

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Engen Diesel (all grades)
Other means of identification : Hydrocarbon Liquid
Product use : Automotive diesel fuel
UN number : 1202

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 : Light Amber Liquid. Flammable. Product can accumulate a static charge and release vapours which may cause a fire or explosion. DOT ERG No. : 128

GHS Classification:

Health

Acute inhalation toxicity : Hazard category 4.
Skin corrosion/irritation : Hazard Category 2.
Carcinogenicity : Hazard Category 2.
STOT - repeated exposure : Hazard Category 2.
Aspiration hazard : Hazard Category 1

Environmental

Acute toxicity : Not classified.
Chronic toxicity : Hazard category 2.

Physical

Flammability : Hazard category 3.

Signal Word : DANGER

GHS Labels/Pictograms:



Hazard Statements

Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (Thymus, Liver, Bone Marrow) Toxic to aquatic life with long lasting effects.

Precautionary Statements

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Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces – No smoking. Keep the container cool and tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and transfer equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Wash exposed skin after handling this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

Response

IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. IF INHALED: Call a POISON CENTRE or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTRE or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. 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. Do NOT induce vomiting. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Collect spillage.

Storage

Store in a well ventilated place. Keep container tightly closed. Keep cool.

Disposal

Do not discharge into lakes, streams, ponds and ground water supply. Dispose of contents/container to an approved waste disposal plant in accordance with local/regional/national/international regulation.

See Section 11 for further health effects/toxicological data.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Weight%
Diesel fuel	68334-30-5	>= 99.00 - <= 100.00

See Section 8 for Exposure Limits (if applicable).

4. FIRST AID MEASURES

Inhalation	:	Move to well-ventilated area. Monitor for respiratory distress; administer oxygen and assist ventilation as required. Seek medical assistance immediately.
Skin contact	:	Remove all contaminated clothing. Wash area with soap and water for 10 to 15 minutes.
Eye contact	:	Remove contact lenses and irrigate exposed eyes for at least 15 minutes. Irrigate before and after removing the lenses to prevent a carry-over of the substances to the shielded area of the lens.
Ingestion	:	Immediately call a POISON CENTER or doctor/ physician. Do NOT induce vomiting. If vomiting does occur, have victim lean forward to reduce risk of aspiration.

5. FIRE-FIGHTING MEASURES

Extinguishing media : Carbon dioxide, foam, dry chemical and water fog.

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Special fire fighting procedure	:	Water spray should only be used to keep fire-exposed containers cool, flush spills away from exposures, disperse vapours and protect personnel attempting to stop leak. 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.
Products of decomposition	:	Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.
Flash Point	:	> 55 °C (ASTM D-93)
Upper Explosion Limit (UEL)	:	7 %(V)
Lower Explosion Limit (LEL)	:	0.6 %(V)
NFPA Hazard Id	:	Health: 1; Flammability: 2; 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	:	Eliminate sources of ignition. Warn occupants and/or ships in the downwind areas of fire and explosion hazard, and warn them to stay clear. 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. If permitted by local authorities and environmental agencies disperse in unconfined waters. 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	:	Keep product away from high energy ignition sources, heat, sparks, pilot lights, static electricity, and open flames. Harmful in contact with or if absorbed through the skin. Avoid inhalation of vapours or mists. Use in well ventilated area away from all ignition sources. See Section 8 for additional personal protection advice when handling this product.
Storage information	:	Store away from all ignition sources in a cool, well ventilated area. This product is a static accumulator, therefore, all storage containers should be grounded and bonded. Drums should also be equipped with self-closing valves, pressure vacuum bungs and flame arresters.
Storage and handling procedures	:	Electrical equipment and fittings must comply with local fire prevention regulations for this class of product. Refer to national or local regulations covering safety at petroleum handling and storage areas for this product.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

Components	CAS-No.	Source	TWA	Value	Notations
Diesel	68334-30-5	ACGIH TLV		100 mg/m ³	Skin; A3; BEI

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 : Use in well ventilated area. Explosive-proof ventilation equipment with local exhaust is desirable.
- Respiratory protection : Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the recommended exposure limit. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.
- Eye protection : If splash with liquid is possible, chemical type goggles should be worn.
- Skin and body protection : However, if frequent splashing or liquid contact is likely to occur, wear oil impervious gloves and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Liquid.
- Colour : Light Amber
- Odour : Hydrocarbon
- Solubility : Negligible
- Boiling point : > 170 °C < 400 °C
- Flash Point : > 55 °C (ASTM D-93)
- Upper Explosion Limit (UEL) : 7 %(V)
- Lower Explosion Limit (LEL) : 0.6 %(V)
- Vapour pressure : 0.5 hPa
- Relative vapour density : 2
- Density : 0.8450 g/cm³ @ 20 °C

- Pour point : < -7 °C
- Viscosity, kinematic : 3.5 mm²/s @ 40 °C (ASTM D-445)
< 1 mm²/s @ 100 °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 : Halogens, strong acids, alkalis and oxidizers.

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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

Diesel fuel

Acute oral toxicity : LD50 (Rats) : 7,600 mg/kg
Acute inhalation toxicity : LC50 (Rats) : > 4.1 mg/l
Acute dermal toxicity : LD50 (Rabbits) : > 4,300 mg/kg

Skin corrosion/irritation

Components

Diesel fuel

Species : Rabbits
Result : Skin irritation (Rabbit, 4h)

Eye irritation

Components

Diesel fuel

Species : Rabbits
Result : May cause mild eye irritation.

Sensitization

Components

Diesel fuel

Remarks : No known significant effects or critical hazards.

Germ cell mutagenicity

Components

Diesel fuel

Remarks : No known significant effects or critical hazards.

Carcinogenicity

Components

Diesel fuel

Remarks : Suspected human carcinogen.

Reproductive toxicity

Components

Diesel fuel

Remarks : No known significant effects or critical hazards.

STOT - single exposure

Components

Diesel fuel

Remarks : No available data.

Specific target organ toxicity (STOT) - repeated exposure

Components

Diesel fuel

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Target Organs : (Thymus, Liver, Bone Marrow)
Remarks : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Components

Diesel fuel
Remarks : May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects Components

Diesel fuel
Acute toxicity : Fish, invertebrates and algae with Fish, invertebrates and algae with LC/EC50 >1 - 10 mg/L
Chronic toxicity : No available data.

Persistence and degradability Components

Diesel fuel
Biodegradability : This product is expected to be inherently biodegradable.

Bioaccumulation Components

Diesel fuel
Bioaccumulation : Log Kow > 4 (potentially bioaccumulative)

13. DISPOSAL CONSIDERATIONS

Waste disposal : Product is suitable for burning for fuel value in compliance with applicable laws and regulations, and consideration of product characteristics at time of disposal.
Other regulations : Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity, or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP).
Flash Point : > 55 °C (ASTM D-93)

14. TRANSPORT INFORMATION

Note : The flash point of this material is > 55 °C, and hence regulatory classifications for flammability may vary.

ADR

Proper shipping name : GAS OIL
UN number : 1202
Class : 3
Letter : F
Packing group : III
Labelling number : 3

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CFR

Proper shipping name : GAS OIL
UN number : 1202
Class : 3
Letter : F
Packing group : III
Labelling number : 3

IATA_C

Proper shipping name : GAS OIL
UN number : 1202
Class : 3
Letter : F
Packing group : III
Labelling number : 3

IMDG

Proper shipping name : GAS OIL
UN number : 1202
Class : 3
Letter : F
Packing group : III
Labelling number : 3
Marine pollutant : Marine Pollutant
Medical First Aid Guide : 311
(MFAG) table
Emergency Schedule (EmS) : 3-07
number
IMDG code page number : 3375

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

Other regulations : Globally Harmonized System of Classification and Labelling of Chemicals (GHS) [GHS (Rev. 7) (2017)]

The components of this product are reported in the following inventories:

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NO - Catalog of Hazardous Chemicals(2015) (China)
NO - List of Toxic Chemicals Restricted to be Imported/Exported (China)
NO - Inventory of Prohibited Chemicals (China)
NO - List of Hazardous Chemicals for Priority Management- SAWS (China)
YES - Toxic Substances Control Act Inventory (TSCA) (U.S.A)
NO - New Zealand Inventory (NZIoC) (New Zealand)
YES - Taiwan Chemical Substance Inventory (TCSI) (Taiwan)
YES - Existing Chemicals List (KECI) (Korea)
NO - Designated existing substances List (First Batch) (Korea)
NO - K-REACH registration exemption substances list (South Korea)
NO - K-REACH CMR substances list by MOE (South Korea)
NO - KREACH Priority control substances 1 (South Korea)
NO - KREACH Priority control substances 2 (South Korea)
NO - Philippine Inventory of Chemicals and Chemical Substances (PICCS) (The Philippines)
YES - Australian Inventory of Chemical Substances (AICS) (Australia)
YES - Domestic Substances List (DSL) (Canada)
NO - Non-Domestic Substances List (NDSL) (Canada)

16. OTHER INFORMATION

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.

Abbreviations That May Have Been Used In This Document:

TLV - Threshold Limit Value	TWA - Time Weighted Average
LTEL - Long-term Exposure Limit	STEL - Short-term Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists	CAS - Chemical Abstract Service Number
IMO/IMDG - International Maritime Dangerous Goods Code	SDS – Safety Data Sheet
SANS – South African National Standards	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
STOT – Specific Target Organ Toxicity	OHS Act – Occupational Health and Safety Act
NFPA - National Fire Protection Association (USA)	ECHA - European Chemicals Agency

Sources of key data used to compile the Safety Data Sheet : European Oil Company Organisation for Environment, Health and Safety)
ECHA (<https://echa.europa.eu/information-on-chemicals>)

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Disclaimer

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license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.
