

<b>SHEQ 003</b>  <b>PETROTRADE</b> <i>experience the difference</i>	<b>Title:</b> 500ppm DIESEL Material Safety Data Sheet (MSDS)		<b>Page.</b> 1 of 7
	<b>Prepared By:</b>	SHEQ Officer	<b>Revision No:</b> 0
	<b>Approved By:</b>	Operations Manager	<b>Issue Date:</b> April 2013

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

### Identification of substance/ preparation

Low Sulphur diesel / Automotive Diesel Oil

Use only as a motor fuel for diesel engines which ignite by means of compression.

Not for aviation use.

SHOULD NOT be used as a solvent nor cleaning agent.

### Company Identification

PETROTRADE (PVT) LTD  
 100 Leopold Takawira Street  
 Harare  
 Telephone Number  
 +263-04-748512/3/6/7; 748548; 748519

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical Composition

A complex mixture of olefins, paraffin and volatile hydrocarbons with carbon numbers predominately in the range C9 and higher.

May also contain small quantities of proprietary performance additives.

### Hazardous Components

The following components considered by various legislative authorities to be hazardous may be present:

#### Typically:

Sulphur -CAS No. 68476-30-2.

## 3. HAZARDS IDENTIFICATION

Classified as hazardous according to the criteria of Hazardous Substances and Articles (Transportation by, and Labelling of Road Tankers) Regulations, 1984 (NO. 262) Alternative substance identification No 1270.

### Skin

May cause irritation with prolonged or repeated contact. Practically non- toxic if absorbed following acute (single) exposure.

### Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhoea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases tremors, convulsions, unconsciousness, coma, respiratory arrest and death may occur.

### Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death.

### **Chronic Effects**

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results has not been determined in humans. Contains sulphur. Prolonged or repeated exposure to sulphur will be irritating to skin. NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

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## **4. FIRST AID MEASURES**

### **Eyes**

Wash eye thoroughly with copious amounts of water for at least 15 minutes, ensuring eyelids are held wide open. Obtain medical advice if any pain or redness develops or persists.

### **Skin**

- Wash skin thoroughly with soap and water or waterless hand cleanser as soon as reasonably practicable.
- Remove heavily contaminated clothing and wash underlying skin.
- In extreme situations of saturation with this product, drench with water, remove clothing as soon as possible and wash skin with soap and water. Seek medical advice if skin becomes red, swollen and painful with blisters.

### **Ingestion**

If contamination of the mouth occurs wash thoroughly with water and do not give liquids. Except as a deliberate act, the ingestion of large amounts of product is unlikely. If it should occur, do not induce vomiting: obtain medical advice. If spontaneous vomiting occurs lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

### **Inhalation**

If exposure to vapour, mists or fumes, causes patient not to breathe provide artificial respiration if one is a trained first aider. Keep patient warm and at rest. If any symptom persists, obtain medical advice.

### **Medical Advice**

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis.

Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distance along tissue planes.

Product can be aspirated on swallowing following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

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## **5. FIREFIGHTING MEASURES**

For major/minor fires comply to internal Emergency Preparedness and Response SOP and call the Fire Brigade where appropriate. Ensure an escape path is always available from any fire. If the fire cannot be extinguished internally the only course of action is to evacuate immediately. If the fire cannot be extinguished internally the only course of action is to evacuate immediately.

**For small fires**

Use any extinguisher suitable for Class B fires, Dry chemical powder, CO<sub>2</sub>, water spray firefighting foam

**For large fires**

Use water spray and firefighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire – exposed containers.

FIRES SHOULD BE DEALT WITH BY TRAINED FIRE FIGHTERS WEARING APPROVED BREATHING APPARATUS. FIRES IN CONFINED SPACES SHOULD BE DEALT WITH BY TRAINED PERSONEL WEARING APPROVED BREATHING APPARATUS.

Any spillage should be regarded as potential fire risk.

**Combustion Products**

Toxic fumes may be evolved on burning or exposure to heat.

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**6. ACCIDENTAL RELEASE MEASURES**

- Observe all relevant local and international regulations. As this product has a very low flash point any spillage or leak is a severe fire and /or explosion hazard.
  - Spilled material may make surfaces slippery. Protect the environment by use of absorbents or absorbent broom where possible.
  - It is advised that stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage that may be reasonably anticipated.
  - Evacuate all non-essential personnel from the immediate area.
  - If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present for entry.
  - Ensure good ventilation.
  - Wear protective clothing.
  - Large and uncontrolled spillages should be smothered with foam to reduce the risk of ignition.
  - The use of firefighting foam may be useful in certain situations to reduce vapours.
  - The proper use of water spray may effectively disperse product vapour or the liquid itself.
  - Recovery of large spillages should be effected by specialist personnel.
  - Protect drains from potential spills to minimise contamination. Do not wash product into drainage system.
  - In the case of spillage on water surfaces, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.
  - In the event of a spillage which can result in exposure to the Public or the environment contact the appropriate regulatory authorities i.e. Environmental Management Agency (EMA) and Local Authority
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**7. HANDLING AND STORAGE****Storage Conditions**

- Store and dispense only in well ventilated areas away from heat and sources of ignition. All tanks should be manufactured and installed in accordance to
- SAZS 341-72 for small quantities, CZI 1963 for bulk storage, Government Notice of 1949 Section 1026 and 1027 for general information.
- Store and use only in equipment/ containers designed for use with this product.

- Diesel fuel in particular low and ultra-low sulphur diesel fuel has the capability of accumulating static electrical charges of sufficient energy to cause a fire/ explosion in the presence of lower flashpoint products such as gasoline.
- Containers must be properly labelled and kept closed when not in use.
- Do not remove warning labels from containers.
- Empty packages may contain some remaining product. Retain hazard warning labels on empty packages as a guide to the safe handling, storage and disposal of empty packaging.
- Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated using equipment such as the fan etc and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations of less than 1% of the lower flammability limit and an oxygen concentration of at least 20% volume .Ensure that the permit to work system is adhered to and completed before entry into the confined storage tanks.
- Always have sufficient people standing by outside the tank with appropriate breathing apparatus and equipment to affect a quick response

#### **Handling Precautions**

- Ensure good ventilation and avoid as far as reasonably practicably the inhalation and contact with vapours, mists or fumes which may be generated during use. If such vapour, mists or fumes are generated their concentration in the workplace air should be controlled to the lowest reasonably practicable level.
- Avoid contact with skin and observe good personal hygiene.
- Avoid contact with eyes .If splashing is likely wear a full face visor or chemical goggles as appropriate.
- Do not siphon product by mouth.
- Whilst using, do not eat, drink or smoke.
- Take all necessary precautions against accidental spillage into soil or water.

#### **Fire Prevention**

- Light hydrocarbon vapours can build up in the headspace of tanks. Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks.
- When the product is pumped (during filling, discharge or ullaging) or decanting and when sampling, there is a risk of static discharge .Ensure equipment used is properly earthed and bonded to the tank structure.
- Explosive air/vapour mixtures may form at ambient temperatures.
- If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard.
- Product contaminated rags: paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose off safely immediately after use.
- Empty containers represent a fire hazard as they may contain some remaining flammable product and vapour. Never cut, weld or braze empty containers.

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Exposure Limits**

If vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.

It is recommended that the current occupational exposure limit for gasoline is used:

Diesel Fuel (ACGIH):

5mg/m as mineral oil mist, 100mg/m<sup>3</sup> (8 hr TWA)

#### **Protective Clothing**

Wear face visor or goggles in circumstances where eye contact can accidentally occur.

If skin contact is likely, wear impervious protective clothing and /or gloves as stipulated by PPE/C matrix.

Protective clothing should be regularly inspected and maintained: overalls should be washed thoroughly.

### **Respiratory Protection**

If operations are such that exposure to vapour, mist or fume may be anticipated then suitable approved respiratory equipment should be worn such as an approved air-purifying respirator with organic vapour cartridges or canister.

The use of respiratory equipment must be strictly in accordance with the manufacturers' instructions and any statutory requirements governing its selection and use as stipulated by Factories and Works (General ) Regulations ,1976 RGN 263 of 1976.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Typical Values**

**Grades: 500ppm gasoil**

	<b>Tested Method</b>	<b>Units</b>	
Physical state			liquid
Color			yellow - amber
Density @ 20 <sup>0</sup> C	ASTM D 1298	kg/l	0.8161-0.8656
Flash point (PMC)	ASTM D 93	<sup>0</sup> C	55-70
Kinematic viscosity @40 <sup>0</sup> C	ASTM D 445	Centistokes	2.2- 4.5

## **10. STABILITY AND REACTIVITY**

### **Conditions to avoid**

Sources of ignition.

Stable at ambient temperatures.

Avoid excessive heat and high temperatures.

Hazardous polymerisation reactions will not occur.

Avoid storage at or near flash point.

### **Materials to avoid**

Avoid contact with strong oxidizing agents

### **Hazardous Decomposition Products**

- Thermal decomposition can produce a variety of compounds, the precise nature of which will depend on the decomposition conditions.
- Incomplete combustion/ thermal decomposition will generate smoke, carbon dioxide and hazardous gases, which will include carbon monoxide.

## **11. TOXOLOGICAL INFORMATION**

### **ABUSE**

Under normal conditions of use the product is not hazardous, however abuse involving deliberate inhalation of very high concentration of vapour, even for short periods can produce unconsciousness and /or result in a sudden fatality.

### **Carcinogenicity/ chronic toxicity**

Exposure has shown to produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding in humans has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation

### **Eyes**

- Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.

### **Skin**

- Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.
- This material contains significant quantities of polycyclic aromatic hydrocarbons (PCAs), some of which has been shown by experimental studies to induce skin cancer.

#### **Ingestion**

- Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea.
- Will injure the lungs if aspiration occurs, e.g. during vomiting.

#### **Inhalation**

- May cause irritation to eyes, nose and throat due to exposure to vapour, mists or fumes.
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### **12. ECOLOGICAL INFORMATION**

Keep out of sewers, drainage areas, and waterways. Report spills and release to regulatory authorities such as Environmental Management Agency (EMA) and Local Authorities.

#### **Mobility**

Spillages may penetrate the soil causing ground contamination.

#### **Persistence and degradability**

This product is inherently biodegradable.

#### **Bio-accumulative potential**

There is no evidence to show bioaccumulation will occur

#### **Aquatic toxicity**

May be harmful to aquatic organisms.

Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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### **13. DISPOSAL CONSIDERATIONS**

- Dispose of by incineration or other suitable means under conditions approved by the local authority or via an authorized person/licensed waste disposal contractor in accordance with local Authority and EMA regulations
  - Empty containers may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.
  - Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers.
  - Materials contaminated with product should be treated as highly flammable
  - Disposal should be in accordance with local Authority and EMA regulations.
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### **14. TRANSPORT INFORMATION**

Proper/common shipping name

ADR/RID: Hydrocarbons liquid, Flammable liquid, Class 3, Item 32 (c), Hazard Identification No. 30

UN: GAS OIL, Flammable liquid, Class 3, Packaging Group III, UN No. 1202

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### **15. REGULATORY INFORMATION**

#### **Canadian Regulatory**

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B

#### **US Federal, State and Regulatory**

The product and its constituents are on the EPA TSCA Inventory

#### **Risk (R) Phrases:**

R40 – Possible risks of irreversible effects

**Safety (S) Phrases**

S24 – Avoid contact with skin.

S36/37 – Wear suitable protective clothing and gloves.

S43 – In case of a fire, use foam/dry powder/CO2/halon. Never use water.

S62 – if swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

S2 – keep out of reach of children.

**16. OTHER INFORMATION**

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