



SAFETY DATA SHEET PANNOX 73 REVISION 2, DATE 01 MAR 19

1. IDENTIFICATION

Product Name	PANNOX 73
Other Names	Coconut alcohol polyethylene glycol ether; Fatty alcohol polyoxyethylene glycol ether
Uses	Used in non-ionic surfactants and industrial cleaners; Emulsifier; Intermediate for sulphation.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Alcohols, C12-14, ethoxylated
Product Description	2.9 EO mole

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



Globally Harmonised System

Hazard Classification		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories		Serious Eye Damage/Irritation - Category 1 Acute Hazard To The Aquatic Environment - Category 1	
Pictograms		 	
Signal Word		Danger	
Hazard Statements		H318	Causes serious eye damage.
		H400	Very toxic to aquatic life.
Precautionary Statements	Prevention	P280	Wear eye protection/face protection.
		P273	Avoid release to the environment.
	Response	P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
		P391	Collect spillage.

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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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
		8.3A	Substances that are corrosive to ocular tissue
	Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment
		9.1D	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Alcohols, C12-14, ethoxylated	Unspecified	68439-50-9	>=99.9 %
Water	H2O	7732-18-5	<=0.1 %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure**

Swallowed	IF SWALLOWED: Rinse mouth, then drink a glass of water. Do not induce vomiting unless directed to do so by medical personnel. 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. Obtain immediate medical care.
Skin	IF ON SKIN: 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.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(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.
Flammability Conditions	Combustible liquid; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam 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.
Fire and Explosion Hazard	Containers may explode when heated.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic fumes, including Carbon oxides.
Special Fire Fighting Instructions	Contain runoff from fire control water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	>166.1 °C [Open cup]
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	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Clean up all spills immediately. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to suitable containers for disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
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. 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. 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 (see SECTION 8). Avoid direct heating and sources of ignition - No smoking. Avoid release to the environment - Collect spillage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed when not in use - Check regularly for leaks and spills. Avoid physical damage to containers. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container, glass, steel or plastic containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
Exposure Limits	No Data Available
Biological Limits	No information available.
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	<ul style="list-style-type: none"> - Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Organic vapour/particulate respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles. - Hand protection: Wear protective gloves. Recommended: Impervious gloves, e.g. PE long-sleeve gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective work clothing, e.g. overalls, safety shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Transparent liquid
Odour	No information available.
Colour	Colourless
pH	5.0 - 7.0 (5% aq.)
Vapour Pressure	<1 mmHg (@ 20 °C)
Relative Vapour Density	>1 Air = 1
Boiling Point	>250 °C
Melting Point	No Data Available
Freezing Point	4 °C
Solubility	Soluble in water

Specific Gravity	0.920 +/- 0.01
Flash Point	>166.1 °C [Open cup]
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	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
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	- CP (1% aq.): 50 ~ 52 °C - HLB: 8 - OHV (mg KOH/g): 168 ~ 178
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	Combustible liquid; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable at room temperature.
Conditions to Avoid	Avoid direct heating. Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong oxidising agents.
Hazardous Decomposition Products	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION**General Information**

- Acute toxicity: May be harmful if swallowed; large amounts may cause nausea, vomiting, diarrhoea.
- Skin corrosion/irritation: Causes mild skin irritation.
- Eye damage/irritation: Causes serious eye damage; Severely irritating to the eyes.
- Respiratory/skin sensitisation: Not sensitising to skin.
- Germ cell mutagenicity: Not considered to be genotoxic.
- Carcinogenicity: Not considered to be carcinogenic.
- Reproductive toxicity: Not considered to have reproductive or developmental toxicity.
- STOT (single exposure): Inhalation of mists or aerosols may cause respiratory irritation.
- STOT (repeated exposure): Not expected to cause serious damage to health from repeated exposure.
- Aspiration toxicity: No information available.

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic toxicity:
 - LC50, Fish (Guppy): 0.876 mg/L (96 h) [Supplier's SDS].

Persistence/Degradability

Biodegradable.

Mobility

No information available.

Environmental Fate

Very toxic to aquatic life - Avoid release to the environment.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container via a licensed disposal company and in accordance with local/regional/national regulations.

Special Precautions for Land Fill

No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name

PANNOX 73 (Alcohols, C12-14, ethoxylated)

Class

C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable

Subsidiary Risk(s)

No Data Available

EPG

47 Low To Moderate Hazard Substances

UN Number

No Data Available

Hazchem

No Data Available

Pack Group

No Data Available

Special Provision

AU01

Comments UN#3082: Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.

Land Transport (Malaysia)

ADR Code	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-14, ethoxylated)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-14, ethoxylated)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-14, ethoxylated)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code	
Proper Shipping Name	Fatty Alcohol (Pannox 73)
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	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-14, ethoxylated)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	3Z
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	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	HSR003226
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National/Regional Inventories

Australia (AIIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
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	SUFFAR1002, SUFFAR1040, SUFFAR1050, SUFFAR8000
Revision	2
Revision Date	01 Mar 2019
Key/Legend	<p>< Less Than > Greater Than</p> <p>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 Heath and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion</p>

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