

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Engen Gearlube EP 80W-90
Product use : Gear Lubricant

Supplier : Engen Petroleum Limited (Tel: +27 (0) 21 403 4911, a/h: +27 (0) 21 403 4099)

Poisons Information Helpline : 0861 555 777 (South Africa)
Spill Response : 086 100 0366 (South Africa)
Customer Service Centre : 0860 036 436 (Sales and Technical Information)
Engen Website : <http://www.engen.co.za/>

2. HAZARDS IDENTIFICATION

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

GHS Classification:

Health

Skin corrosion/irritation : Hazard category 3.
Eye irritation : Hazard category 2B.

Environmental

Acute toxicity : Not classified.
Chronic toxicity : Hazard category 4.

Physical

Flammability : Not classified.

Signal Word : Warning

GHS Labels/Pictograms:



Hazard Statements

Causes mild skin irritation. May cause mild eye irritation. May cause long lasting harmful effects to aquatic life.

Precautionary Statements

Prevention

Wash exposed skin after handling this product. Use personal protective equipment as required.

Response

IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical attention. IF SWALLOWED: Get medical attention if you feel unwell. Do NOT induce vomiting. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breath. Call a POISON CENTRE or doctor if you feel unwell. IF ON SKIN (or hair): Immediately remove all contaminated clothing. Gently wash skin with plenty of soap and water. Launder contaminated clothing before re-use. If skin irritation occurs: Get medical attention.

Disposal

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

Engen Gearlube EP 80W-90

See Section 11 for further health effects/toxicological data.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Weight%
Long-chain alkyl amine	Proprietary	< 0.50
Long-chain alkenyl amine	Proprietary	< 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. If breathing has stopped, assist ventilation with mechanical device or use mouth-to-mouth resuscitation.
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	:	> 164 °C (ASTM D-92)
Upper Explosion Limit (UEL)	:	7.0 %(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.
--	---	--

Engen Gearlube EP 80W-90

- 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.
Warn other ships in the vicinity. If allowed by regulatory authorities the use of suitable dispersants should be considered where recommended in local oil spill procedures.
- Personal precautions : See Section 8.
- 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.
- 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
Base oil package		ACGIH TLV	LTEL	5 mg/m3		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

Engen Gearlube EP 80W-90

Appearance	:	Liquid.
Colour	:	Brown
Odour	:	Mild
Solubility	:	Negligible
Boiling point	:	> 316 °C
Flash Point	:	> 164 °C (ASTM D-92)
Upper Explosion Limit (UEL)	:	7.0 %(V)
Lower Explosion Limit (LEL)	:	0.9 %(V)
Vapour pressure	:	< 0.1 hPa
Density	:	0.8913 g/cm ³ @ 20 °C (ASTM D-4052)
Pour point	:	-36 °C
Viscosity, kinematic	:	15.20 mm ² /s @ 100 °C (ASTM D-445) 131.0 mm ² /s @ 40 °C (ASTM D-445)

10. STABILITY AND REACTIVITY

Stability	:	Stable.
Conditions to avoid	:	Extreme heat and high energy sources of ignition, such as sparks and static electricity.
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 toxicity

Components

Long-chain alkyl amine

Acute oral toxicity	:	LD50 (Rats) : 612 mg/kg
Acute inhalation toxicity	:	LC50 (Rats) : 157 mg/l
Acute dermal toxicity	:	LD50 (Rats) : 251 mg/kg

Long-chain alkenyl amine

Acute oral toxicity	:	LD50 (Rats) : 1,689 mg/kg
Acute inhalation toxicity	:	No available data.
Acute dermal toxicity	:	No available data.

Skin corrosion/irritation

Components

Long-chain alkyl amine

Result	:	Skin irritation (Rabbit, 4h) - NITE
--------	---	-------------------------------------

Long-chain alkenyl amine

Result	:	Causes skin irritation.
--------	---	-------------------------

Eye irritation

Components

Long-chain alkyl amine

Result	:	Causes serious eye damage.
--------	---	----------------------------

Long-chain alkenyl amine

Result	:	Causes serious eye damage.
--------	---	----------------------------

Sensitization

Components

Engen Gearlube EP 80W-90

Long-chain alkyl amine

Remarks : May cause skin allergy and sensitization.

Long-chain alkenyl amine

Germ cell mutagenicity

Components

Long-chain alkyl amine

Remarks : No known significant effects or critical hazards.

Long-chain alkenyl amine

Remarks : No known significant effects or critical hazards.

Carcinogenicity

Components

Long-chain alkyl amine

Remarks : Not classifiable as a human carcinogen.

Long-chain alkenyl amine

Remarks : Not classifiable as a human carcinogen.

Reproductive toxicity (Teratogenicity)

Components

Long-chain alkyl amine

Remarks : No known significant effects or critical hazards.

Long-chain alkenyl amine

Remarks : No known significant effects or critical hazards.

STOT - single exposure

Components

Long-chain alkyl amine

Remarks : No known significant effects or critical hazards.

Long-chain alkenyl amine

Specific target organ toxicity (STOT) - repeated exposure

Components

Long-chain alkyl amine

Remarks : May cause damage to organs.

Long-chain alkenyl amine

Remarks : Causes damage to organs.

Aspiration hazard

Components

Long-chain alkyl amine

Remarks : May be fatal if swallowed and enters airways.

Long-chain alkenyl amine

Remarks : May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Components

Long-chain alkyl amine

Acute toxicity : Fish, invertebrates and algae with E(L)C50s <1 mg/L

Chronic toxicity : Fish, invertebrates and algae with E(L)C50s <1 mg/L

Engen Gearlube EP 80W-90

Long-chain alkenyl amine

Acute toxicity	:	Fish LC50 0.11 mg/l (96hrs) Daphnia EC50 0.011 mg/l (48hrs) Algae EC50 0.03 mg/l (96hrs)
Chronic toxicity	:	Fish LC50 0.11 mg/l (96hrs) Daphnia EC50 0.011 mg/l (48hrs) Algae EC50 0.03 mg/l (96hrs)

Persistence and degradability Components

Long-chain alkyl amine

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

Long-chain alkenyl amine

Biodegradability	:	This product is expected to be inherently biodegradable.
------------------	---	--

Bioaccumulation Components

Long-chain alkyl amine

Bioaccumulation	:	Does not bio-accumulate significantly.
-----------------	---	--

Long-chain alkenyl amine

Bioaccumulation	:	Does not bio-accumulate significantly.
-----------------	---	--

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.
Contaminated packaging	:	Empty containers retain residue (liquid and/or vapour) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.
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	:	> 164 °C (ASTM D-92)

14. TRANSPORT INFORMATION

Engen Gearlube EP 80W-90

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

15. REGULATORY INFORMATION

South African Legislation and Standards : South African OHS Act, 85 of 1993: Hazardous Chemical Substances, Regulation 9A
National Environmental Management: Waste Act 2008

South African Guidelines
SANS 10234:2008 - Globally Harmonized System of classification & labelling of chemicals
SANS 11014:2010 - Safety data sheet for chemical products - Content & order of sections

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.

SARA

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

SARA (311/312) Reportable Hazard Categories : None

The following product ingredients are cited on the lists below

Chemical name	CAS-No.	Concentration [%]	List Citations
Long-chain alkyl amine		< 0.50	
Long-chain alkenyl amine		< 0.50	

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.

Engen Gearlube EP 80W-90

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.
