Safety Data Sheet

Used Lubricating Oil

with known inclusions of wear metals

Protective Clothing:

In Case of Emergency Contact:

ROSE Foundation
Tel: 021-448 7492
Email: info@rosefoundation.org.za

1. Product and Company Identification

Product Name	Used Lubricating Oil
Chemical Product Names	Used Lubricating Oil
Other Names	Used Oil; Used Lube Oil, Waste Lube Oil
Material Uses	None; waste material
CAS#	Not applicable; various ingredients
UN Number	1268; 3286; 3082
Hazchem Code	3WE
Details of the supplier	ROSE Foundation, Suite A9, Waverley Court, 7 Kotzee Road, Mowbray, 7925, South Africa

2. Composition and Information on Ingredients

Ingredients*	CAS No.	Composition Range %
Used Petroleum/Paraffin Base Oils	64741-xx-x 64742-xx-x 8012-95-1	80-100
Water	7732-18-5	0-20
Diesel	68476-34-8	0-5
Gasoline	6474-46-4	0-1

Ingredients*	CAS No.	Composition Range %
Polycyclic Aromatic Hydrocarbons	Various	0-1
Chlorinated Paraffin	85535-85-9	<0.5
Ethylene Glycol	107-21-1	Trace

The above ingredients represent an abridged and consolidated listing of potential substances that may be more or less present in any given Used Lubricating Oil. Possible additional substances include acetone, butane, octane, isopropanol, heptane, n-hexane, benzene, toluene, ethylbenzene, xylenes, trimethylbenzenes, morpholine, potassium permanganate, chloroform, silicon, sulphides, isobutylenes, acids, salts, phosphates, kerosene, phenols, calcium, iron, alcohols, solvents etc.; this list is not exhaustive.

* Broadly based on known hazardous compounds typically present in Used Lubricating Oil, and limited to those compound groups expected at, or above, 0.1% (minimum threshold stipulated within SANS 10234, as published in accordance with the Globally Harmonised System).

3. Hazard Identification of Ingredients

Hazard Classification (SANS 10228)	Class 3; Class 6.1; Class 8; Class 9
Hazard Rating (SANS 10234)	Cat. 2–3 Flammable Liquid; Cat. 1–4 Acute Toxicity; Cat. 1–2 Skin Corrosion; Cat. 1 Skin Sensitisation; Cat. 2 Skin/Eye Sensitisation; Cat. 3 STOT; Cat. 1–2 Mutagen; Cat. 1–2 Carcinogen; Cat. 1–2 Teratogen; Cat. 1–2 Repeat Exposure; Cat. 1–3 Acute Aquatic Toxicity; Cat. 1–4 Chronic Aquatic Toxicity.
Physical Effects	Highly flammable liquid and vapour; Flammable liquid and vapour.
Human Effects	Harmful if swallowed; May be fatal if swallowed and enters airways; Causes severe skin burns and eye damage; Causes skin irritation; May cause an allergic skin reaction; Causes severe eye damage; Causes severe eye irritation; Toxic if inhaled; May cause drowsiness or dizziness; May cause genetic defects; Suspected of causing genetic defects; May cause cancer; Suspected of causing cancer; May damage fertility or the unborn child; Suspected of damaging fertility or the unborn child; Causes damage to organs through prolonged or repeated exposure; May cause damage to organs through prolonged or repeated exposure.
Environmental Effects	Very toxic to aquatic life; Toxic to aquatic life; Harmful to aquatic life; Very toxic to aquatic life with long lasting effects; Toxic to aquatic life with long lasting effects; Harmful to aquatic life with long lasting effects; May cause long lasting harmful effects to aquatic life.
Hazard Statements	H225; H226; H302; H304; H314; H315; H317; H318; H319; H331; H336; H340; H341; H350; H351; H360; H361; H372; H373; H400 - H413.
Precautionary Statements	P201; P202; P210; P220; P221; P233; P240; P241; P242; P243; P260; P261; P264; P270; P271; P272; P280; P281; P301+P310; P302+P352; P305+P351+P338; P308+P313; P310; P311; P312; P314; P301+P312; P301+P330+P331; P303+P361+P353; P304+P340; P273; P321; P330; P331; P332+P313; P333+P313; P337+P313; P370+P378; P362; P363; P391; P403+P233; P403+P235; P405; P501
Carcinogenicity	Suspected of causing cancer
Mutagenicity	Suspected of causing genetic defects
Neurotoxicity	Not identified
Teratogenicity	Suspected of damaging fertility or the unborn child

4. First Aid Measures

Eye Contact	Flush eyes immediately with running water, ensuring eyelids are held open, for at least 15 minutes. Remove contact lenses, if applicable. Seek immediate medical attention.
Skin Contact	Wash skin thoroughly with soap and water. Remove contaminated clothing and launder or dispose of. Seek medical attention if irritation develops or symptoms persist. Can be absorbed through the skin.
Inhalation	Move person into fresh air and/or remove source of inhalation. Apply artificial respiration if person is not breathing. Seek immediate medical attention.
Ingestion	If swallowed do NOT induce vomiting and do NOT give anything by mouth to an unconscious person. If conscious, allow person to drink water only. Seek immediate medical attention.
Notes to Physician	First aider to communicate route and duration of exposure to attending physician. Treatment should be symptomatic.

5. Fire Fighting Measures

Flammability	Used Lubricating Oil is likely to contain flammable components.
Extinguishing Media	Use fire extinguishing media appropriate for local conditions (water fog, foam, dry chemical or CO_2) and the surrounding environment. Water or foam may cause frothing. Use water to cool fire-exposed containers. Do NOT allow contaminated fire-fighting water to enter drains or sewers. Fire residues and contaminated fire-fighting water must be disposed of as hazardous waste in accordance with local regulations.
Protective clothing	Self-contained breathing apparatus and full flame-retardant Personal Protective Equipment (PPE) is required to fight fires involving Used Lubricating Oil

6. Accidental Release Measures

Personal Precautions
Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Wear appropriate PPE to prevent inhalation and contact with skin and eyes. Spilled material may make surfaces slippery.

Environmental Precautions
Stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage.
Protect drains from potential spills to minimise contamination. Protect environmentally sensitive areas and water supplies.

Clean-up Methods
First eliminate ignition sources, and then stop source of release if it can be done without risk of harm. Contain the spill with hydrocarbon-proof dykes to prevent further contamination of soil, groundwater or surface water. Clean-up using appropriate, inert absorbent material that must be disposed of as hazardous waste in accordance with local regulations. DO NOT wash product into drainage. Place sufficient signage around spill indicating a slipping hazard and prevent access to the spill site.
Scrub contaminated area with detergent and water using a stiff broom. Pick up liquid with additional absorbent and place in a disposable container.

7. Handling and Storage

Safe Handling
Avoid all contact with skin and eyes by using appropriate PPE. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities. Do NOT eat, drink or smoke in work areas.

Safe Storage
Store away from sources of ignition, and away from strong acids and oxidising agents. Store in appropriate, clearly labelled and bunded containers in a cool, dry area. Do NOT allow cutting, welding, brazing, soldering, drilling or grinding in proximity to containers.

8. Exposure Control/ Personal Protection

Exposure Limits (where established)

Ingredients	Occupational Exposure Limits		Ingredients	Occupational Exposure Limits
Petroleum/Paraffin Base Oils	5 mg/m^3		Polycyclic Aromatic Hydrocarbons	52 mg/m3 (naphthalene)
Water	-		Chlorinated Paraffin	-
Diesel	100 mg/m3 (as total hydrocarbons)		Ethylene Glycol	-
Gasoline	300 ppm (as gasoline motor fuel)			

Control Measures
Prevent any contact during handling. Ensure adequate ventilation and PPE when handling material.

Personal Protective Equipment (PPE)
Personnel to wear polyvinyl alcohol or nitril-butyl rubber gloves that satisfy specifications of EU Directive 89/686/EEC and EN 374.
Wash gloved hands thoroughly before removing and dispose of contaminated gloves appropriately.
Eye protection must include tightly fitting safety goggles. Eye wash stations must be available for personnel.

General Precautions
Avoid contact with skin and eyes; avoid breathing vapours and mists.

Environmental Exposure Control
Prevent spillage and do NOT allow into drains, sewers, or any other water course. Store in adequately bunded areas in well-sealed containers that are not exposed to the elements. Immediately advise appropriate local authority if spillage or contaminated runoff occurs.

9. Physical and Chemical Properties

Appearance	Brown to black liquid	**Solubility**	Not determined
Size	Not determined	**Flammability**	Flammable
Odour	Used oil; may contain various odourants	**Auto Flammability**	Not determined; unlikely
pH	7–10.5	**Exposure Properties**	Not determined
Density	Variable; approx. 0.9 kg/l	**Oxidizing Properties**	Not determined
Solubility solvent	Not determined	**Vapour Pressure**	Not determined
Boiling Point	Typically ~215°C	**Incompatibility**	**See Section 10**
Flash Point	Typically ~110°C	**Viscosity**	Variable
Melting Point	Not determined	**Solubility coefficient**	Not determined

10. Stability and Reactivity

Reactivity
No dangerous reactions or polymerization are known to occur under conditions of normal ambient storage and handling conditions.

Chemical Stability
Used Lubricating Oil is considered stable under normal ambient conditions and expected storage and handling conditions.

Possibility of Hazardous Reactions
See **'Incompatible material'**

Conditions to Avoid
Contamination with other wastes or media; heat, flames, sparks or any other potential ignition source. Avoid exposure to incompatible materials.

Incompatible material
Strong acids and oxidising agents such as peroxides, nitrates and chlorates.

Hazardous decomposition products
Oxides of carbon, nitrogen and sulphur, aldehydes and ketones. Acrid and toxic fumes and particulates will be generated from a fire involving Used Lubricating Oil

11. Toxicological Information (where established)

Ingredient Name	LD_{50}	Route	Species		Ingredient Name	LD_{50}	Route	Species
Petroleum/Paraffin Base Oils	5 000 mg/kg	Oral	Rat		Polycyclic Aromatic Hydrocarbons	50 - 2000 mg/kg	Oral	Rat
Water	-	-	-		Chlorinated Paraffin	4 000 mg/kg	Oral	Rat
Diesel	2 000 mg/kg	Dermal	Rabbit		Ethylene Glycol	4 700 mg/kg	Oral	Rat
Gasoline	14 000 mg/kg	Oral	Rat					

Bio-Availability
Limited data available; Polycyclic aromatic hydrocarbons typically have poor bio-availability, which decreases with increasing molecular mass of the hydrocarbon compound.

Chronic Health Effects
Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity, Mutagenicity and Toxic to Reproduction (CMR) effects
Suspected of causing genetic defects; Suspected of causing cancer; Suspected of damaging fertility or the unborn child.

12. Ecological Information

Ingredient Name	LC_{50}	Period	Species		Ingredient Name	LC_{50}	Period	Species
Petroleum/Paraffin Base Oils	>100 ppm	96h	Oncorhynchus mykiss		Polycyclic Aromatic Hydrocarbons	7.9 mg/l	96h	Pimephales promelas
Water	-	-	-		Chlorinated Paraffin	>5 000 mg/l	96h	Albumus albumus
Diesel	5 mg/l	4h	Rat		Ethylene Glycol	41 000 mg/l	96h	Oncorhynchus mykiss
Gasoline	5.2 mg/l	4h	Rat					

Eco Toxicity	See table above
Mobility	Degradation of Used Lubricating Oil can lead to increased mobility and acculated concentrations of wear metals in the environment.
Persistence and Degradability	Used Lubricating Oil is not considered wholly biodegradable.
Bioaccumulation Potential	Certain wear metals from Used Lubricating Oil are known to bioaccumulate. Kerosene is known to bioaccumulate.

13. Disposal Considerations

Disposal Methods	If Used Oil cannot be re-used, the material (including containers) must be disposed of as hazardous waste in accordance with local and national environmental requirements. Ensure storage in sealed containers. Do NOT wash into sewers or waterways. Must be transported and disposed of by appropriately licensed waste disposal company.

14. Transport Information

UN Number	Proper Shipping name	Classes	Packing group	Labels
1268	PETROLEUM DISTILLATES, N.O.S. OR PETROLEUM PRODUCTS, N.O.S.	Class 3	Packing Group III	
3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	Class 3; Class 6.1; Class 8	Packing Group I	
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Class 9	Packing Group III	

15. Regulatory Information

Poisons Schedule Number	Not determined
Handling, Storage and Disposal	• National Environmental Management Waste Act, Act No. 59 of 2008 (as amended). • South African National Standards (SANS) 10234:2008, Globally Harmonized System of Classification and Labelling of Chemicals (GHS). • Department of Environmental Affairs, Waste Classification and Management Regulations, Government Notice No. R. 634, 2013.
Transport	• National Road Traffic Regulations (2000) as promulgated under the National Road Traffic Act, No. 83 of 1996. • South African National Standards (SANS) 10228:2006, The Identification and Classification of Dangerous Goods for Transport.
Occupational	• Occupational Health and Safety Act (1993). Hazardous Chemical Substances Regulations, 1995. • Occupational Exposure Limits - Recommended Limits (South Africa, 1995).
SDS Content	This safety data sheet broadly complies with the requirements of SANS 10234:2008 under the Globally Harmonized System.

16. Other Information

Date of Issue:	**01 September 2021**
Version:	**V4**
Next Review	**October 2022**
Prepared by:	WSP Environmental (Pty) Ltd

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of issue: 01 September 2021 **End of SDS**