



SAFETY DATA SHEET ALKEST TW 80 K REVISION 5, DATE 27 JAN 23

1. IDENTIFICATION

Product Name	ALKEST TW 80 K
Other Names	Polyoxyethylene sorbitan (20) monooleate; Polysorbate 80
Uses	Industrial use.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs.
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)
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Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations
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3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs.	Unspecified	9005-65-6	>=86 - 100 %

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

Swallowed	IF SWALLOWED: Rinse mouth. Get medical advice/attention if you feel unwell. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Never give anything by mouth to an unconscious or convulsing 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: Remove and isolate 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. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	There is not known any specific antidote. Direct the treatment in accordance with the symptoms and clinical conditions of the patient. *Most important symptoms/effects, acute and delayed: Large doses may cause abdominal spasms and diarrhoea. Aspiration could cause chemical pneumonitis. May cause respiratory tract irritation.
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	Product is not flammable; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), alcohol-resistant foam or water spray for extinction. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire. *CAUTION: Use of water spray when fighting fire may be inefficient.
Fire and Explosion Hazard	Containers may explode when heated.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic fumes, including Carbon monoxide, Carbon dioxide.
Special Fire Fighting Instructions	Contain runoff from fire control 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	>149 °C [Cleveland 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. 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 a suitable container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Contain and dike spilled product with earth or sand.
Decontamination	Clean contaminated objects and areas thoroughly observing environmental regulations.
Environmental Precautionary Measures	Prevent entry into drains and waterways. Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.
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, especially in confined areas. 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).
Storage	Store in a cool, dry and well-ventilated place. Protect from sunlight. Keep containers tightly closed when not in use. Avoid prolonged exposure to the air. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container or recommended packaging material, i.e. Stainless steel, Carbon steel.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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: Wear face mask with organic vapour cartridge in case of exposure to vapours/aerosols. In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self contained breathing apparatus (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear safety glasses with side shields (or goggles). - Hand protection: Handle with gloves. Recommended: Gloves made of rubber or PVC (polyvinyl chloride). - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: PVC apron, safety boots/shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. If accidental contact occurs, exposed area should be washed immediately. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	No information available.
Colour	Yellowish - Amber
pH	6.0 (5% w/w in water @ 25°C)
Vapour Pressure	<16 mmHg (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	>100 °C
Melting Point	No Data Available
Freezing Point	<0 °C
Solubility	Soluble in water
Specific Gravity	1.07 (Water = 1)
Flash Point	>149 °C [Cleveland 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	1.07 g/cm ³
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	300 - 500 cSt (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Pour Point: -21.5 °C (- 5 °F)
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	Product is not flammable; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Combustion/decomposition may produce irritating and/or toxic gases, including Carbon monoxide, Carbon dioxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No hazardous reactivity is expected.
Chemical Stability	Stable under normal conditions of use and storage.
Conditions to Avoid	Avoid high temperatures and ignitions sources. Avoid prolonged exposure to air.
Materials to Avoid	Incompatible/reactive with strong oxidising agents.
Hazardous Decomposition Products	Combustion/decomposition may produce irritating and/or toxic gases, including Carbon monoxide, Carbon dioxide.
Hazardous Polymerisation	Will not polymerise.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none"> - Acute toxicity: Large doses may cause abdominal spasms and diarrhoea. - Skin corrosion/irritation: Reported to be non-irritating when applied undiluted to human skin for 48 hours. Produced inflammation, thickening and necrosis when applied to rabbits for one month. - Eye damage/irritation: Causes mild irritation. Slight irritant (150 mg, rats). - Respiratory/skin sensitisation: Not a skin sensitiser in guinea-pigs. - Germ cell mutagenicity: Negative results with sister chromatid exchange and Ames tests. Positive results with chromosome aberration test (induced rat liver S9). - Carcinogenicity: No evidence of carcinogenic activity in female rats or in male or female mice which received diets containing 25,000 or 50,000 ppm for 2 years. - Reproductive toxicity: Reproductive effects have been reported in animals. 10-20 day old male rat pups whose dams received chronic doses (1.25 mL/L) via drinking water exhibited an enhancement in their exploratory and locomotor activity during the diurnal period of the day. - STOT (single exposure): May cause respiratory tract irritation. - STOT (repeated exposure): Daily doses of up to 15 grams given to adult humans produced no adverse effects. Mild to moderate central nervous system depression with ataxia, paralytic activity and reduced rectal temperature was reported after oral administration in laboratory animals. Pheochromocytomas in male rats as well as inflammation, squamous hyperplasia and ulcers of the fore stomach of rats and mice have been reported in 2 year feeding studies. - Aspiration toxicity: Aspiration could cause chemical pneumonitis.
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Information on likely routes of exposure:

- Ingestion: Large doses may cause abdominal spasms and diarrhoea. Aspiration could cause chemical pneumonitis.
- Eye contact: Causes mild irritation.
- Skin contact: It is considered to be non-irritating to human skin.
- Inhalation: May cause respiratory tract irritation.

Chronic effects: No information available.

Acute**Ingestion**

Acute toxicity (Oral):

- LD50, Rat: 34,500 uL/kg
- LD50, Mouse: 25,000 mg/kg

*Probable lethal dose for humans is above 15 g/kg for 70 kg person.

Chronic**Reproduction**

Reproductive effects (Oral):

- LOAEL, Rat: 500 mg/kg/day (based upon an increase in maternal relative liver weight).
- NOAEL, Rat: >5,000 mg/kg/day (based on prenatal development).

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No information available.

Persistence/Degradability

Not readily biodegradable (32 % after 28 days).

Mobility

Expected to have high mobility in soil.

Environmental Fate

Slightly hazardous to water - Prevent entry into drains and waterways.

Bioaccumulation Potential

Not expected to bioaccumulate in the environment.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container in accordance with local/regional/national regulations. The preferred options for disposal include reuse, recycling, co-processing, finding a use for a byproduct, incineration or other thermal destruction process at licensed facilities. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions.

Special Precautions for Land Fill

Contaminated packaging: The preferred options for disposal include reuse, recycling or reclamation at licensed facilities. Do not cut or pierce the packaging, nor do hot work near them. Do not remove labels until the product has been fully removed and the packaging cleaned.

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

ADG Code

Proper Shipping Name

ALKEST TW 80 K

Class

No Data Available

Subsidiary Risk(s)

No Data Available

No Data Available

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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	ALKEST TW 80 K
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	ALKEST TW 80 K
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	ALKEST TW 80 K
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	ALKEST TW 80 K
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	ALKEST TW 80 K
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)
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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	Not Hazardous
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National/Regional Inventories

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

Korea (KECI)	Listed
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
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	POLSOE1500, POLSOE2000, POLSOE2500, POLSOE2501, POLSOE2510, POLSOE3200, POLSOE3210, SOROLE2310
Revision	5
Revision Date	27 Jan 2023
Key/Legend	<p>< Less Than > Greater Than 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</p>

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health 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