

SAFETY DATA SHEET

Revision Date : 23.06.2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Poweroil TO 1020 (60 UX)
Product use : Transformer oil

Supplier : Engen Petroleum Limited (Tel: 021-403 4911, a/h: 021-403 4099)
Health Emergency Telephone : 021-689 5227 (Red Cross Poison Service)
Transport Emergency Telephone : 011-975 1278/83 (Hazchemwise)
Customer Service Centre : 0860 036 436 (Sales and Technical Information)
Engen Website : <http://www.engen.co.za/>

2. HAZARDS IDENTIFICATION

Emergency response data : Light Amber Liquid. DOT ERG No. - Not applicable.

GHS Classification:

Health

Acute oral toxicity	Hazard category 5. May be harmful if swallowed.	Warning
Skin irritation	Hazard category 3. Practically non-irritating.	Warning
Eye irritation	Hazard category 2B. Mild irritant.	Warning

Environmental

Aquatic toxicity	: Hazard category 2. Very toxic to fish, aquatic organisms and wildlife.	Warning
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Physical

Flammability	: This product is non-flammable. Combustible liquid.	Warning
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GHS Labels/Pictograms:



Hazard Statements

Combustible liquid. May cause eye and mild skin irritation. May be harmful if swallowed.

Precautionary Statements

Response

IN CASE OF FIRE: Use carbon dioxide, foam or dry chemical for extinction. IF IN EYES: Rinse cautiously with water for several minutes. IF SWALLOWED: Get medical attention if you feel unwell. IF ON SKIN: Immediately remove all contaminated clothing. Gently wash skin with plenty of soap and water. Launder contaminated clothing before re-use.

Disposal

Do not discharge into lakes, streams, ponds and ground water supply.

See Section 11 for further health effects/toxicological data.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Weight%
Hydrotreated light naphthenic distillate	64742-53-6	> 99.50
Additive package		< 0.50

See Section 8 for Exposure Limits (if applicable).

4. FIRST AID MEASURES

Inhalation	:	Not expected to be a problem. However, if respiratory irritation occurs due to excessive vapour or mist exposure, seek immediate medical assistance.
Skin contact	:	Remove contaminated clothing. Dry wipe exposed skin and cleanse with hand cleaner, soap and water. Launder contaminated clothing before reuse. (See Section 16 - Injection Injury)
Eye contact	:	Flush thoroughly with water. If irritation occurs call a doctor.
Ingestion	:	Not expected to be a problem. However, if discomfort occurs seek medical attention. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

Extinguishing media	:	Carbon dioxide, foam, dry chemical and water fog.
Special fire fighting procedure	:	Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.
Special protective equipment for firefighters	:	For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.
Unusual fire and explosive hazards	:	None.
Products of decomposition	:	Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.
Flash Point	:	> 140 °C (ASTM D-93)
Upper Explosion Limit (UEL)	:	7 %(V)
Lower Explosion Limit (LEL)	:	0.9 %(V)
NFPA Hazard Id	:	Health: 0; Flammability: 1; Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

Procedure if material is released or spilled	:	Report spills/releases as required to appropriate authorities.
Methods for cleaning up	:	LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping using explosion-proof equipment or contain spilled liquid with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of absorbed residues as directed in Section 13. WATER SPILL: Notify port and relevant authorities. Confine with booms if skimming equipment is available to recover the spill for later recycling or disposal.

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Environmental precautions : Prevent spill from entering municipal sewers, water sources or low lying areas. Advise the relevant authorities if contaminations have occurred.

7. HANDLING AND STORAGE

Safe handling advice : No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

Storage information : Keep containers closed when not in use. Do not store in open or unlabelled containers. Do not store near heat sources, sparks, flames, strong oxidizing agents and combustible materials.

Storage and handling procedures : Prevent small spills and leakages to avoid slip hazard.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

Components	CAS-No.	Source	TWA	Value	Notations
Hydrotreated light naphthenic distillate	64742-53-6	ACGIH TLV	LTEL STEL	5 mg/m ³ 10 mg/m ³	Oil mists

LTEL: Long Term Exposure Limits - Time Weight Average (TWA) over 8 hours.

STEL: Short Term Exposure Limits - Time Weight Average (TWA) over 15 Minutes

Note: Limits Shown for guidance only. Follow applicable regulations.

Personal Protective Equipment (PPE)

Engineering controls : If mists are generated, use ventilation, local exhaust or enclosures to control below exposure limits.

Respiratory protection : Approved respiratory equipment must be used when mist concentrations exceed the recommended exposure limits.

Eye protection : If splash with liquid is possible, chemical type goggles should be worn.

Skin and body protection : No special equipment required. However, if frequent splashing or liquid contact is likely to occur, wear oil impervious gloves and clothing. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.
Colour : Light Amber
Odour : Mild
Solubility : Negligible
Boiling point : > 271 °C
Flash Point : > 140 °C (ASTM D-93)
Upper Explosion Limit (UEL) : 7 %(V)
Lower Explosion Limit (LEL) : 0.9 %(V)
Vapour pressure : < 0.1 hPa
Density : 0.8880 g/cm³ @ 20 °C (ASTM D-4052)
Pour point : -45 °C
Viscosity, kinematic : 11 mm²/s @ 40 °C (ASTM D-445)

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10. STABILITY AND REACTIVITY

Stability	:	Stable.
Conditions to avoid	:	Extreme heat.
Materials to avoid	:	Strong oxidizers.
Hazardous decomposition products	:	Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	(Rats): Practically non-toxic (LD50: Greater than 2000 mg/kg). Based on testing of similar products and/or components. Warning Hazard category 5. May be harmful if swallowed.
Acute dermal toxicity	:	(Rabbits): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components. Warning Hazard category 5. No significant effects expected.
Acute inhalation toxicity	:	Not applicable. Harmful concentrations of mists and/ or vapours are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.
Skin irritation	:	(Rabbits): Practically non-irritating. (Primary Irritation Index: 0.5 or less). Based on testing of similar products and/or the components. Warning Hazard category 3. No significant effects expected.
Eye irritation	:	(Rabbits): Practically non-irritating. (Draize score: greater than 0 but 6 or less). Based on testing of similar products and/or the components. Warning Hazard category 2B. May cause mild eye irritation.
Respiratory and skin sensitization	:	This product was not a skin sensitizer when tested in a Modified Buehler Guinea Pig Sensitization Assay.
Germ cell mutagenicity	:	This product tested negative in a series of mutagenic tests.
Carcinogenicity	:	Chronic mouse skin painting studies of severely solvent refined mineral base oils showed no evidence of carcinogenic effects.
Reproductive toxicity (Teratogenicity)	:	Negative in a series of genetic assays and teratological studies.
Specific target organ toxicity (STOT) - single exposure	:	No significant effects expected.
Specific target organ toxicity (STOT) - repeated exposure	:	Severely solvent refined and severely hydrotreated mineral base oils have been tested at an Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.
Aspiration hazard	:	No significant effects expected.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	:	(Salmon) LC/EC50: 8.1 mg/l at 96 hours. Warning Hazard category 2.
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Toxicity to aquatic organisms : (Daphnia magna) LC/EC50: 6 mg/l at 48 hours.
(Green algae) LC/EC50: 9.4 mg/l at 8 hours.

Elimination information (persistence and degradability)

Biodegradability : This product is expected to be inherently biodegradable at a slow to moderate rate.

Mobility : Adsorption to sediment and soil will be the predominant behaviour.

Bioaccumulation : Minimal owing to low water solubility.

Further information on ecology

Remarks : In the absence of specific environmental data for this product, this assessment is based on information for representative substances.

13. DISPOSAL CONSIDERATIONS

Waste disposal : Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and considerations of product characteristics at time of disposal.

Other regulations : The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Flash Point : > 140 °C (ASTM D-93)

14. TRANSPORT INFORMATION

Note : This product is not regulated by the following: U.S. DOT (CFR), ADR, IATA and IMDG.

Static Accumulator (50 picosiemens or less) : Yes

15. REGULATORY INFORMATION

US OSHA Hazard Communication Standard : When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Governmental Inventory Status : All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL, KECI, ENCS, PICCS and IECSC.

EU Labelling : Product is not dangerous as defined by the European Union Dangerous Substances/Preparations Directives. EU labelling not required.

SARA

U.S. Superfund Amendments and Reauthorization Act SARA Title III : This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

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SARA (311/312) Reportable : None
Hazard Categories

The following product ingredients are cited on the lists below

Chemical name	CAS-No.	Concentration [%]	List Citations
Hydrotreated light naphthenic distillate	64742-53-6	> 99.50	Not listed
Additive package		< 0.50	Not listed

Regulatory List Searched

1 = ACGIH ALL	6 = IARC 1	11 = TSCA 4	17 = CA P65	22 = MI 293
2 = ACGIH A1	7 = IARC 2A	12 = TSCA 5a2	18 = CA RTK	23 = MN RTK
3 = ACGIH A2	8 = IARC 2B	13 = TSCA 5e	19 = FL RTK	24 = NJ RTK
4 = NTP CARC	9 = OSHA CARC	14 = TSCA 6	20 = IL RTK	25 = PA RTK
5 = NTP SUS	10 = OSHA Z	15 = TSCA 12b	21 = LA RTK	26 = RI RTK

Code Key: CARC = Carcinogen; SUS = Suspected Carcinogen

16. OTHER INFORMATION

Note: Engen products do not contain PCBs.

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Note: No significant changes have been made to this Safety Data Sheet since the previous date.

Disclaimer

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

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