SAFETY DATA SHEET
POLYETHER POLYOL
REVISION 4, DATE 16 JUL 21

1. IDENTIFICATION

Product Name	**Polyether Polyol**
Other Names	DEP-330N; Glycerol poly(oxyethylene, oxypropylene) ether; Glycerol, ethoxylated and propoxylated; KONIX FA-703; KONIX KE-810; LEP-330N; SANNIX FA-703; WANOL F3135; WANOL F3147; WANOL F3160; YD-3031; YD-330N
Uses	Base material for polyurethane. For industrial use only.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Glycerol, propylene oxide, ethylene oxide polymer
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

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

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)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Glycerol, propylene oxide, ethylene oxide polymer	Unspecified	9082-00-2	<=100 %
May contain: Antioxidant (BHT)	C15H24O	128-37-0	0 - <0.1 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention. 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, preferably an ophthalmologist.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
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.
Advice to Doctor	Treat symptomatically. First Aid responders should pay attention to self-protection and use the recommended protective clothing (see SECTION 8). *Following cases of gross overexposure, investigation of liver, kidney and eye function may be advisable.
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 (CO2), foam or water spray for extinction - Do not use water jets.
Fire and Explosion Hazard	Containers may explode when heated.

Hazardous Products of Combustion	Fire may produce irritating, corrosive and/or toxic gases, including Carbon dioxide, Carbon monoxide, oxides of Nitrogen and traces of hydrogen cyanide.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	>150 - 235 °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	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Avoid breathing mist/vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13).
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, drains or confined areas.
Decontamination	Do not flush away residues with water - Retain as contaminated waste.
Environmental Precautionary Measures	Prevent entry into soil, drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
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/aerosols and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Keep away from heat and all sources of ignition - No smoking. Lines should be purged with Nitrogen before and after transfer.
Storage	Store in a cool, dry and well-ventilated place (<35 °C). Keep containers tightly closed when not in use. Protect from sunlight. Protect from moisture/moist atmosphere (hygroscopic). Keep away from heat and all sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). *Nitrogen blanket recommended for large tanks.
Container	Keep in the original container or suitable materials. Do not store in Copper, Copper alloys. Tanks must be clean, dry and rust-free; Tanks should be fitted with heating coils in areas where the ambient temperature is below the recommended handling temperature.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standards are available for this product. COMPONENT: 2,6-Di-tert-butyl-p-cresol (CAS No. 128-37-0): - Safe Work Australia Exposure Standard: TWA = 10 mg/m3
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	- Respiratory protection: Not required under normal conditions of use. If vapours form, respirators must be used. Recommended: Full-mask respirator with filter type ABEK (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-guards or chemical splash goggles. - Hand protection: Handle with gloves. Recommended: Impervious gloves, e.g. PVC, Neoprene rubber, Nitrile rubber. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Work clothes with long sleeves (chemical resistant).
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Keep working clothes separately. Change contaminated or soaked clothing immediately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Odourless to mild, specific
Colour	Colourless/Light
pH	5.0 - 8.0
Vapour Pressure	Negligible at ambient temperature (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	Decomposes before boiling [Literature]
Melting Point	<0 °C (Pour point)
Freezing Point	No Data Available
Solubility	Soluble in acetone, methanol
Specific Gravity	1.02 - 1.04 (Water = 1)
Flash Point	>150 - 235 °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	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	900 - 910 mPa.s (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
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, corrosive and/or toxic gases, including Carbon dioxide, Carbon monoxide, oxides of Nitrogen and traces of hydrogen cyanide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	The reaction of polyols and isocyanates generates heat.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Keep away from heat and all sources of ignition. Protect from moisture.
Materials to Avoid	Incompatible/reactive with oxidising materials, strong acids, strong bases, avoid unintended contact with isocyanates.
Hazardous Decomposition Products	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include Carbon dioxide, alcohols, ethers, hydrocarbons, ketones, polymer fragments.
Hazardous Polymerisation	Polymerises exothermically with diisocyanates at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Based on physical properties, not likely to be an aspiration hazard. - Eye contact: May cause slight temporary eye irritation. May cause slight temporary corneal injury. - Skin contact: Prolonged skin contact is unlikely to result in absorption of harmful amounts. Prolonged exposure not likely to cause significant skin irritation. May cause more severe response if skin is abraded (scratched or cut). Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. Did not cause allergic skin reactions when tested in guinea pigs [for component(s) tested]. - Inhalation: At room temperature, exposure to vapour is minimal due to low volatility; single exposure is not likely to be hazardous. Vapour from heated material or mist may cause respiratory irritation. Chronic effects: Based on available data, repeated exposures are not anticipated to cause significant adverse effects. In vitro genetic toxicity studies were negative [for component(s) tested].
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: >2,000 mg/kg [Estimated].
Other	Acute toxicity (Dermal): - LD50, Rabbit: >2,000 mg/kg [Estimated].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - Acute toxicity, Fish: Expected to have low toxicity, LC/EC/IC50: >1,000 mg/L - Acute toxicity, Invertebrates: Expected to have low toxicity, LC/EC/IC50: >100 mg/L - Acute toxicity, Algae: Expected to have low toxicity, LC/EC/IC50: >1,000 mg/L - Acute toxicity, Microorganisms: Expected to have low toxicity, LC/EC/IC50: >100 mg/L
Persistence/Degradability	No information available.
Mobility	Due to the low n-octanol-water partition coefficient, an adsorption on the sediment is not to be expected.
Environmental Fate	Small particles may have physical effects on aquatic and terrestrial organisms. Prevent entry into soil, drains and waterways.
Bioaccumulation Potential	Does not bioaccumulate significantly.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Recover or recycle if possible. Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Contaminated packaging: May be recycled after cleaning, or disposed of as above.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Polyether Polyol
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Polyether Polyol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	Polyether Polyol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)
US DOT

Proper Shipping Name	Polyether Polyol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport
IMDG Code

Proper Shipping Name	Polyether Polyol
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
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport
IATA DGR

Proper Shipping Name	Polyether Polyol
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
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

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)

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	Not Hazardous

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	Not Determined
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
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)	Listed

16. OTHER INFORMATION

Related Product Codes	POLYHE2001, POLYPG1101, POLYPG1104, POLYPG1105, POLYPG1150, POLYPG1154, POLYPG1155, POLYPG1160, POLYPG1162, POLYPG1182, POLYPG1183, POLYPG1184, POLYPG5225, POLYPG5250, POLYPG8100, POLYPG8125, POLYPG8150, POLYPG8300, POLYPG8325, POLYPG8350, POLYSP1000, POLYSP1001, POLYSP1002, POLYSP1003, POLYSP1100, POLYSP1200, POLYSP1205, POLYSP1400, POLYSP1500, POLYSP2000, POLYSP2020, POLYSP2200, POLYSP2500, POLYSP2520, POLYSP2600, POLYSP3000, POLYSP3500, POLYSP4000, POLYSP4500, POLYSP4700, POLYSP4800, POLYSP5000, POLYSP5100, POLYSP5150, POLYSP5151, POLYSP5200, POLYSP5400, POLYSP6000, POLYSP6400, POLYSP6500, POLYSP6600, POLYSP7000, POLYSP7500, POLYSP8000, POLYSP8100, POLYSP8125, POLYSP8150, POLYSP8500, POLYSP9000, POLYSP9500
Revision	4
Revision Date	16 Jul 2021
Reason for Issue	Update SDS
Key/Legend	< Less Than > Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm^2** 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/cm^3** 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/m^3** 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 **m^3** Cubic Metre **mbar** Millibar **mg** Milligram **mg/24H** Milligrams per 24 Hours **mg/kg** Milligrams per Kilogram **mg/m^3** 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 **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