

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Ethyl 3-ethoxypropionate</b>
<b>Other Names</b>	EEP
<b>Uses</b>	Solvents.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C7H14O3
<b>Chemical Name</b>	Propanoic acid, 3-ethoxy-, ethyl ester
<b>Product Description</b>	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

<b>Hazard Classification</b>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
<b>Hazard Categories</b>	Flammable Liquids - Category 3		
<b>Pictograms</b>			
<b>Signal Word</b>	Warning		
<b>Hazard Statements</b>	<b>H226</b>	Flammable liquid and vapour.	
	<b>AUH066</b>	Repeated exposure may cause skin dryness or cracking	
<b>Precautionary Statements</b>	Prevention	<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		<b>P233</b>	Keep container tightly closed.
		<b>P240</b>	Ground/bond container and receiving equipment.
		<b>P241</b>	Use explosion-proof electrical/ventilating/lighting and all other equipment.
		<b>P242</b>	Use only non-sparking tools.
		<b>P243</b>	Take precautionary measures against static discharge.
		<b>P280</b>	Wear protective gloves/eye protection/face protection.
		<b>P273</b>	Avoid release to the environment.
	Response	<b>P370 + P378</b>	In case of fire: Use carbon dioxide (CO2), dry chemical, regular foam extinguishing agent or water spray for extinction.
		<b>P303 + P361 + P353</b>	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
		<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
	Storage	<b>P403 + P235</b>	Store in a well-ventilated place. Keep cool.
	Disposal	<b>P501</b>	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

<b>HSNO Classifications</b>	Physical Hazards	<b>3.1C</b>	Flammable liquid - medium hazard
	Health Hazards	<b>6.3B</b>	Substances that are mildly irritating to the skin
	Environmental Hazards	<b>9.1C</b>	Substances that are harmful in the aquatic environment

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ethyl 3-ethoxypropionate	C7H14O3	763-69-9	100 %

## 4. FIRST AID MEASURES

### *Description of necessary measures according to routes of exposure*

<b>Swallowed</b>	If swallowed: Rinse mouth. Do not induce vomiting. Call a Poison Centre or doctor/physician if you feel unwell. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Never give anything by mouth to an unconscious person.
<b>Eye</b>	Eye contact: 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.
<b>Skin</b>	Skin contact: Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
<b>Inhaled</b>	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician if you feel unwell. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Treat symptomatically. Ensure that attending medical personnel are aware of identity and nature of product(s) involved, and take precautions to protect themselves.
<b>Medical Conditions Aggravated by Exposure</b>	May aggravate pre-existing skin, eye and respiratory disorders.

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out. Avoid getting water inside containers.
<b>Flammability Conditions</b>	HIGHLY FLAMMABLE LIQUID - Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.
<b>Extinguishing Media</b>	Use foam, dry chemical, Carbon dioxide or water spray for extinction - Do not use water jets. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.
<b>Fire and Explosion Hazard</b>	Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Many vapours are heavier than air and will collect in low or confined areas. Vapours from runoff may create an explosion hazard. Containers may explode when heated.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating and/or toxic or gases, including: Carbon oxides.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways; Vapours from runoff may create an explosion hazard.
<b>Personal Protective Equipment</b>	Full fire kit and breathing apparatus - Normal firefighting clothing is appropriate (i.e. self-contained open circuit positive pressure compressed air breathing apparatus, worn in combination with fire kit, firefighters' gloves and firefighters' boots).
<b>Flash Point</b>	58 °C
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	377 °C
<b>Hazchem Code</b>	•3Y

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	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. Avoid breathing vapours and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Absorb spill with earth, sand or other non-combustible material; Use clean, non-sparking tools to collect material and place it in suitable containers for later disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
<b>Decontamination</b>	No information available.

<b>Environmental Precautionary Measures</b>	Spillages and decontamination runoff should be prevented from entering drains and watercourses - Runoff may pollute waterways; Vapours from runoff may create an explosion hazard.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Wear protective gloves/eye protection/face protection (see SECTION 8). Keep away from heat and ignition sources - No smoking. Ground/bond container and receiving equipment. Use explosion proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
<b>Storage</b>	Store in a well-ventilated place. Keep cool. Keep container dry. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Keep container tightly closed. Inspect periodically for damage or leaks. Keep away from incompatible materials (oxidising agents, metals). - Flammable materials should be stored in a separate safety storage cabinet or room.
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available for this product.
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	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.
<b>Personal Protection Equipment</b>	Respiratory protection: In case of inadequate ventilation or when vapours/aerosols are generated, wear respiratory protection. Recommended filter type: A - Organic vapour. Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Splash goggles. Hand protection: Wear protective gloves. Recommended: Impervious gloves. Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Lab coat.
<b>Special Hazards Precautions</b>	Many vapours are heavier than air and will collect in low or confined areas (e.g. drains, basements, tanks). Do NOT enter confined spaces where vapour may have collected.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and wash before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear liquid
<b>Odour</b>	Faint
<b>Colour</b>	Colourless
<b>pH</b>	5 - 7
<b>Vapour Pressure</b>	1.11 mmHg (@ 25 °C)
<b>Relative Vapour Density</b>	5.03 Air = 1
<b>Boiling Point</b>	170 °C
<b>Melting Point</b>	-50 °C
<b>Freezing Point</b>	-50 °C

<b>Solubility</b>	10 % vol. 25°C
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	58 °C
<b>Auto Ignition Temp</b>	377 °C
<b>Evaporation Rate</b>	0.12 (n-BA = 1)
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	146.19 g/mol
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	1.08
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No information available.
<b>Potential for Dust Explosion</b>	Not applicable.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	HIGHLY FLAMMABLE LIQUID - Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.
<b>Reactions That Release Gases or Vapours</b>	Fire may produce irritating and/or toxic or gases, including: Carbon oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	Vapours will form explosive mixtures with air.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No information available.
<b>Chemical Stability</b>	Stable under the recommended storage and handling conditions.
<b>Conditions to Avoid</b>	Keep away from heat/sparks/open flames/hot surfaces - No smoking. Take precautionary measures against static discharge.
<b>Materials to Avoid</b>	Incompatible with oxidising agents, metals, strong acids and bases.
<b>Hazardous Decomposition Products</b>	Fire/heat may produce irritating and/or toxic or gases, including: Carbon oxides. Vapours will form explosive mixtures with air.
<b>Hazardous Polymerisation</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Acute toxicity: Symptoms may include ataxia, drowsiness. May cause irritation of mouth, throat, and stomach if
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swallowed.  
Skin corrosion/irritation: May cause mild skin irritation. Prolonged or repeated skin contact may cause drying and irritation.  
Eye damage/irritation: May cause eye irritation. Symptoms may include tearing, redness and discomfort.  
Respiratory/skin sensitisation: Not expected to be a skin or respiratory sensitiser.  
Germ cell mutagenicity: Not expected to be mutagenic in humans.  
Carcinogenicity: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.  
Reproductive toxicity: Not expected to have reproductive effects.  
STOT - single exposure: May cause irritation of the nose, throat, mucous membranes, and respiratory tract.  
Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.  
STOT - repeated exposure: Prolonged overexposure may cause liver and kidney effects. Repeated exposure affects the nervous system - Effects seen at high doses only.  
Aspiration toxicity: No information available.

#### **Acute**

<b>Ingestion</b>	Acute toxicity (Oral): - LD50, Rat: 3,200 - 5,000 mg/kg
<b>Other</b>	Acute toxicity (Dermal): - LD50, Rabbit: 4,080 - 10,000 mg/kg
<b>Inhalation</b>	Acute toxicity (Inhalation): - LC50, Rat: >5.967 mg/L dust/mist (6 h) - LC50 (no mortality), Rat: >14.4 mg/L vapour (4 h) - LC50, Rat: >998 ppm (highest concentration tested) (6 h)
<b>Carcinogen Category</b>	None

## **12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	- Toxicity to fish: LC50, Pimephales promelas (Fathead minnow): 45.3 mg/L (96 h) [static].
<b>Persistence/Degradability</b>	Moderately biodegradable (43 % after 28 days) [OECD Guideline 301 E - Ready biodegradability].
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Harmful to aquatic life - Avoid release to the environment; Prevent entry into drains and waterways.
<b>Bioaccumulation Potential</b>	Bioaccumulation is not expected. - Log Pow: 1.08 (calculated).
<b>Environmental Impact</b>	No Data Available

## **13. DISPOSAL CONSIDERATIONS**

<b>General Information</b>	Dispose of contents/container in accordance with local/regional/national regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber.
<b>Special Precautions for Land Fill</b>	Contaminated packaging: Empty containers retain residue and can be hazardous. Do NOT cut, weld, drill or grind on or near this container. Dispose of as unused product.

## **14. TRANSPORT INFORMATION**

### **Land Transport (Australia)**

ADG Code

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available

<b>EPG</b>	14 Liquids - Highly Flammable
<b>UN Number</b>	3272
<b>Hazchem</b>	•3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

### Land Transport (Malaysia)

ADR Code

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	14 Liquids - Highly Flammable
<b>UN Number</b>	3272
<b>Hazchem</b>	3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	14 Liquids - Highly Flammable
<b>UN Number</b>	3272
<b>Hazchem</b>	3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

### Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available
<b>ERG</b>	128 Flammable Liquids (Non-Polar / Water-Immiscible)
<b>UN Number</b>	3272
<b>Hazchem</b>	3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

### Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3272
<b>Hazchem</b>	3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available
<b>EMS</b>	F-E, S-E
<b>Marine Pollutant</b>	No

## Air Transport

IATA DGR

<b>Proper Shipping Name</b>	ESTERS, N.O.S. (Ethyl-3-ethoxypropionate)
<b>Class</b>	3 Flammable Liquids
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3272
<b>Hazchem</b>	3Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## National Transport Commission (Australia)

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

<b>Dangerous Goods Classification</b>	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** HSR001040

## National/Regional Inventories

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Listed
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Listed
<b>Europe (EINECS)</b>	Not Determined
<b>Europe (REACH)</b>	Not Determined
<b>Japan (ENCS/METI)</b>	Listed
<b>Korea (KECI)</b>	Listed
<b>Malaysia (EHS Register)</b>	Not Determined
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Listed
<b>Switzerland (Giftliste 1)</b>	Not Determined



<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Not Determined
<b>USA (TSCA)</b>	Not Determined

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	ETETPR1000, ETETPR1001, ETETPR1002, ETETPR1003, ETETPR1004, ETETPR2000, ETETPR2001, ETETPR2100, ETETPR2101, ETETPR3010, ETETPR4000, ETETPR4100, ETETPR5000, ETETPR8009, ETETPR8010, ETETPR9000, ETETPR9008
<b>Revision</b>	2
<b>Revision Date</b>	18 Sep 2017
<b>Reason for Issue</b>	New SDS
<b>Key/Legend</b>	<p>&lt; Less Than &gt; Greater Than  <b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius  <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand  <b>deg F (°F)</b> Degrees Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre  <b>g/l</b> Grams per Litre  <b>HSNO</b> Hazardous Substance and New Organism  <b>IDLH</b> Immediately Dangerous to Life and Health  <b>immiscible</b> Liquids are insoluable in each other.  <b>inHg</b> Inch of Mercury  <b>inH<sub>2</sub>O</b> Inch of Water  <b>K</b> Kelvin  <b>kg</b> Kilogram  <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre  <b>lb</b> Pound  <b>LC50</b> 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.  <b>LD50</b> 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.  <b>ltr</b> or <b>L</b> Litre  <b>m<sup>3</sup></b> Cubic Metre  <b>mbar</b> Millibar  <b>mg</b> Milligram  <b>mg/24H</b> Milligrams per 24 Hours  <b>mg/kg</b> Milligrams per Kilogram  <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre  <b>Misc</b> or <b>Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present.  <b>mm</b> Millimetre  <b>mmH<sub>2</sub>O</b> Millimetres of Water  <b>mPa.s</b> Millipascals per Second  <b>N/A</b> Not Applicable  <b>NIOSH</b> National Institute for Occupational Safety and Health  <b>NOHSC</b> National Occupational Health and Safety Commission  <b>OECD</b> Organisation for Economic Co-operation and Development  <b>Oz</b> Ounce  <b>PEL</b> Permissible Exposure Limit  <b>Pa</b> Pascal  <b>ppb</b> Parts per Billion  <b>ppm</b> Parts per Million  <b>ppm/2h</b> Parts per Million per 2 Hours  <b>ppm/6h</b> Parts per Million per 6 Hours  <b>psi</b> Pounds per Square Inch  <b>R</b> Rankine  <b>RCP</b> Reciprocal Calculation Procedure</p>

**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