SHELL ADVANCE FILTER OIL (AEROSOL)

RECOMMENDED USES

Shell Advance Filter Oil (Aerosol) is recommended for use as:

- an aerosol applied protective coating for "off road" motorcycle foam and coated filters.

If Shell Advance Filter Oil (Aerosol) 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 Advance Filter Oil (Aerosol) is not to be used as:

- The contents of aerosols are known to be abused for their narcotic effects by young people. Long term abuse in this way leads to serious impairment of brain function. Solvent abuse can kill.

- The disposal of Shell Advance Filter Oil (Aerosol) to soil, watercourses and drains is a legal offence.

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

PRODUCT: SHELL ADVANCE FILTER OIL (AEROSOL)

COMPANY: SHELL UK OIL PRODUCTS LTD.

ADDRESS: STANLOW MANUFACTURING COMPLEX, PO BOX 3, ELLESMERE PORT, CH65 4HB,

TELEPHONE: 0151-350-4000

EMERGENCY TELEPHONE: 0151-350-4595

2: COMPOSITION/INFORMATION ON INGREDIENTS

Shell Advance Filter Oil (Aerosol) is a preparation manufactured from hydrocarbon propellants butane and propane, hydrotreated light petroleum naphtha and additives.

The following components, which have health effects, are present at significant concentrations.

<table>
<thead>
<tr>
<th>CONC. COMPONENT</th>
<th>CLASS</th>
<th>RISK PHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=50% hydrotreated light petroleum naphtha</td>
<td>Xn R65</td>
<td>May cause lung damage if swallowed</td>
</tr>
</tbody>
</table>

Exposure limit values exist for the following constituents:

- Butane
- Propane - asphyxiant

3: HAZARD IDENTIFICATION

Shell Advance Filter Oil (Aerosol) is classified as extremely flammable for supply purposes.

Shell Advance Filter Oil (Aerosol) contains propane (at less than or equal to 25%) and butane (at less than or equal to 25%) which are classified as extremely flammable and hydrotreated light petroleum naphtha (at less than or equal to 50%) which is classified as R11 - highly flammable and Xn R65 - may cause lung damage if swallowed for supply purposes.

The aerosol propellant in Shell Advance Filter Oil (Aerosol) containers is a mixture of extremely flammable hydrocarbon gases, propane and butane which are heavier than air and, in the event of damage occurring to the containers, will collect in depressions, pits, drains, confined spaces, etc. where it can present a health as well as a safety hazard.

The contents of aerosols are known to be abused for their narcotic effects by young people. Aspiration of the propellant can lead to irregular heartbeat, lung damage and even death. Long term abuse of hydrocarbon propellants can lead to serious impairment of brain function.
When expelled from the aerosol Shell Advance Filter Oil (Aerosol) will be in the form of a liquid which can be aspirated into the lungs.

It contains butane to which an exposure limit applies and propane which is an asphyxiant.

Prolonged and repeated skin contact may give rise to dermatitis.

Shell Advance Filter Oil (Aerosol) is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed product in cartons of less than 30 kg gross weight to be exempt from control providing they are labelled in accordance with above provisions to show they are transported as Limited Quantities.

Aerosols not so packed must be labelled under the general classification for aerosols.

The hydrocarbon propellant will react rapidly with hydroxyl radicals and ozone when released to air.

Shell Advance Filter Oil (Aerosol) contains hydrotreated light petroleum naphtha, present at less than or equal to 50%, which is classified as N R51/53 - toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4: FIRST AID MEASURES

INHALATION
Remove to fresh air. If rapid recovery does not occur, obtain medical attention.

SKIN
Skin contact does not normally require first aid, but 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
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.

5: FIRE-FIGHTING MEASURES

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

6: ACCIDENTAL RELEASE MEASURES

Major loss of containment is unlikely as the product is packed in individual aerosols. However, the following action would be appropriate for example in the case of a major incident involving road transport carrying significant quantities of aerosols.

IMMEDIATE EMERGENCY ACTION
Clear people away from the area to a safe place
Do not operate electrical equipment unless flameproof
Summon aid of emergency services if warranted
Treat or refer casualties if necessary

FURTHER ACTION - FIRE
IF SAFE :
- Containers exposed to fire can be cooled by water fog/spray
*** NEVER USE WATER JET ***

FURTHER ACTION - SPILLAGE
IF SAFE :

Extinguish naked lights, eg cigarettes - AVOID MAKING SPARKS
Position fire fighting equipment
Disperse vapours to below the flammable limit using water fog/spray
Try to stop the flow of liquid product
Prevent product entering waterways, drains etc. (Covering with wet sacking helps)
Use sand, earth or other suitable material
If product reaches waterways, drains etc. inform local and fire authorities
Reclaim product directly or absorb in suitable medium and transfer to suitable, clearly marked containers
See section 13 for disposal of contaminated product and waste

SMALL SPILLS should be soaked up in a suitable absorbent material and disposed of as for large spills.

7: HANDLING AND STORAGE

HANDLING

Shell Advance Filter Oil (Aerosol) does not require any special handling techniques, but it should be handled in the original containers and spillage avoided.

STORAGE

Flammable/combustible. Store at moderate temperatures in dry, well ventilated area. Keep away from heat, sparks and open flame. Protect from sunlight and do not expose to temperatures exceeding 50 °C.

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 2000.

UK Occupational Exposure Standards :

<table>
<thead>
<tr>
<th></th>
<th>Butane</th>
<th>Propane</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,450 mg/cubic metre 8-hour TWA value</td>
<td>Asphyxiant</td>
</tr>
<tr>
<td></td>
<td>1,810 mg/cubic metre 15-min TWA value</td>
<td></td>
</tr>
</tbody>
</table>

RECOMMENDED PROTECTIVE CLOTHING

Impervious gloves and overalls where regular contact is likely, and goggles if there is a risk of splashing.
### 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid (on release from the aerosol)</td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Acidity/Alkalinity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>- 44 Deg. C.</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>&lt; 0 Deg. C.</td>
</tr>
<tr>
<td>Autoflammability</td>
<td>200 Deg. C.</td>
</tr>
<tr>
<td>Flammability Limits - Upper</td>
<td>10.9% vol.</td>
</tr>
<tr>
<td>- Lower</td>
<td>1% vol</td>
</tr>
<tr>
<td>Vapour Pressure @ 20 Deg. C.</td>
<td>375 kPa</td>
</tr>
<tr>
<td>Relative Density @ 15 Deg. C.</td>
<td>0.76 (liquid on release from aerosol)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Poorly soluble</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Data not available</td>
</tr>
<tr>
<td>Fat solubility/solvent</td>
<td>&gt; 1</td>
</tr>
</tbody>
</table>

### 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 and strong acids and alkalis.

**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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Expected Compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>Polycyclic Aromatic Hydrocarbons</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>Unburnt Hydrocarbons</td>
</tr>
<tr>
<td>Water</td>
<td>Unidentified Organic and Inorganic Compounds</td>
</tr>
<tr>
<td>Particulate Matter</td>
<td>Nitrogen Oxides</td>
</tr>
</tbody>
</table>

### 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**

Exposure to higher concentrations of Shell Advance Filter Oil (Aerosol) vapours can lead to drowsiness, unconsciousness, and subsequent asphyxiation.

**Precautions:**

Inhalation of vapours should be avoided. Where, exceptionally, higher concentrations of the vapour are likely to be present, eg. in the event of use in a badly ventilated area, persons should not be allowed to enter the area, even in an emergency, until the atmosphere has been checked and passed as safe for entry by a competent person.

**First Aid:**

Remove the affected person to fresh air. If breathing has stopped administer artificial respiration. Give external cardiac massage if necessary. If the person is breathing, but unconscious, place in the recovery position. Obtain medical assistance immediately.
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 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 and irritation.

Precautions:

If there is a risk of eye contact while using Shell Advance Filter Oil (Aerosol), 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 hydrocarbon 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 and erythema. Excessive and prolonged inhalation of 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.

12: ECOLOGICAL INFORMATION

Shell Advance Filter Oil (Aerosol) contains hydrotreated light petroleum naphtha, present at less than or equal to 50%, which is classified as N R51/53 - toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information given below refers to the hydrocarbon propellant and hydrotreated light petroleum naphtha.

AIR

The hydrocarbon propellants and the volatile components of hydrotreated light petroleum naphtha will evaporate on release and react rapidly with hydroxyl radicals and ozone.

WATER

If released to water, the hydrocarbon propellants and the volatile components of hydrotreated light petroleum naphtha will evaporate, but a proportion will dissolve. In aerobic water and sediment they may biodegrade, but under anaerobic conditions they may persist.

SOIL

If released to soil, the hydrocarbon propellants and the volatile components of hydrotreated light petroleum naphtha will evaporate, with a proportion of the product being absorbed in the upper soil layers. Larger volumes may penetrate into anaerobic soil layers in which the product may persist. The product may reach the water table in which case the more soluble components will cause groundwater contamination. The product will move with groundwater. The movement of the product and the solubility of constituents can lead to contamination of sources of drinking water.

13: DISPOSAL CONSIDERATIONS

Empty aerosol containers of Shell Advance Filter Oil (Aerosol) may be disposed of with domestic refuse. Shell Advance Filter Oil (Aerosol) is covered by the Special Waste Regulations. Industrial disposal of larger quantities 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.
14: TRANSPORT INFORMATION

Shell Advance Filter Oil (Aerosol) is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed product in cartons of less than 30 kg gross weight to be exempt from control providing they are labelled in accordance with above provisions to show they are transported as Limited Quantities.

Aerosols not so packed must be labelled as follows:-

| Substance Identification Number | 1950 |
| Proper Shipping Name | Aerosols |
| Symbol | Flammable Gas |
| Packing Group | Special Single Use Dispensers |
| IMO Hazard Class | 2.1 |
| Marine Pollutant | No |
| ADR/RID Class | 2 |
| Item No. | 5(F) |
| Danger Labels | 3 |
| Hazchem Code | N/A |
| IATA/ICAO Class | Aerosols must be repacked in appropriate packaging and must bear flammable gas symbol unless exempted under IATA provision 2.6.1 |

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 8th Amendment 96/54/EC, the 24th Adaptation to Technical Progress 96/54/EC, and the Preparations Directive 88/379/EEC as last amended by the 4th Adaptation to Technical Progress 96/65/EC.

Dangerous for Supply

Symbols | Flame |
Risk Phrases : | R12 Extremely flammable |
Safety Phrases : | S2 - Keep away from children |
| S3 - Keep in cool place |
| S16 - Keep away from sources of ignition - No Smoking |
| S23 - Do not breathe spray or vapour |
| S51 - Use only in well ventilated areas |
Also for Aerosols Directive compliance :

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 Deg. C.. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - no smoking. Use only in well ventilated areas. Do not breathe spray. Avoid contact with skin and eyes

16: OTHER INFORMATION

LEGISLATION

Consumer Protection Act 1987
Control of Pollution Act 1974
Environmental Protection Act 1990
Factories Act 1961
Health and Safety at Work Act 1974
Aerosol Directive 75/324/EEC as amended by 94/1/EEC
Aerosol Dispensers Regulations 1977 & 1997
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)22 Electrical apparatus for use in potentially explosive atmospheres
HS(G)140 The safe use and handling of flammable liquids
HS(G)71 The storage of packaged dangerous substances
EH/40 Occupational Exposure Limits
MS24 Health surveillance of occupational skin disease

OTHER LITERATURE
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

