

MATERIAL SAFETY DATA SHEET

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

PRODUCT NAME

AUTO DIESEL / DERV

SYNONYMS : G.O.R.V., Ultra-Low Sulphur Diesel, AD10

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Revision No	: 10
Last Revision Date	: January 2006

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NAME AND ADDRESS OF MANUFACTURER/SUPPLIER

ConocoPhillips Ltd, Humber Refinery, South Killingholme, North Lincolnshire, DN40 3DW.

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EMERGENCY CONTACT

ConocoPhillips Ltd. Humber Refinery, South Killingholme, Immingham, North Lincolnshire DN40 3DW.
Health and Safety Emergency Telephone No. 01469 555348 (24 hours)

APPLICATION

For use as a fuel in diesel engines only. Any other use implies a processing operation which may change its essential characteristics and liability for safety of the product will transfer to the processor.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Petroleum Hydrocarbons >99%

Saturated olefinic and aromatic - C₁₀ to C₂₆ - may contain Polycyclic Aromatic Hydrocarbons - PAHs.
CAS No. 068334-30-5. EINECS No. 269-822-7, R40.

Additives

1. Middle distillate flow improvers (various) up to 1000ppm. (Dispersion of Ethylene vinyl acetate in an organic solvent).
2. Cetane improvers (Alkyl Nitrates) - up to 500ppm. CAS No. 27247-96-7, EINECS No. 269-822-7.
3. May contain Dye and Chemical Marker - Gas Oil Marker Concentrate. CAS No. 68334-30-5.
4. Antistatic Additive 1 - 3 ppm
5. May contain a multifunctional detergent

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3. HAZARDS IDENTIFICATION

Health Hazards:

This product contains amounts of Polycyclic Aromatic Hydrocarbons, some of which are known from experimental animal studies to be skin carcinogens. Prolonged and repeated exposure may therefore cause dermatitis and there is a risk of skin cancer. The risk of skin cancer will be very low, providing the handling precautions are such that prolonged and repeated skin contact is avoided and good personal hygiene is observed. Aspiration of liquid into the lungs directly or as a result of vomiting following ingestion of the liquid can cause severe lung damage and death.

Safety Hazards:

Product can accumulate static charges, which may be a possible ignition source (see Section 7). However product does contain an antistatic additive.

Environmental Hazards:

Dangerous for the environment. Toxic to aquatic organisms. May cause long-term adverse effects in the environment.

4. FIRST AID MEASURES

Eyes :	Rinse immediately with plenty of water until irritation subsides. If irritation persists, obtain medical attention.
Skin :	Immediate flush with large amounts of water, using soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, get medical attention.
Inhalation :	In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.
Ingestion :	DO NOT INDUCE VOMITING, since it is important that no amount of the material should enter the lungs (aspiration). Keep at rest. Get prompt medical attention.
Pressure Injection :	ALWAYS OBTAIN IMMEDIATE MEDICAL ATTENTION EVEN THOUGH THE INJURY MAY APPEAR MINOR.

5. FIRE-FIGHTING MEASURES

Extinguishing Media :	Foam, dry chemical powder, carbon dioxide.
Fire and Explosion Hazards :	Flammable liquid, moderate hazard. Liquid can release vapours that readily form flammable mixtures at or above the flash point. Static discharge; material can accumulate static charges which may cause an incendiary electrical discharge. However, this product does contain an antistatic additive.
Special Fire-Fighting Procedures :	Water fog or spray to cool fire exposed surfaces (e.g. containers) and to protect personnel, should only be used by personnel trained in fire-fighting. Cut off "fuel"; depending on circumstances, either allow the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire. Respiratory and eye protection required for fire-fighting personnel exposed to fumes or smoke.
Hazardous Combustion Products :	Smoke, sulphur oxides and carbon monoxide in the event of incomplete combustion.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions : See Section 8.

Environmental Precautions :

Land Spill : Eliminate sources of ignition. Shut off source taking normal safety precautions. Prevent liquid from entering sewers, watercourses or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation. Take measures to minimise the effects of groundwater.

Water Spill : Eliminate the spill immediately with booms. Warn shipping. Notify port and other relevant authorities.

Decontamination Procedures :

Recover by skimming or pumping using explosion-proof equipment, or contain spilled liquid with booms, sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of absorbed residues as directed in Section 13.

7. HANDLING AND STORAGE

Store product in cool, well ventilated surroundings, well away from sources of ignition. Provide suitable mechanical equipment for the safe handling of drums and heavy packages.

Electrical equipment and fittings must comply with local regulations regarding fire prevention with this class of product.

Load/unload temperature : Ambient to 40°C **Storage temperature :** Ambient to 40°C

Special Precautions

Use the correct grounding procedure. Store and handle in closed or properly vented containers. Ensure compliance with statutory requirements for storage and handling. Check for and prevent potential leaks from containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace Exposure Limit :	<u>Substance</u>	<u>8-hour TWA</u>	<u>STEL</u>	<u>Source / Other Information</u>
	Mineral Oil Mist	5 mgm ⁻³	10 mgm ⁻³	HSE Guidance: <i>not</i> listed in EH 40)

Personal Protection : In open systems where contact is likely, wear safety goggles (EN 166) , chemical-resistant overalls, and chemically impervious gloves (EN 374). Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided. Where concentrations in air may exceed the OES approved respirators may be required (EN 405).

Monitoring Methods: Health & Safety Executive (HSE), Methods for the determination of Hazardous Substances (MHDS); MDHS 84
<http://www.hsl.gov.uk/search.htm>

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Clear straw coloured liquid	Odour :	Pungent petroleum
Density at 15°C :	0.82 g/ml	pH :	Not applicable
Vapour Pressure at 20°C :	< 0.3 Kpa	Vapour Density (air=1) :	< air
Boiling point, °C :	180 - 390°C	Pour Point °C :	-24°C
Flash Point (Closed Cup), °C :	> 55°C	Auto-ignition Temperature, °C :	250°C - 270°C
Flammability Limit, in Air, % by Volume : LEL : 0.5 UEL : 6.0			
Kinematic Viscosity at 20°C, mm²s⁻¹ : 4.8 Kinematic Viscosity at 40°C, mm²s⁻¹ : 3.0			
Solubility : Negligible			

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION.

10. STABILITY AND REACTIVITY

Stability :	The product is stable and not subject to polymerisation.
Conditions to avoid :	Avoid exposure to extreme heat.
Materials to avoid :	Avoid contact with strong oxidising agents such as liquid chlorine.
Hazardous Decomposition Products :	Product does not decompose at ambient temperature.

11. TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's component's

HEALTH EFFECTS

On eyes :	Slightly irritating but does not damage eye tissue.
On skin :	Low order of acute toxicity. Irritating. Prolonged or repeated contact may also lead to more serious skin disorders, including skin cancer. Certain components present in this material may be absorbed through the skin, possibly in toxic quantities.
By inhalation :	In high concentrations and/or at elevated temperatures, vapour or mist is irritating to mucous membranes, may cause headaches and dizziness, may be anaesthetic and may cause other central nervous system effects. Elevated temperatures or mechanical action may form vapours, mists or fumes, which may be irritating to the eyes, nose, throat and lungs. Avoid breathing vapours, mists or fumes.

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11. TOXICOLOGICAL INFORMATION CONTINUED

By ingestion : Low order of acute/systemic toxicity. Minute amounts aspirated into the lungs during ingestion or vomiting may cause sever pulmonary injury and death.

Chronic : Contains Polycyclic Aromatic Hydrocarbons (PAH's). Prolonged and/or repeated skin contact with certain PAH's has been shown to cause skin cancer. Prolonged and/or repeated exposure by inhalation of certain PAH's may also cause cancer of the lung and of other sites of the body.

Acute : Based upon animal test data from similar materials and products, the acute toxicity of this product is expected to be :

ORAL LD50 > 5000 mg/kg
DERMAL LD50 > 2000 mg/kg

12. ECOLOGICAL INFORMATION

In the absence of specific environmental data for this product, this assessment is based on information developed with various other crude oils. Gas oils released into the environment will float on water and spread on the surface; on release to soils, gas oils show some mobility, but absorption is the predominant physical process.

Ecotoxicity: Dangerous for the environment. Toxic to most invertebrates and slightly toxic to fish.

Mobility: Some mobility in soils.

Persistence and Degradability : Lighter components volatilise and in air undergo photolysis to give half-lives of less than a day. Photoxidation of liquid hydrocarbons on the water surface also contributes to the loss process. Slow to moderate degradation in water and soil.

Bioaccumulation Potential: Potential to bioaccumulate, but metabolic processes may reduce this tendency.

13. DISPOSAL CONSIDERATIONS

The product contains hazardous ingredients listed in Section 2. Collects and dispose of it at an authorised disposal facility, in conformance with national and local; regulations and in accordance with EEC Directives on hazardous waste.

14. TRANSPORT INFORMATION

Classification for Transport : Rails cars, tank trucks, tankers, barges, drum.

Shipping Name : Diesel Fuel

UN Number : 1202

Packaging Group : III

UN Class : 3

Marine Pollutant: See Section 6

ADR/RID : Class 3

ICAO/IATA : Class 3

Emergency Action Code: 3Y

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15. REGULATORY INFORMATION

Hazard Label Data :	Xn Harmful N Dangerous for the Environment
R & S Phrases :	R40 Limited evidence of carcinogenic effect. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment S2 Keep out of reach of children S36/37 Wear suitable protective clothing and gloves S61 Avoid releases into the environment, see Section 6
EC Directives :	EC Directive 91 / 155 / EEC Waste Oil Directive 87 / 101/ EEC
Statutory Information :	The Health and Safety at Work Act 1974 Consumer Protection Act 1987 Environmental Protection Act 1990 Control of Substances Hazardous to Health Regulations 2002 (as amended) Chemicals (Hazard Information and Packaging) Regulations 2002 Dangerous Substances and Explosive Atmospheres Regulations 2002

16. OTHER INFORMATION

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this Sheet. You should not use the product other than for the stated application or applications.

If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others or may be affected of any hazards described in this sheet and of any precautions that should be taken.

This data sheet has been revised in sections 1, 8