

# Automotive Diesel Fuel

## SAFETY DATA SHEET

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

#### Identification of substance/preparation

Automotive Diesel Fuel

#### Application

Fuel for compression ignition diesel engines

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### Chemical Composition

Complex mixture of middle distillate hydrocarbons, with carbon numbers in C10 to C28 range.

Performance enhancing additives may be included.

#### Hazardous Components

Cracked components containing polycyclic aromatic hydrocarbon compounds may be present.

Fuels, diesel. EINECS No: 269-822-7, CAS No: 68334-30-5, Xn, R40 Possible risks of irreversible effects, R65 Harmful: may cause lung damage if swallowed, R66 Repeated exposure may cause skin dryness or cracking (>90%)

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### 3. HAZARDS IDENTIFICATION

Harmful if swallowed - aspiration hazard.

This material may contain significant quantities of polycyclic aromatic hydrocarbons (PCAs), some of which have been shown by experimental studies to induce skin cancer.

Repeated exposure may cause skin dryness or cracking.

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### 4. FIRST-AID MEASURES

#### Eyes

Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists.

#### Skin

Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin.

## **Ingestion**

If contamination of the mouth occurs, wash out thoroughly with water.

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.

## **Inhalation**

If inhalation of mists, fumes or vapour causes irritation to the nose or throat, or coughing, remove to fresh air. If symptoms persist obtain medical advice.

## **Medical Advice**

Treatment should in general be symptomatic and directed to relieving any effects.

Product can be aspirated on swallowing or 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.

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 minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

## **5. FIRE-FIGHTING MEASURES**

For major fires call the Fire Service. Ensure an escape path is always available from any fire.

There is a danger of flashback if sparks or hot surfaces ignite vapour.

Use foam, dry powder or water fog. DO NOT USE water jets.

Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus.

### **Combustion Products**

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

See Stability and Reactivity, Section 10 of this Safety Data Sheet.

## **6. ACCIDENTAL RELEASE MEASURES**

Any spillage should be regarded as a potential fire risk.

In the event of spillage, remove all sources of ignition and ensure good ventilation.

Wear protective clothing. See Exposure Controls/Personal Protection, section 8, of this Safety Data Sheet.

Spilled material may make surfaces slippery.

Clean up spilled material immediately.

Contain and recover spilled material using sand or other suitable inert absorbent material.

Recovery of large spillages should be effected by specialist personnel.

It is advised that stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage which may be reasonably anticipated.

Large and uncontained spillages should be smothered with foam to reduce the risk of ignition.

The foam blanket should be maintained until the area is declared safe.

Protect drains from potential spills to minimise contamination. Do not wash product into drainage system.

Vapour is heavier than air and may travel to remote sources of ignition (eg. along drainage systems, in basements etc.).

If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry.

In the case of spillage on water, 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 case of spillage at sea approved dispersants may be used where authorised by the appropriate government/regulatory authorities.

Regular surveillance on the location of the spillage should be maintained.

In the event of spillages contact the appropriate authorities.

## **7. HANDLING AND STORAGE**

### **Storage Conditions**

Store and dispense only in well ventilated areas away from heat and sources of ignition.

Store and use only in equipment/containers designed for use with this product.

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 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.

Always have sufficient people standing by outside the tank with appropriate breathing apparatus and equipment to effect a quick rescue.

### **Handling Precautions**

Avoid, as far as reasonably practicable, inhalation of vapour, mists or fumes generated during use.

Avoid contact with skin and observe good personal hygiene.

Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.

Do not siphon product by mouth.

Whilst using do not eat, drink or smoke.

Wash hands thoroughly after contact.

Use disposable cloths and discard when soiled. Do not put soiled cloths into pockets.

Take all necessary precautions against accidental spillage into soil or water.

### **Fire Prevention**

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). 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.

Will present a flammability hazard if heated above flash point but bulk liquids at normal storage temperatures will present virtually no fire hazard. If fuel contacts hot surfaces, or leaks from high pressure fuel pipes, the vapour and/or mists generated will create a flammability or explosion hazard.

When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure.

Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate.

Dispose of safely immediately after use.

Empty containers represent a fire hazard as they may contain some remaining flammable product and vapour. Never cut, weld, solder or braze empty containers.

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

### **Exposure Limits**

There is no appropriate occupational exposure limit for this material.

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

### **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.

Protective clothing should be regularly inspected and maintained; overalls should be dry-cleaned, laundered and preferably starched after use.

### **Respiratory Protection**

If operations are such that exposure to vapour, mist or fume may be anticipated, then suitable approved respiratory equipment should be worn.

The use of respiratory equipment must be strictly in accordance with the manufacturers' instructions and any statutory requirements governing its selection and use.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

	Test Method	Units	
Physical state			low viscosity liquid
Colour			amber
Odour			gasoil-like
Density @ 20°C	ASTM D 4052	kg/m <sup>3</sup>	860
Kinematic viscosity @ 40°C	ASTM D 445	mm <sup>2</sup> /s	2 - 6
Boiling point/range	ASTM D 86	°C	160 - 385
Flash point (PMC)	ASTM D 93	°C	55 - 70
Explosion limits		%	0.6 - 6.5
Partition coefficient (n-octanol/water)		Log <sub>10</sub> Pow	>3
Solubility in water		g/l	low solubility

## 10. STABILITY AND REACTIVITY

Stable at ambient temperatures.

Hazardous polymerisation reactions will not occur.

### Conditions to Avoid

Sources of ignition

### Materials to Avoid

Avoid contact with strong oxidizing agents.

### Hazardous Decomposition Products

Thermal decomposition products will vary with conditions.

Incomplete combustion will generate smoke, carbon dioxide and hazardous gases, including carbon monoxide.

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## 11. TOXICOLOGICAL INFORMATION

### 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.

As with all such products containing potentially harmful levels of PCAs, prolonged or repeated skin contact may eventually result in dermatitis or more serious irreversible skin disorders including cancer.

### Ingestion

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.

Will injure the lungs if aspiration occurs, eg. 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

### Mobility

Spillages may penetrate the soil causing ground water contamination.

This material may accumulate in sediments.

### Persistence and degradability

This product is inherently biodegradable.

### Bioaccumulative potential

There is no evidence to suggest bioaccumulation will occur.

### **Aquatic toxicity**

Harmful to aquatic organisms, may cause long term effects in the aquatic environment

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 a licensed waste disposal contractor.

Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

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## **14. REGULATORY INFORMATION**

### **EU Category of Danger**

Carcinogenic category 3

Harmful

### **EU Labelling**

Symbol:

St. Andrew's Cross

Indication of danger:

HARMFUL

Contains:

Fuels, Diesel

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

R40 Possible risks of irreversible effects

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking

### **Safety ( S ) Phrases:**

S2 Keep out of reach of children

S24 Avoid contact with skin

S43 In case of fire, use foam/dry powder/CO2. Never use water jets.

S36/37 Wear suitable protective clothing and gloves

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

S61 Avoid release into the environment. Refer to special instructions/Safety data sheets.

National legislation: Occupational Health and Safety Act (Act 85 of 1993)

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