

1. IDENTIFICATION

Product Name	Tung Oil
Other Names	Chinawood Oil
Uses	Widely used in production of alkylid resin, raw lacquer, varnish and paint.
Chemical Family	No Data Available
Chemical Formula	C57H92O6
Chemical Name	Tung Oil
Product Description	Tung oil is transparent or slightly turbid liquid, extracted from the seeds of tung tree.

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.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	No. 8, Block G, Ground Floor, Taipan 2 Jalan PJU 1A/3 Ara Damansara 47301, Petaling Jaya, Selangor, Malaysia	+60-3-7843-6833

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) No Data Available

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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO ClassificationsHealth
Hazards**6.3B**

Substances that are mildly irritating to the skin

6.4A

Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS*Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Tung Oil	C57H92O6	8001-20-5	99.99 %

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

Swallowed	Rinse mouth with water. Give 2-4 cupfuls of water to drink. Do NOT induce vomiting. If vomiting occurs, give further water. Seek medical attention.
Eye	Flush eyes with plenty of running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin	Immediately remove contaminated clothing and equipment. Wash off with soap and plenty of water. If irritation occurs, seek medical attention. Wash contaminated clothing and shoes before reuse.
Inhaled	If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
Flammability Conditions	Product is a combustible liquid.
Extinguishing Media	Sand, alcohol resistant foam, carbon dioxide, dry chemical, water as fog ONLY. Do NOT direct a stream of water into the hot burning liquid. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire.
Hazardous Products of Combustion	Carbon monoxide and carbon dioxide.
Special Fire Fighting Instructions	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.

Flash Point	289 °C Closed 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	Eliminate all sources of ignition. Increase ventilation. Avoid walking through spilled product as it may be slippery. Use clean, non-sparking tools and equipment. Avoid breathing vapors, mist or gas.
Clean Up Procedures	If you spill this chemical, use absorbent paper to pick up all liquid spill material. Your contaminated clothing and absorbent paper should be sealed in a vapor-tight plastic bag for eventual disposal.
Containment	Stop leak if safe to do so.
Decontamination	Solvent wash all contaminated surfaces with alcohol followed by washing with a strong soap and water solution.
Environmental Precautionary Measures	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep away from exposure under sun and rain. Keep away from heat, sparks and open flames. This product is classified as a 'C2' Combustible Liquid for the purpose of storage and handling in accordance with the requirements of AS1940.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC).
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
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	RESPIRATOR: Respiratory protection is not required. Where protection is desired, use multi-purpose combination type ABEK respirator cartridges (AS1715/1716). EYES: Safety glasses with side shields (AS1336/1337). HANDS: Wear impervious gloves (AS2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).
Work Hygienic Practices	Do not eat, drink or smoke around product. Wash hands after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Mild
Colour	Cler, yellowish, transparent or slightly turbid
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	0.9360 - 0.9395
Flash Point	289 °C Closed 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	873.3
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	Refractive Index: 1.517 - 1.522 at 20 deg C Iodine Value: 163 - 173 Saponification Value: 190 - 195 Moisture & Impurities: 0.3% MAX. Free Fatty Acid (FFA): 4% MAX. Worstall's Heat Test: 7.5 minutes MAX. Beta Tung Oil Test: Negative (no crystalline precipitate).
Potential for Dust Explosion	Product is a liquid.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

General Information	Combustible liquid
Chemical Stability	Product is stable under normal conditions of use, storage, and temperature.
Conditions to Avoid	Heat, flame, inorganic acids.
Materials to Avoid	Strong oxidizing agents.
Hazardous Decomposition Products	Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide.
Hazardous Polymerisation	Has not been reported.

11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: Based on best current information, there is no data known associated with this product. Skin corrosion/irritation: Skin, rabbit: Based on best current information, there is no data known associated with this product. Serious eye damage/irritation: Eyes, rabbit: Based on best current information, there is no data known associated with this product. Respiratory or skin sensitization: Based on best current information, there is no data known associated with this product. CMR effects (Carcinogenicity, Mutagenicity and Toxicity for Reproduction): Carcinogenicity: this product is not listed in the NTP, IARC or OSHA lists for carcinogenicity. STOT-single exposure and/or repeated exposure: Health hazards of acute overexposure: harmful if inhaled. May affect the brain, nervous system or respiratory system, causing dizziness, headache, nausea or respiratory irritation. Health hazards of chronic overexposure: may cause nose & throat and skin & eye irritation, allergic skin reaction. ¹
Eyelrritant	May be an eye irritant.
Ingestion	Ingestion may cause gastrointestinal tract irritation.
Inhalation	Inhalation may cause giddiness, headaches, dizziness and nausea.
SkinIrritant	May cause skin irritation, may cause dermatitis.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecological information available for this product.
Persistence/Degradability	No information available on persistence/degradability for this product.
Mobility	No information available on mobility for this product.
Environmental Fate	Avoid contaminating waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Tung Oil
Class	C2 Combustible Liquids - Flash point > 150 °C
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

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Tung Oil
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

Land Transport (United States of America)

US DOT

Proper Shipping Name	Tung Oil
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

Sea Transport

IMDG

Proper Shipping Name	Tung Oil
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

Proper Shipping Name	Tung Oil
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

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) No Data Available

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR003878
----------------------	-----------

National/Regional Inventories

Australia (AICS)	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)	KE-34952
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
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	TUNOIL1000, TUNOIL1001, TUNOIL1002, TUNOIL1003, TUNOIL1004, TUNOIL1005, TUNOIL1006, TUNOIL1007, TUNOIL1008, TUNOIL1009, TUNOIL1010, TUNOIL1011, TUNOIL1012, TUNOIL1013, TUNOIL1014, TUNOIL1015, TUNOIL1016, TUNOIL1017, TUNOIL1018, TUNOIL1019, TUNOIL1020, TUNOIL1021, TUNOIL1022, TUNOIL1023, TUNOIL1024, TUNOIL1025, TUNOIL1026, TUNOIL1027, TUNOIL1028, TUNOIL1029, TUNOIL1030, TUNOIL1031, TUNOIL1032, TUNOIL1200, TUNOIL1500, TUNOIL2000, TUNOIL2001, TUNOIL2002, TUNOIL2500, TUNOIL3000, TUNOIL3500, TUNOIL4000, TUNOIL5000, TUNOIL5001, TUNOIL6000, TUNOIL7000, TUNOIL7001, TUNOIL8000, TUNOIL8100, TUNOIL8200, TUNOIL8300, TUNOIL8001, TUNOIL6100, TUNOIL7100, TUNOIL5500, TUNOIL9000
Revision	3
Revision Date	22 Apr 2015
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 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</p>

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