

Safety Data Sheet

AeroShell Oil 100**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

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|--|---|--------------|
| Product Code | 001A0070 | |
| Infosafe No. | ACIPE NZ/eng/C | |
| Issued Date | 15/05/2003 | |
| Product Type/Use | Mineral lubricating oil for aircraft piston engines. For further details consult the AeroShell Book on www.shell.com/aviation . | |
| Other Names | Name | Code |
| | AeroShell Oil 100 | 140001168127 |
| Supplier | Telephone Numbers | |
| Shell New Zealand Limited 3 Queens Wharf Wellington NEW ZEALAND | Emergency Tel. 0800 474 355 | |
| | Telephone/Fax Number Tel: 0800 474 355 Fax: 0800 743 553 | |

2. COMPOSITION/INFORMATION ON INGREDIENTS**Preparation Description**

Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION**Hazards Identification**

Not classified as hazardous according to HSNO Regulations 2001.

Human Health Hazards

No specific hazards under normal use conditions. Prolonged or repeated exposure may give rise to dermatitis. Used oil may contain harmful impurities.

Safety Hazards

Not classified as flammable, but will burn.

Environmental Hazards

Not classified as dangerous for the environment.

4. FIRST AID MEASURES**Symptoms and Effects**

Not expected to give rise to an acute hazard under normal conditions of use.



Inhalation

In the unlikely event of dizziness or nausea, remove casualty to fresh air. If symptoms persist, obtain medical attention.

Skin

Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

Eye

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion

Wash out mouth with water and obtain medical attention. Do not induce vomiting.

Advice to Doctor

Treat symptomatically. Aspiration into the lungs may result in chemical pneumonitis. Dermatitis may result from prolonged or repeated exposure. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function.

5. FIRE FIGHTING MEASURES

Specific Hazards

Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

Extinguishing Media

Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

Water in jet. Use of halon extinguishers should be avoided for environmental reasons.

Protective Equipment

Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with skin and eyes. Wear PVC, Neoprene or nitrile rubber gloves. Wear rubber knee length safety boots and PVC Jacket and Trousers. Wear safety glasses or full face shield if splashes are likely to occur.

Environmental Precautions

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Inform local authorities if this cannot be prevented.

Clean-up Methods - Small Spillages

Absorb liquid with sand or earth. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.

Clean-up Methods - Large Spillages

Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Dispose of as for small spills.



7. HANDLING AND STORAGE

Handling

Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Avoid prolonged or repeated contact with skin. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Prevent spillages. Cloth, paper and other materials that are used to absorb spills present a fire hazard. Avoid their accumulation by disposing of them safely and immediately. In addition to any specific recommendations given for controls of risks to health, safety and the environment, an assessment of risks must be made to help determine controls appropriate to local circumstances.

Storage

Keep in a cool, dry, well-ventilated place. Use properly labelled and closeable containers. Avoid direct sunlight, heat sources, and strong oxidizing agents.

Storage Temperatures

-20°C Minimum. 50°C Maximum.

Recommended Materials

For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials

For containers or container linings, avoid PVC.

Other Information

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits

| Substance | Regulations | Exposure Duration | Exposure Limit | Units | Notes |
|-------------------|-------------|-------------------|----------------|-------------------|-------|
| Oil mist, mineral | WES 2002 | TWA | 5 | mg/m ³ | |
| | WES 2002 | STEL | 10 | mg/m ³ | |

WES 2002 Workplace Exposure Standards 2001

Exposure Controls

Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols.

Respiratory Protection

Not normally required. If oil mist cannot be controlled, a respirator fitted with an organic vapour cartridge combined with a particulate pre-filter should be used.

Hand Protection

PVC or nitrile rubber gloves.

Eye Protection

Wear safety glasses or full face shield if splashes are likely to occur.

Body Protection

Minimise all forms of skin contact. Overalls and shoes with oil resistant soles should be worn. Launder overalls and undergarments regularly.

Environmental Exposure Controls

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.



9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| Colour | Amber. |
| Physical State | Liquid at ambient temperature. |
| Odour | Characteristic mineral oil. |
| pH Value | Data not available. |
| Vapour Pressure | <0.1 Pa at 20°C. |
| Initial Boiling Point | Expected to be above 280°C. |
| Solubility in Water | Negligible. |
| Density | 886 kg/m ³ at 15°C. |
| Flash Point | 260°C (COC). |
| Flammable Limits - Upper | circa 10%(V/V). |
| Flammable Limits - Lower | circa 1%(V/V). |
| Auto-Ignition Temperature | Expected to be above 320°C. |
| Kinematic Viscosity | 250 mm ² /s at 37.8°C. |
| Evaporation Rate | Data not available. |
| Vapour Density (Air=1) | Greater than 5. |
| Partition co-efficient, n-octanol/water | Log Pow expected to be greater than 6. |
| Pour Point | -23°C. |

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Materials to Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment

Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.

Acute Toxicity - Oral

LD50 expected to be > 2000 mg/kg.

Acute Toxicity - Dermal

LD50 expected to be > 2000 mg/kg.

Acute Toxicity - Inhalation

Not considered to be an inhalation hazard under normal conditions of use.

Eye Irritation

Expected to be slightly irritating.

Skin Irritation

Expected to be slightly irritating.

Respiratory Irritation

If mists are inhaled, slight irritation of the respiratory tract may occur.



Skin Sensitisation

Not expected to be a skin sensitizer.

Carcinogenicity

Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Other components are not known to be associated with carcinogenic effects.

Mutagenicity

Not considered to be a mutagenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

Other Information

Prolonged and/or repeated contact with products containing mineral oils may result in defatting of the skin, particularly at elevated temperatures. This may lead to irritation and possibly dermatitis, especially under conditions of poor personal hygiene. Skin contact should be minimised. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed. Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for Assessment

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Mobility

Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Persistence / Degradability

Not expected to be readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Bioaccumulation

Contains components with the potential to bioaccumulate.

Ecotoxicity

Poorly soluble mixture. May cause physical fouling of aquatic organisms. Product is expected to be practically non-toxic to aquatic organisms, LL/EL50 >100 mg/l. (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Other Adverse Effects

Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

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

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Recycle or dispose of in accordance with prevailing regulations, with a recognised collector or contractor. The competence of the contractor to deal satisfactorily with this type of product should be established beforehand. Do not pollute the soil, water or environment with the waste product.

Product Disposal

As for waste disposal.

Container Disposal

Recycle or dispose of in accordance with the legislation in force with a recognised collector or contractor.

14. TRANSPORT INFORMATION**Transport Information**

Not dangerous for transport under NZS 5433, IMO and IATA/ICAO regulations.

15. REGULATORY INFORMATION

| | |
|------------------|--|
| EC Symbols | None. |
| EC Risk Phrase | Not classified. |
| EC Safety Phrase | Not classified. |
| EINECS | All components listed or polymer exempt. |

National Legislation

New Zealand Workplace Exposure Limits 2002 (WES).

New Zealand Standard 5433:1999 Transport of Dangerous Goods on Land.

Hazardous Substances and New Organisms Act 1996.

Packaging & Labelling

Safety data sheet available for professional user on request.

16. OTHER INFORMATION**References**

For detailed advice on Personal Protective equipment, refer to the following Australian Standards :-

HB 9 (Handbook 9) Manual of industrial personal protection.

AS/NZS 1337 Eye protectors for industrial applications.

AS/NZS 1715 Selection, use and maintenance of respiratory protective devices.

AS/NZS 1716 Respiratory protective devices.

Poisons Schedule

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Restrictions

Not to be used when an oil containing a dispersant additive is required. This product must be used, handled and applied in accordance with the requirements of the equipment manufacturer's manuals, bulletins and other documentation.

Technical Contact Numbers

0800 474 355.

Further Information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute a guarantee for any specific property of the product.

... **End Of SDS** ...

