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Data Sheet No. LCLA01 Revision : 07 04 1999

REPLACES LCLA01 : 26 10 98

This data sheet has been prepared in accordance with the requirements of the Data Sheet Directive 91/155/EEC.

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**RECOMMENDED USES**

Shell Clavus Oil is recommended for use as :

an industrial gear lubricant ; and as a bearing and refrigerator compressor oil.

If Shell Clavus Oil is used for a purpose not covered in this section, Shell UK Ltd. would be grateful to receive information on the application.

**KNOWN MISUSES/ABUSES**

Shell Clavus Oil is not to be used as :

none known.

The disposal of Shell Clavus Oil to soil, watercourses and drains is a legal offence.

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**1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**PRODUCT :**

**SHELL CLAVUS OIL**

**Comprising :**

**Shell Clavus Oil 15  
Shell Clavus Oil 32  
Shell Clavus Oil 46  
Shell Clavus Oil 68  
Shell Clavus Oil 100**

**COMPANY :**

**SHELL U.K. LIMITED,**

**ADDRESS :**

**SHELL-MEX HOUSE, STRAND, LONDON. WC2R 0DX**

**TELEPHONE :**

**0171-257-3000**

**EMERGENCY TELEPHONE NUMBER :**

**AS ABOVE**

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**2: COMPOSITION/INFORMATION ON INGREDIENTS**

Shell Clavus Oil is a preparation manufactured from highly refined mineral oils derived from crude petroleum.

Exposure limit values exist for the following constituents:

Mineral Oil.

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**3: HAZARD IDENTIFICATION**

Shell Clavus Oil is not classified as dangerous for supply or conveyance. It contains mineral oil, to which exposure limits apply. Prolonged and repeated skin contact may give rise to dermatitis. Mineral base oil will not biodegrade in anaerobic conditions and, hence, can be persistent. It contains components which have a high potential to bioaccumulate.

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#### **4: FIRST AID MEASURES**

##### **INHALATION**

Under normal conditions of use inhalation of vapours is not feasible or likely to present an acute hazard.

##### **SKIN**

Skin contact does not normally require first aid, but oil soaked clothing should be removed, and contaminated skin washed with soap and water. If persistent irritation occurs, medical advice should be sought without delay.

Where a high pressure injection injury has occurred, medical attention should be obtained immediately. Show this Data Sheet to the physician drawing attention to "Notes for Doctors" in Section 11 below.

##### **EYES**

Flush the eye with copious quantities of water. If irritation persists refer for medical attention.

##### **INGESTION**

###### **DO NOT INDUCE VOMITING**

If ingestion is suspected, wash out the mouth with water, and send to hospital immediately. Show this Data Sheet to the physician drawing attention to "Notes for Doctors" in Section 11 below.

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#### **5: FIRE-FIGHTING MEASURES**

Extinguishants	- Large Fire :	Foam/Water Fog - NEVER USE WATER JET
	- Small Fire :	Foam/Dry Powder/AFFF/CO2/Sand/Earth

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#### **6: ACCIDENTAL RELEASE MEASURES**

The first concern should be to prevent entry to drains or watercourses.

LARGE SPILLS should be banded by a suitable medium such as sand or earth. The liquid should be reclaimed directly or in an adsorbent medium and then transferred to suitable, clearly marked containers and disposed of in accordance with local byelaws and the requirements of the Environmental Protection Act 1990.

SMALL SPILLS should be soaked up with sand or earth and disposed of as for large spills.

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#### **7: HANDLING AND STORAGE**

##### **HANDLING**

Shell Clavus Oil does not require any special handling techniques, but it should be handled in suitable containers and spillage avoided.

##### **STORAGE**

The storage of Shell Clavus Oil is not subject to any special controls or restrictions. It should be stored in properly designed, closable, labelled containers, eg mild steel or high density polyethylene (HDPE).

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

### **EXPOSURE LIMIT VALUES**

The following limits are taken from The Health and Safety Executive's Guidance Note EH40 Occupational Exposure Limits 1997.

UK Occupational Exposure Standards :

Oil Mist, Mineral : 5 mg/cubic metre 8-hour TWA value  
10 mg/cubic metre 15-min TWA value

### **RECOMMENDED PROTECTIVE CLOTHING**

Impervious gloves and overalls where regular contact is likely, and goggles if there is a risk of splashing

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## **9: PHYSICAL AND CHEMICAL PROPERTIES**

Physical State :	Liquid at ambient temperature
Appearance :	Pale Amber
Odour :	Characteristic, mineral oil
Acidity/Alkalinity :	Not applicable
Initial Boiling Point :	>320 Deg. C.
Flammability :	Not applicable
Autoflammability :	Expected to be >320 Deg. C.
Flammability Limits	- Upper : 10 % vol.
	- Lower : 1 % vol.
Explosive Properties :	Not applicable
Oxidising Properties :	Not applicable
Vapour Pressure @ 20 Deg. C. :	<0.1 k.Pa
Solubility :	Water Solubility : Very Low
	Fat solubility/solvent : Data not available
Partition Coefficient, n-octanol water :	Expected to be > 6
Vapour Density (Air =1) :	> 1

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TYPICAL PROPERTIES	POUR POINT Deg C.	FLASH POINT Deg C.	DENSITY @ 15 Deg C.	VISCOSITY @ 40 Deg C.
Shell Clavus Oil 15	-39	153	0.879	15
Shell Clavus Oil 32	-33	162	0.889	32
Shell Clavus Oil 46	-30	189	0.892	46
Shell Clavus Oil 68	-27	193	0.897	68
Shell Clavus Oil 100	-24	>200	0.903	100

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## **10: STABILITY AND REACTIVITY**

### **CONDITIONS TO AVOID**

Extremes of temperature. Store between 0 and 50 Deg. C.

### **MATERIALS TO AVOID**

Strong oxidising agents, eg. chlorates which may be used in agriculture.

### **DECOMPOSITION PRODUCTS**

The substances arising from the thermal decomposition of these products will largely depend upon the conditions bringing about decomposition. The following substances may be expected from normal combustion :

Carbon Dioxide	Polycyclic Aromatic Hydrocarbons
Carbon Monoxide	Unburnt Hydrocarbons
Water	Unidentified Organic and Inorganic Compounds
Particulate Matter	Nitrogen Oxides

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## **11: TOXICOLOGICAL INFORMATION**

### **ACUTE HEALTH HAZARDS AND ADVICE**

Toxicity following single exposure to high levels (orally, dermally or by inhalation) is of a low order. The main hazards are: in the unlikely event of ingestion, aspiration into the lungs with possible resultant chemically induced pneumonia ; and, if the products are handled under high pressures, of high pressure injection injuries.

### **INHALATION**

Under normal conditions of use inhalation of vapours is not feasible or likely to present an acute hazard.

### **SKIN**

Skin contact presents no acute health hazard except in the case of high pressure injection injuries. These can lead to the loss of the affected limbs if not treated immediately and properly.

#### **Precautions :**

Avoid contact with the skin by the use of suitable protective clothing. Where skin contact is unavoidable, a high standard of personal hygiene must be practised. Extreme care must be exercised where the product is likely to be encountered at high pressures, when it is recommended that safe systems of work be employed.

#### **First Aid :**

Skin contact does not normally require first aid, but oil soaked clothing should be removed, and contaminated skin washed with soap and water. If persistent irritation occurs, medical advice should be sought without delay.

Where a high pressure injection injury has occurred, medical attention should be obtained immediately. Show this Data Sheet to the physician drawing attention to "Notes for Doctors" below.

### **EYES**

Eye contact may cause some discomfort.

#### **Precautions :**

If there is a risk of splashing while handling the liquid, suitable eye protection should be used.

#### **First Aid :**

Flush the eye with copious quantities of water. If irritation persists refer for medical attention.

### **INGESTION**

The main hazard following ingestion is of aspiration into the lungs during subsequent vomiting.

#### **Precautions :**

Accidental ingestion is unlikely. Normal handling and hygiene precautions should be taken to avoid ingestion.

#### **First Aid :**

DO NOT INDUCE VOMITING.

If ingestion is suspected, wash out the mouth with water, and send to hospital immediately. Show this Data Sheet to the physician drawing attention to "Notes for Doctors" below.

### **CHRONIC HEALTH HAZARD AND ADVICE**

Prolonged and repeated contact with oil products can be detrimental to health. The main hazards arise from skin contact and in the inhalation of mists. Skin contact under conditions of poor hygiene and over prolonged periods can lead to defatting of

the skin, dermatitis, erythema, oil acne and oil folliculitis. Excessive and prolonged inhalation of oil mists may cause a chronic inflammatory reaction of the lungs and a form of pulmonary fibrosis.

## **NOTES FOR DOCTORS**

### **HIGH PRESSURE INJECTION INJURIES**

High pressure injection injuries require surgical intervention and possibly steroid therapy to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. PROMPT surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetic, and wide exploration is essential.

### **INGESTION AND ASPIRATION OF PETROLEUM PRODUCTS**

There may be a risk to health where low viscosity products are aspirated into the lungs following vomiting, although this is uncommon in adults. Such aspiration would cause intense local irritation and chemical pneumonitis. Children, and those in whom consciousness is impaired, will be more at risk. Emesis of lubricants is not usually necessary, unless a large amount has been ingested, or some other compound has been dissolved in the product. If this is indicated - for example, when there is rapid onset of CNS depression from a large ingested volume - gastric lavage under controlled hospital conditions, with full protection of the airway is required. Supportive care may include oxygen, arterial blood gas monitoring, respiratory support and, if aspiration has occurred, treatment with corticosteroids and antibiotics. Seizures should be controlled with Diazepam, or appropriate equivalent drug.

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## **12: ECOLOGICAL INFORMATION**

The information given below refers to Shell Clavus Oil , which is 100% mineral base oil .

### **AIR**

Shell Clavus Oil is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.

### **WATER**

If released to water, Shell Clavus Oil will form a floating layer on the surface and its components will not evaporate or dissolve to any great extent. Dissolved components will be absorbed in sediments. In aerobic water and sediments they will biodegrade slowly, but in anaerobic conditions they will persist. Shell Clavus Oil is practically non-toxic to aquatic organisms but contains components which have a high potential to bioaccumulate.

### **SOIL**

Small volumes released on land will be absorbed in the upper soil layers and be biodegraded slowly. Larger volumes may penetrate into anaerobic soil layers in which the product will persist and may reach the water table on which it will form a floating layer. The more soluble components may dissolve but their high soil absorption coefficient and the low solubility will prevent significant contamination of ground water.

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## **13: DISPOSAL CONSIDERATIONS**

Shell Clavus Oil should be disposed of to a licensed waste contractor. Any disposal route should comply with local byelaws and the requirements of the Environmental Protection Act, 1990.

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## **14: TRANSPORT INFORMATION**

Not Dangerous for Conveyance

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## **15: REGULATORY INFORMATION**

This material has been classified according to the requirements of the Dangerous Substances Directive 67/548/EEC as last amended by the 7th Amendment 92/32/EEC, the 22nd Adaptation to Technical Progress 96/54/EC, and the Preparations Directive 88/379.

Not Dangerous for Supply

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## **16: OTHER INFORMATION**

The references set out below give further information on specific aspects.

### **LEGISLATION**

Consumer Protection Act 1987  
Control of Pollution Act 1974  
Environmental Protection Act 1990  
Factories Act 1961  
Health and Safety at Work Act 1974

Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations  
Chemical (Hazards, Information, and Packaging for Supply) Regulations  
Control of Substances Hazardous to Health Regulations  
Dangerous Substances in Harbour Areas Regulations  
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations  
Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations  
Road Traffic (Carriage of Dangerous Substances in Road Tankers and Tank Containers) Regulations  
Road Traffic (Training of Drivers of Vehicles Carrying Dangerous Goods) Regulations  
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations  
Special Waste Regulations

### **GUIDANCE NOTES**

HS(G)71      The storage of packaged dangerous substances  
EH/40        Occupational Exposure Limits  
EH/58        The Carcinogenicity of Mineral Oils  
MS24        Health surveillance of occupational skin disease

### **OTHER LITERATURE**

Concawe Report 86/69    Health Aspects of Worker Exposure to Oil Mists  
Concawe Report 01/97    Petroleum Products - First Aid Emergency and Medical Advice

Department of the Environment - Waste Management - The Duty of Care - A Code of Practice

### **ADDRESSES**

Concawe, Madouplein 1, B-1210 Brussel, Belgium

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