °C [ASTM D 93]
Lower Explosion Limit	1.3 %
Upper Explosion Limit	12 %
Auto Ignition Temperature	255 ℃
Hazchem 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 flames in immediate area). All equipment used in handling the product must be earthed. Do not touch or walk through spilled material. Avoid breathing vapour/aerosol and contact with eyes, skin and clothing. *Ensure procedures and training for emergency decontamination and disposal are in place. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.
Clean Up Procedures	Recover large spills by pumping (use an explosion proof or hand pump). Absorb small spillage or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal (see SECTION 13). *Use clean, non-sparking tools to collect absorbed material.
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Dike far ahead of large spill for later disposal. *A vapour-suppressing foam may be used to reduce vapours. Water spray may reduce vapour, but may not prevent ignition in closed spaces.
Decontamination	No information available.
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 a safe area. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

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/aerosols and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). FLAMMABLE LIQUID & VAPOUR: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground and bond container and receiving equipment. Use explosion-proof equipment and non-sparking tools. Take action to prevent static discharges. Avoid mixing with incompatible materials (see SECTION 10). Do not use compressed air for filling, discharging or handling.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed - After use replace the closing cap immediately. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10). Keep in an area equipped with solvent-resistant flooring. Store locked up. *Product is hygroscopic. For prolonged storage, it is recommended to keep the product under a nitrogen atmosphere.
Container	Keep in the original container, Stainless steel or Steel. *Unsuitable material: Plastic articles; Butyl caoutchouc (butyl rubber); NR (natural rubber, natural latex); NBR (Nitrile rubber).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Contains no substances with occupational exposure limit values. *DNEL/DMEL (workers): - Inhalation (Acute, systemic effects): 317 mg/m3
Exposure Limits	No Data Available
Biological Limits	Predicted No Effect Concentrations (PNECs): - Water (Freshwater): 10 mg/l - Water (Marine): 1 mg/l - Sewage Treatment Plant (STP): 1,250 mg/l - Sediment (Freshwater): 37.6 mg/kg - Sediment (Marine water): 3.76 mg/kg - Soil: 2.4 mg/kg - Secondary poisoning: 142 mg/kg food
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); The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used (refer to AS/NZS 1715 & 1716). Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Tightly fitting safety goggles. Hand protection: Wear protective gloves. Recommended: Wear chemically resistant gloves, e.g. Butyl caoutchouc (butyl rubber), Neoprene, NBR (Nitrile rubber). Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Solvent-resistant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.
Special Hazards Precaustions	Avoid release to the environment. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time).
Work Hygienic Practices	Smoking, eating and drinking should be prohibited in the application area. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Characteristic, ether-like
Colour	Clear
рН	No Data Available
Vapour Pressure	1.2 Pa (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	136 °C
Melting Point	No Data Available
Freezing Point	ca70 °C
Solubility	Completely miscible with water - Soluble in organic solvents
Specific Gravity	0.897
Flash Point	40 °C [ASTM D 93]
Auto Ignition Temp	255 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available

Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.897 g/cm3
Specific Heat	No Data Available
Molecular Weight	104.1 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	<1
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	57.7 %
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion!
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	FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, corrosive and/or toxic gases, including Carbon oxides (CO, CO2), Organic compounds.
Release of Invisible Flammable Vapours and Gases	Vapours may form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	Product is hygroscopic. May react with oxygen to form explosive peroxides.
Chemical Stability	The product is stable under storage at normal ambient temperatures.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Protect from sunlight and exposure to air.
Materials to Avoid	Incompatible/reactive with strong oxidizing agents, atmospheric oxygen, acids and bases.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, corrosive and/or toxic gases, including Carbon oxides (CO, CO2), Organic compounds.
Hazardous Polymerisation	Hazardous polymerisation may occur upon depletion of inhibitor.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Not classified (Based on available data, the classification criteria are not met). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

- Skin corrosion/irritation: Not classified (Based on available data, the classification criteria are not met). May cause redness and swelling of the skin. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

- Eye damage/irritation: Causes serious eye irritation; erythema (redness).
- Respiratory/skin sensitisation: Not classified (Based on available data, the classification criteria are not met).
- Germ cell mutagenicity: Not classified (Based on available data, the classification criteria are not met).
- Carcinogenicity: Not classified (Based on available data, the classification criteria are not met).
- Reproductive toxicity: Not classified (Based on available data, the classification criteria are not met).
- STOT (single exposure): May cause drowsiness or dizziness (central nervous system effects); burning sensation,

breathing difficulties, coughing. Possible effects include headache, dizziness, cramp, unconsciousness and death.

- STOT (repeated exposure): Not classified (Based on available data, the classification criteria are not met).

- Aspiration toxicity: Not classified (Based on available data, the classification criteria are not met).

Acute

Ingestion	Acute toxicity (Oral): - LD50, Rat: >5,000 mg/kg
Other	Acute toxicity (Dermal): - LD50, Rabbit: >5,000 mg/kg
Inhalation	Acute toxicity (Inhalation): - LC50, Rat: >10,000 ppm (4 h).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish: >100 mg/l - LC50, Crustacea (Daphnia): >100 mg/l - EC50, Algae/aquatic plants: >100 mg/l
Persistence/Degradability	Readily biodegradable.
Mobility	The product is water soluble. Highly mobile in soils.
Environmental Fate	The product is not classified as dangerous for the environment.
Bioaccumulation Potential	The product has low potential for bioaccumulation.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	If recycling is not possible, dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Empty containers retain residue and can be dangerous. Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate.

14. TRANSPORT INFORMATION

Land Transport (Australia) ADG Code	
Proper Shipping Name	ALCOHOLS, N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1987

Userhau	21/
Hazchem Back Group	•3Y
Pack Group Special Provision	III No Data Available
Special Provision	NO Data AvaiidDie
Land Transport (Malaysia) ADR Code	
Proper Shipping Name	ALCOHOLS N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1987
Hazchem	•3Y
Pack Group	11
Special Provision	No Data Available
Land Transport (New Zealand)	
NZS5433	
Proper Shipping Name	ALCOHOLS, N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1987
Hazchem	•3Y
Pack Group	III
Special Provision	No Data Available
Land Transport (United States of America) US DOT	
Proper Shipping Name	ALCOHOLS, N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	127 Flammable Liquids (Polar / Water-Miscible)
UN Number	1987
Hazchem	•3Y
Pack Group	III
Special Provision	No Data Available
Sea Transport IMDG Code	
Proper Shipping Name	ALCOHOLS, N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1987
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	ALCOHOLS, N.O.S. (1-Ethoxy-2-propanol)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1987
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	HSR001218 (Reissued)

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	216-374-5
Europe (REACh)	01-2119462792-32-
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	ETPROP0700, ETPROP1000, ETPROP1001, ETPROP1002, ETPROP1003, ETPROP1004, ETPROP1005, ETPROP1006, ETPROP1007, ETPROP3000, ETPROP4000, ETPROP9900
Revision	5
Revision Date	18 May 2021
	5
	Oz Ounce
	PEL Permissible Exposure Limit Pa Pascal

pb Parts per Billion
ppm Parts per Million per 2 Hours
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