

SAFETY DATA SHEET

Section 1 - PRODUCT IDENTIFIER/CHEMICAL IDENTITY

- 1.1 PRODUCT IDENTIFIER:** Mono 50
- 1.2 PRODUCT CODE:** MONO50
- 1.3 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST:**
RELEVANT IDENTIFIED USES: Diesel engine oil
RESTRICTIONS ON USE: None known
- 1.4 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:**
SUPPLIER NAME: PENRITE OIL Company Pty Ltd (ABN: 25005 001 525)
ADDRESS (Australia): 110-116 Greens Rd, Dandenong South, VIC, Australia, 3175
TELEPHONE (Australia): 1300 736 748; +61 3 9801 0877; Fax 1800 736 748

ADDRESS (New Zealand): 75 Lady Ruby Dr, East Tamaki, Auckland, New Zealand, 2013
TELEPHONE (New Zealand): 0800 533 698; Fax 0800 533 698

EMAIL: tech@penriteoil.com (Aust and NZ)
- 1.5 EMERGENCY TELEPHONE:** Australia: 1300 736 748 New Zealand: 0800 533 698
Poisons information Centre: Australia: 131 126 New Zealand: 0800 764 766
- 1.6 HSNO APPROVAL NUMBER:** Not applicable
HSNO GROUP TITLE: Not applicable

Section 2 - HAZARD(S) IDENTIFICATION

- 2.1 CLASSIFICATION OF THE HAZARDOUS CHEMICAL:**
GHS CLASSIFICATION HAZARD CLASS AND CATEGORY: Under Work Health and Safety Regulations, the product is classified as hazardous.
- 2.2 LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS:**
SIGNAL WORD:
PICTOGRAMS:
HAZARD STATEMENTS:
PRECAUTIONARY STATEMENTS:
PREVENTION: Wash hands thoroughly after handling
Wear gloves and eye protection/face protection
RESPONSE: Not Applicable
STORAGE: Not Applicable
DISPOSAL: Not Applicable
- 2.3 OTHER HAZARDS:** The mixture has a low order of toxicity associated with it. Excessive exposure may result in mild irritation to the skin or respiratory system as well as possible irritation to the

eye. People with pre-existing skin conditions, such as eczema or dermatitis, should take precautions so as not to exacerbate the condition. As for all chemical products, persons should not expose open wounds, cuts, abrasions or irritated skin to this material.

Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS	CONC (%W/W)	GHS	Code
Distillates (petroleum), hydrotreated, Heavy paraffinic	64742-54-7	80 - 90	Non hazardous	
Phosphorodithioic acid, mixed o,o-bis(sec-Bu and isoctyl) esters, zinc salts	113706-15-3	< 1.0	Eye damage Cat.1 Skin irrit. Cat 2	H318 H315
Other ingredients	-	up to 100	Non hazardous	

Section 4 - FIRST AID MEASURES

4.1 DESCRIPTION OF NECESSARY FIRST AID MEASURES:

INGESTION: Rinse mouth out with water. Due to the blend of ingredients present, the manufacturer recommends that if swallowed, do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. If irritation develops or persists or vomiting has occurred after ingestion, seek medical assistance.

EYE: If in eyes, hold eyelids apart and flush the eye immediately with large amounts of running water. Continue flushing for at least 15 minutes or until advised to stop by a Doctor. Check for contact lenses. If there are contact lenses, these should be removed after several minutes of rinsing by the exposed person or medical personnel if it can be done easily. After flushing, if irritation develops or persists, seek medical assistance.

SKIN CONTACT: If skin or hair contact has occurred remove any contaminated clothing and footwear, wash skin or hair thoroughly with soap and water. If irritation develops or persists, consult a Doctor.

INHALATION: If affected, remove the patient from further exposure into fresh air, if safe to do so. If providing assistance, avoid exposure to yourself – only enter contaminated environments with adequate respiratory equipment. Once removed, lay patient down in a well-ventilated area and reassure them whilst waiting for medical assistance. If unconscious, place in a recovery position and seek immediate medical assistance. If irritation develops or persists, consult a Doctor

PROTECTION FOR FIRST AIDERS: No personnel shall place themselves in a situation that is potentially hazardous to themselves. As the product is hydrocarbon based, if the person has ingested the product, caution should be exercised in using direct mouth-to-mouth resuscitation techniques. Always ensure that you are wearing gloves when dealing with first aid procedures involving chemicals and/or blood.

FIRST AID FACILITIES: Eye wash fountain and safety showers are recommended in the area where the product is used.

4.2 MOST IMPORTANT SYMPTOMS & EFFECTS, BOTH ACUTE & DELAYED, CAUSED BY EXPOSURE:

ACUTE: Ingestion or inhalation of vapours may lead to irritation of the mouth and respiratory tract. Ingestion may lead to nausea and diarrhoea. Eye contact may lead to localised burning, redness and tearing. Skin contact may lead to redness or itching.

CHRONIC: Skin contact may aggravate/exacerbate existing skin conditions, such as dermatitis.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NECESSARY:

ADVICE TO DOCTOR: Treat symptomatically. As the product is hydrocarbon based, if vomiting has occurred after ingestion, the patient should be monitored for adverse effects to ensure that the product has not aspirated into the lungs.

Section 5 - FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

SUITABLE MEDIA: Use extinguishing media appropriate for surrounding fire. Use carbon dioxide, foam, dry chemical or water spray. Spray down fumes resulting from fire.

UNSUITABLE MEDIA: Avoid using full water jet directed at residual material that may be burning. Water may cause splattering on hot residue. Product will float on water.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

COMBUSTION HAZARDS: Combustion may produce oxides of carbon, calcium, nitrogen, sulphur, boron, phosphorus and zinc, as well as smoke and irritating vapours.

5.3 ADVICE FOR FIRE FIGHTERS

FIRE: This product is not flammable under conditions of use. It is a hydrocarbon based liquid that will burn if preheated. Keep storage tanks, pipelines, fire exposed surfaces, etc. cool with water spray.

HAZCHEM CODE: Not Applicable.

EXPLOSION: No indicative information of product being an explosive hazard. Closed containers may explode when exposed to extreme heat.

PROTECTIVE EQUIPMENT: In the event of a fire, wear full protective clothing and self-contained breathing equipment with full-face piece operated in the pressure demand or other positive pressure mode.

Section 6 - ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

PERSONAL PROTECTION: For small spills wear nitrile gloves, glasses/goggles, boots and full-length clothing. During routine operation a respirator is not required. However, if mists or vapours are generated, an approved organic vapour/particulate respirator is required. For

large spills, or in confined spaces, a full chemically resistant body suit is recommended and the atmosphere must be evaluated for oxygen deficiency. If in doubt about potential oxygen deficiency wear self-contained breathing apparatus.

CONTROL MEASURES: Ventilate area and extinguish and/or remove all sources of ignition. Stop the leak if safe to do so. CAUTION: The spilled product will be slippery. Avoid contact with the spilled material.

EMERGENCY PROCEDURES: In the event of a spill or accidental release, notify the relevant authorities in accordance with all applicable regulations.

6.2 ENVIRONMENTAL

PRECAUTIONS:

SPILL ADVICE: Do not allow product to enter drains, surface water, sewers or watercourses – inform local authorities if this occurs.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

CONTAINMENT: Contain the spill and absorb with a proprietary absorbent material, sand or earth. For large spills prepare a bund/barrier/dyke ahead of the spill to confine the spill and allow later recovery. If there is the possibility of spills to enter drains, surface water, sewers or watercourses ensure bunding, or that drains are covered, to minimise the potential for this to occur.

CLEANING PROCEDURES: Having contained the spill, as mentioned above collect all material quickly and place use absorbent in suitable containers. Follow local regulations for the disposal of waste. For large spills that have been banded, the material can be pumped into vessels and returned for reprocessing or destruction. Personnel must wear gloves, goggles or glasses, boots and full-length clothing during cleaning procedures. Wash contaminated area and objects with detergent and water after spill has been cleared. Rinse the cleaned area with water. Do not allow wash water or rinsings to enter drains, surface water, sewers or water courses.

Section 7 - HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

7.1 PRECAUTIONS FOR SAFE HANDLING:

SAFE HANDLING: Avoid contact with the product by using appropriate protective equipment such as gloves, glasses or goggles and full-length clothing. Prevent small spills and leakage to avoid slip hazards. Properly dispose of any contaminated rags or cleaning materials in order to prevent fire hazards. Eating, drinking, and smoking should be prohibited in the area where this material is handled, stored and processed. Worker should follow good personal hygiene practices, such as washing hands before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Keep containers tightly closed when not in use. Prevent product from entering waterways, drains or sewers.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

SAFE STORAGE: This product is a hydrocarbon-based liquid that will burn if preheated. Store in a dry, well ventilated area away from direct sunlight, ignition sources, oxidising agents, foodstuffs and clothing. Keep containers closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

INCOMPATIBILITIES: Oxidizing substances including strong acids.

Section 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 EXPOSURE CONTROL MEASURES:

EXPOSURE LIMIT VALUES: Exposure standards for the product have not been established. However, in the operation of certain equipment or at elevated temperatures, if oil mists or aerosols are generated the following Exposure Standard should be observed:

TWA: 5 mg/m³

STEL: 10 mg/m³ (ACGIH)

8.2 BIOLOGICAL MONITORING: No data available

8.3 CONTROL BANDING: No data available

8.4 ENGINEERING CONTROLS: Special ventilation is not normally required when using this product in normal use scenarios. However, in the operation of certain equipment, at elevated temperatures, or in confined spaces - mists or vapour may be generated and local exhaust ventilation should be provided to maintain airborne concentration levels below the nominated exposure standard and at an acceptable level that does not cause irritation.

8.5 INDIVIDUAL PROTECTION MEASURES:

EYE & FACE PROTECTION: Wear safety glasses/goggles to avoid eye contact when handling. If there is a risk of splashing during use, a full face shield is recommended. Use eye protection in accordance with AS 1336 and AS 1337.

SKIN (HAND) PROTECTION: If there is the chance of contact with the material wear gloves to provide hand protection. Nitrile rubber gloves are recommended.

SKIN (CLOTHING) PROTECTION: During normal operating procedures, long sleeved clothing is recommended to avoid skin contact. Soiled clothing should be washed with detergent prior to re-use.

RESPIRATORY PROTECTION: During routine operation a respirator is not required. However, if mists or vapours are generated, an approved half face organic vapour/particulate respirator is required. Use respirators in accordance with AS 1715 and AS 1716.

THERMAL PROTECTION: Not Applicable

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE:	Viscous amber liquid
ODOUR:	Typical lubrication oil odour.
ODOUR THRESHOLD:	No data available
pH:	Not applicable
MELTING/FREEZING POINT:	Not applicable
INITIAL BOILING POINT:	No data available
BOILING RANGE (°C):	No data available
FLASH POINT (°C):	Typically 240
EVAPORATION RATE:	No data available
FLAMMABILITY LIMITS (%):	No data available

VAPOUR PRESSURE (mmHg):	No data available
VAPOUR DENSITY:	No data available
DENSITY (g/mL @ 15 °C):	Typically 0.882
SOLUBILITY IN WATER (g/L):	Insoluble in water
PARTITION COEFFICIENT:	No data available for n-octanol/water
AUTO-IGNITION TEMP (°C):	No data available
DECOMPOSITION TEMP (°C):	Not data available
VISCOSITY (cSt @ 40 °C):	Typically 195
VISCOSITY (cSt @ 100 °C):	Typically 18

Section 10 - STABILITY AND REACTIVITY

- 10.1 REACTIVITY:** The product does not pose any further reactivity hazards other than those listed in the following sub-sections
- 10.2 CHEMICAL STABILITY:** Stable under recommended storage and handling conditions (see section 7)
- 10.3 POSSIBILITY OF HAZARDOUS REACTION:** Keep away from strong oxidising agents, such as strong acids, chlorates, nitrates and peroxides. Hazardous polymerisation does not occur.
- 10.4 CONDITIONS TO AVOID:** Observe the usual pre-cautionary measures for handling chemicals. Do not heat the container or leave the container open when not in use. Avoid sources of ignition.
- 10.5 INCOMPATIBLE MATERIALS:** Strong oxidizing materials including concentrated acids.
- 10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products are not expected to form during normal storage requirements. See Section 5.2 for Hazardous Combustion products.

Section 11 - TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Phosphorodithioic acid, mixed o,o-bis(sec-Bu and isooctyl) esters, zinc salts

Oral - LD₅₀: 2600 mg/kg

Dermal - LD₅₀: >3160 mg/kg

- 11.2 IF SWALLOWED:** This product is expected to have a low order of toxicity associated with it when ingested. It may cause slight irritation to the mouth, throat and digestive tract. Based upon assessment of similar products, the Acute Oral Toxicity is expected to be LD50 (rat) >5000 mg/kg when tested against OECD Guideline 420 or similar. During normal usage ingestion should not be a means of exposure.
- 11.3 SKIN/CORROSION/IRRITATION:** This product is not expected to exhibit dermal corrosive properties according to OECD Test 404, based on the available data and the known hazards of the components. May be mildly irritating to the skin. This product contains components that could potentially cause skin irritation, however the amounts are below the GHS/WHs cut off levels. Correct handling procedures incorporating appropriate protective clothing and gloves should minimise the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.

- 11.4 SERIOUS EYE DAMAGE/IRRITATION:** This product is not expected to exhibit Eye Irritation or Serious Damage/Corrosivity according to OECD Test 405, based on the available data and the known hazards of the components according to the additive package manufacturer. May be mildly irritating to the eyes. Symptoms may include localised burning, redness and tearing. The product contains a dithiophosphate compound that is rated as Causes serious eye damage. Test conducted by the additive package manufacturer, using this compound in base oils, indicate that this ingredient is present in the product at amounts well below the concentration cut off levels (GHS/WHMIS) where the product would expect to be irritating to the eyes. Correct handling procedures incorporating appropriate eye protection should minimise the risk of eye irritation.
- 11.5 RESPIRATORY OR SKIN SENSITISATION:** This product is not expected to be a skin sensitiser according to OECD Test 406, based on the available data and the known hazards of the components. This product is not expected to be a respiratory tract sensitiser, based on the available data and the known hazards of the components.
- 11.6 GERM CELL MUTAGENICITY:** This product is not expected to be mutagenic according to tests such as OECD Tests 471, 475, 476, 478 and 479, based on the available data and the known hazards of the components.
- 11.7 CARCINOGENICITY:** This product is not expected to be a carcinogen according to OECD test 451, based on the available data and the known hazards of the components. Long term animal experiments have shown that any health risks are associated with the level of aromatic and polycyclic constituents in the product. These constituents are removed during the manufacturing process to a level at which no health risks are expected as a result of normal handling. Representative testing of the Base Oils used to manufacture lubricants shows that they pass IP-346.
- 11.8 REPRODUCTIVE TOXICITY:** This product is not expected to be a reproductive hazard according to tests such as OECD Tests 414 and 421, based on the available data and the known hazards of the components.
- 11.9 SPECIFIC TARGET ORGAN TOXICITY (STOT) SINGLE EXPOSURE:** This product is not expected to cause organ damage from a single exposure, based on the available data and the known hazards of the components. This product is not expected to pose an irritation hazard at ambient temperature or under normal handling conditions. Not classified as a respiratory irritant, however inhalation of vapours or mist (generated at elevated temperatures or by mechanical action) may cause irritation to the nose, throat and respiratory system.
- 11.10 SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE:** This product is not expected to cause organ damage from prolonged or repeated exposure according to tests such as OECD Tests 410 and 412, based on the available data and the known hazards of the components.
- 11.11 ASPIRATION HAZARD:** This product is not expected to be an aspiration hazard, based on the available data and the known hazards of the components. However, as the product is hydrocarbon based, if vomiting has occurred after ingestion, the patient should be monitored for adverse effects.
- 11.12 OTHER INFORMATION:** If this material is overheated, especially in the presence of water, hydrogen sulphide may be released. Used oils may contain harmful impurities that can accumulate during usage. Due to the use of oils in different types of equipment the types of

impurities that accumulate during its usage are unknown. Therefore, all used oils should be handled with caution and skin contact should be avoided by wearing suitable gloves, such as those made of nitrile rubber.

Section 12 - ECOLOGICAL INFORMATION

- 12.1 ECOTOXICITY:** There is no data available for the product as a whole. Some of the components have been rated as toxic to aquatic life with long lasting effects and may cause long lasting harmful effects to aquatic life. Based upon the calculated values the product is expected to be rated as possibly causing long lasting harmful effects to aquatic life.
- 12.2 PERSISTENCE & DEGRADABILITY:** Based on the available data and the known hazards of the components and similar products the product is not expected to be readily biodegradable. Major constituents are expected to be inherently biodegradable, however the product contains components that may persist in the environment.
- 12.3 BIOACCUMULATIVE POTENTIAL:** No information is available.
- 12.4 MOBILITY IN SOIL:** If the product enters soil, based upon similar products it is expected that it will adsorb onto soil particles and will not be mobile.
- 12.5 OTHER ADVERSE EFFECTS:** Based on the available data and the known hazards of the components and similar products the product is not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. The product is a mixture of non-volatile components, which are not expected to be released to the air in any significant amounts. The product will float on water.

Section 13 - DISPOSAL CONSIDERATION

13.1 DISPOSAL METHODS:

PRODUCT: The product should not be released to the environment, so any unused material should be recycled wherever possible or be disposed of as hazardous waste at an appropriate collection depot. If this is not possible, the product is suitable for burning in an enclosed burner where it can be used as a fuel source. The product is also suitable for incineration at very high temperatures to prevent formation of undesirable combustion products. Spilled product that cannot be recovered should be absorbed and then shovelled into a suitable drum. Follow Government regulations for disposal of such waste. Do not mix new or used lubricating oils taken for recycling or disposal by suitably licensed contractors in accordance with Government regulations.

CONTAINERS: Empty containers may contain residual oil. They should be completely drained and then stored until reconditioned or disposed of. Empty drums should be taken for recycling or disposal through suitably licensed contractors in accordance with Government regulations. Where the containers are of metal construction they should not be pressurised, cut by a grinder, welded, brazed, soldered, drilled or exposed to heat, flames or other sources of ignition. Closed metal containers when exposed to such conditions/treatment may explode causing serious injury or death.

Section 14 - TRANSPORT INFORMATION

This product is not regulated for land, sea or air transportation. (HS Code: 3403.19.43)

14.1	LAND (ADG Code):	Not applicable
	UN NUMBER:	Not applicable
	UN PROPER SHIPPING NAME:	Not applicable
	TRANSPORT HAZARD CLASS(ES):	Not applicable
	PACKAGING GROUP:	Not applicable
	ENVIRONMENTAL HAZARDS:	Not applicable
	SPECIAL PRECAUTIONS FOR USER:	Not applicable
	HAZCHEM CODE:	Not applicable
14.2	SEA (IMDG):	Not applicable
	UN NUMBER:	Not applicable
	UN PROPER SHIPPING NAME:	Not applicable
	TRANSPORT HAZARD CLASS(ES):	Not applicable
	PACKAGING GROUP:	Not applicable
	ENVIRONMENTAL HAZARDS:	Not applicable
	SPECIAL PRECAUTIONS FOR USER:	Not applicable
14.3	AIR (IATA):	Not applicable
	UN NUMBER:	Not applicable
	UN PROPER SHIPPING NAME:	Not applicable
	TRANSPORT HAZARD CLASS(ES):	Not applicable
	PACKAGING GROUP:	Not applicable
	ENVIRONMENTAL HAZARDS:	Not applicable
	SPECIAL PRECAUTIONS FOR USER:	Not applicable

Section 15 - REGULATORY INFORMATION

15.1	SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:	
	APPLICABLE REGULATIONS:	
	SUSMP:	Not Scheduled
	AICS:	All ingredients are listed in the AICS list
	MONTREAL PROTOCOL:	Not applicable
	STOCKHOLM CONVENTION:	Not applicable
	ROTTERDAM CONVENTION:	Not applicable
	BASEL CONVENTION:	Not applicable
	INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL):	Not determined
	OTHER REGULATORY INFORMATION:	
	GHS CLASSIFICATION HAZARD CLASS & CATEGORY AND HAZARD STATEMENT:	
	Eye Damage Cat.1	H318 Causes serious eye damage
	Skin Irritant Cat. 2	H315 Causes skin irritation

HSNO APPROVAL NUMBER: Not applicable
HSNO GROUP TITLE: Not applicable

Section 16 - ANY OTHER RELEVANT INFORMATION

16.1 SDS INFORMATION:

16.2 Date of SDS Preparation: 11th August 2016

16.3 REVISION CHANGES: Update Aust/NZ address details (Sect.1), Rev 7.3

16.4 ACRONYMS:

SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
CAS Number	Chemical Abstract Service Registry Number
EINECS	European Inventory of Existing Commercial Chemical Substances
UN Number	United Nations Number
OSHA	Occupational Safety and Health Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
IUCLID	International Uniform Chemical Information Database
RTECS	Registry of Toxic Effects of Chemical Substances
% W/W	Percent weight for weight
OECD	Organisation for Economic Co-Operation and Development
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
HAZCHEM Code	Emergency action code of numbers and letters which gives information to emergency services
NOHSC	National Occupational Health and Safety Commission
AICS	Australian Inventory of Chemical Substances
TWA/STEL	Time – Weighted Average/ Short term Exposure Limit
HSNO	Hazardous Substances and New Organisms Act 1996
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
WHS	Work Health and Safety
PPE	Personal Protective Equipment.

All information contained in this Safety Data Sheet and the health, safety and environmental information are considered to be accurate to the best of our knowledge as of the issue date specified above. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the data and information contained in this data sheet. Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The Company accepts no responsibility for any injury, loss or damage, resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.