According to the Hazardous Products Regulations

# **AeroShell Turbine Oil 500**

Version Revision Date: SDS Number: Print Date: 2016-05-19

2.2 2016-05-18 800001001487 Date of last issue: 09.03.2016
Date of first issue: 09.12.2011

#### **SECTION 1. IDENTIFICATION**

Product name : AeroShell Turbine Oil 500

Product code : 001A0083

### Manufacturer or supplier's details

Manufacturer/Supplier : Shell Canada Products

400 - 4th Avenue S.W Calgary AB T2P 0J4

Canada

Telephone : (+1) 8006611600 Telefax : (+1) 4033848345

Emergency telephone num-

ber

CANUTEC (24 hr): (+1) 613-996-6666; Toll Free: 1-888-CAN-

UTEC (226-8832)

CHEMTREC (24 hr): 1 (703) 527-3887 or 1 (800) 424-9300

(US)

### Recommended use of the chemical and restrictions on use

Recommended use : Synthetic lubricating oil for aircraft turbine engines.

For further details consult the AeroShell Book on

www.shell.com/aviation.

Restrictions on use : This product must be used, handled and applied in accord-

ance with the requirements of the equipment manufacturer's

manuals, bulletins and other documentation.

### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Skin sensitisation : Category 1

Specific target organ toxicity

- repeated exposure

: Category 2

Reproductive toxicity : Category 2

Chronic aquatic toxicity : Category 3

**GHS** label elements

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Hazard pictograms





Signal word : Warning

Hazard statements : PHYSICAL HAZARDS:

Not classified as a physical hazard under GHS criteria.

**HEALTH HAZARDS:** 

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or re-

peated exposure if swallowed.

H361f Suspected of damaging fertility. ENVIRONMENTAL HAZARDS:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:** 

P201 Obtain special instructions before use. P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention. **Storage:** 

No precautionary phrases.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Hazardous components which must be listed on the label:

Contains N-phenyl-1-naphthylamine.

Contains tricresyl phosphate.

# Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Used oil may contain harmful impurities.

Not classified as flammable but will burn.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance name : AeroShell Turbine Oil 500

Chemical nature : Blend of synthetic esters and additives.

### **Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
N-phenyl-1-naphthylamine	90-30-2	0.5 - 2
Triaryl phosphate	1330-78-5	0.5 - 2

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### **SECTION 4. FIRST-AID MEASURES**

If inhaled : No treatment necessary under normal conditions of use.

If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with wa-

> ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

: Flush eye with copious quantities of water. In case of eye contact

If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities

are swallowed, however, get medical advice.

Most important symptoms and effects, both acute and

delayed

Skin sensitisation (allergic skin reaction) signs and symptoms

may include itching and/or a rash.

Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Protection of first-aiders : When administering first aid, ensure that you are wearing the

appropriate personal protective equipment according to the

incident, injury and surroundings.

Notes to physician : Treat symptomatically.

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

Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon diox-

ide, sand or earth may be used for small fires only.

Unsuitable extinguishing

media

: Do not use water in a jet.

Specific hazards during fire-

fighting

: Hazardous combustion products may include:

A complex mixture of airborne solid and liquid particulates and

gases (smoke).

Carbon monoxide may be evolved if incomplete combustion

occurs.

Unidentified organic and inorganic compounds.

Specific extinguishing meth-

ods

: Use extinguishing measures that are appropriate to local cir-

Special protective equipment

for firefighters

cumstances and the surrounding environment.

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained

Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to

relevant Standards (e.g. Europe: EN469).

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### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Personal precautions, protec- : Avoid contact with skin and eyes.

Environmental precautions

: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth

or other containment material.

Reclaim liquid directly or in an absorbent.

Soak up residue with an absorbent such as clay, sand or other

suitable material and dispose of properly.

Additional advice : For guidance on selection of personal protective equipment

see Chapter 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Chapter 13 of

this Safety Data Sheet.

# **SECTION 7. HANDLING AND STORAGE**

General Precautions : Use local exhaust ventilation if there is risk of inhalation of

vapours, mists or aerosols.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this

material.

Advice on safe handling : Avoid prolonged or repeated contact with skin.

Avoid inhaling vapour and/or mists.

When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning mate-

rials in order to prevent fires.

Avoidance of contact : Strong oxidising agents.

Product Transfer : This material has the potential to be a static accumulator.

Proper grounding and bonding procedures should be used

during all bulk transfer operations.

**Storage** 

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Recommended storage tem-

perature

: -50 - 50 °C

Other data : Keep container tightly closed and in a cool, well-ventilated

place.

Use properly labeled and closable containers.

Packaging material : Suitable material: For containers or container linings, use mild

steel or high density polyethylene.

Unsuitable material: PVC.

Container Advice : Polyethylene containers should not be exposed to high tem-

peratures because of possible risk of distortion.

### **SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### Components with workplace control parameters

# Biological occupational exposure limits

No biological limit allocated.

# **Monitoring Methods**

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures : The level of protection and types of controls necessary will

vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.

Appropriate measures include:

Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

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General Information:

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

### Personal protective equipment

Respiratory protection

No respiratory protection is ordinarily required under normal conditions of use.

In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Select a filter suitable for the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].

Hand protection Remarks

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but

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recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm

depending on the glove make and model.

: If material is handled such that it could be splashed into eyes, Eye protection

protective eyewear is recommended.

Skin and body protection : Wear chemical resistant gloves/gauntlets and boots. Where

risk of splashing, also wear an apron.

Thermal hazards : Not applicable

Protective measures : Personal protective equipment (PPE) should meet recom-

mended national standards. Check with PPE suppliers.

### **Environmental exposure controls**

General advice : Take appropriate measures to fulfill the requirements of rele-

vant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before

discharge to surface water.

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing

vapour.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

: Liquid at room temperature. **Appearance** 

Colour : Various colours

Odour : Slight hydrocarbon

Odour Threshold : Data not available

: Not applicable pН

pour point : <= -54 °C / -65 °F

Method: Unspecified

Initial boiling point and boiling

: > 280 °C / 536 °F estimated value(s) range

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Flash point : 256 °C / 493 °F

Method: Unspecified

Evaporation rate Data not available

Flammability (solid, gas) : Data not available

Upper explosion limit : Typical 10 %(V)

Lower explosion limit : Typical 1 %(V)

Vapour pressure : < 0.5 Pa (20 °C / 68 °F)

estimated value(s)

Relative vapour density : >1

estimated value(s)

Relative density : 1.005 (15 °C / 59 °F)

Density : 1,005 kg/m3 (15.0 °C / 59.0 °F)Method: Unspecified

Solubility(ies)

Water solubility : negligible

Solubility in other solvents : Data not available

Partition coefficient: n-

: Pow: > 6

octanol/water

(based on information on similar products)

Auto-ignition temperature : > 320 °C / 608 °F

Viscosity

Viscosity, dynamic : Data not available

: 25.26 mm2/s (40.0 °C / 104.0 °F) Viscosity, kinematic

Method: Unspecified

5.17 mm2/s (100 °C / 212 °F)

Method: Unspecified

: Not classified Explosive properties

Oxidizing properties : Data not available

Conductivity : This material is not expected to be a static accumulator.

Decomposition temperature : Data not available

### **SECTION 10. STABILITY AND REACTIVITY**

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Reactivity : The product does not pose any further reactivity hazards in

addition to those listed in the following sub-paragraph.

Chemical stability : Stable.

Possibility of hazardous reac-

tions

: Reacts with strong oxidising agents.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidising agents.

Hazardous decomposition

products

: Hazardous decomposition products are not expected to form

during normal storage.

### **SECTION 11. TOXICOLOGICAL INFORMATION**

Basis for assessment : Information given is based on data on the components and

the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a

whole, rather than for individual component(s).

# Information on likely routes of exposure

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

### **Acute toxicity**

**Product:** 

Acute oral toxicity : LD50 (rat): > 5,000 mg/kg

Remarks: Expected to be of low toxicity:

Acute inhalation toxicity : Remarks: Not considered to be an inhalation hazard under

normal conditions of use.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Remarks: Expected to be of low toxicity:

### Skin corrosion/irritation

### **Product:**

Remarks: Expected to be slightly irritating.

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin result-

ing in disorders such as oil acne/folliculitis.

### Serious eye damage/eye irritation

### **Product:**

Remarks: Expected to be slightly irritating.

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### Respiratory or skin sensitisation

### **Product:**

Remarks: Expected to be a skin sensitizer.

### **Components:**

# N-phenyl-1-naphthylamine:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Remarks: Classified Skin Sensitiser Category 1B.

# Germ cell mutagenicity

### **Product:**

Genotoxicity in vivo : Remarks: Not considered a mutagenic hazard.

# Carcinogenicity

### **Product:**

Remarks: Not expected to be carcinogenic.

# Reproductive toxicity

### **Product:**

Effects on fertility

Remarks: Possible risk of impaired fertility.

# STOT - single exposure

### **Product:**

Remarks: Not expected to be a hazard.

# STOT - repeated exposure

### **Product:**

Remarks: May cause damage to organs or organ systems through prolonged or repeated expo-

### **Aspiration toxicity**

### **Product:**

Not considered an aspiration hazard.

### **Further information**

### **Product:**

Remarks: 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

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environment on disposal.

ALL used oil should be handled with caution and skin contact avoided as far as possible.

Remarks: Slightly irritating to respiratory system.

### **SECTION 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.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).(LL/EL/IL50 expressed as the nominal amount of

product required to prepare aqueous test extract).

### **Ecotoxicity**

**Product:** 

Toxicity to fish (Acute toxici-

Remarks: Expected to be harmful:

LL/EL/IL50 10-100 mg/l

Toxicity to crustacean (Acute

toxicity)

Remarks: Expected to be harmful:

LL/EL/IL50 10-100 mg/l

Toxicity to algae/aquatic

plants (Acute toxicity)

Remarks: Expected to be harmful:

LL/EL/IL50 10-100 mg/l

Toxicity to fish (Chronic tox-

icity)

Remarks: Data not available

Toxicity to crustacean

(Chronic toxicity) Toxicity to microorganisms

(Acute toxicity)

: Remarks: Data not available

: Remarks: Data not available

### **Components:**

N-phenyl-1-naphthylamine:

M-Factor (Acute aquatic tox-

icity)

### Persistence and degradability

### **Product:**

Biodegradability : Remarks: Expected to be not readily biodegradable.

> Major constituents are expected to be inherently biodegradable, but contains components that may persist in the environ-

ment.

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### Bioaccumulative potential

**Product:** 

Bioaccumulation : Remarks: Contains components with the potential to bioac-

cumulate.

Partition coefficient: n-

octanol/water

: Pow: > 6

Remarks: (based on information on similar products)

### Mobility in soil

**Product:** 

Mobility : Remarks: Liquid under most environmental conditions.

If it enters soil, it will adsorb to soil particles and will not be

mobile.

Remarks: Floats on water.

### Other adverse effects

#### **Product:**

Additional ecological infor-

mation

 Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.
 Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

Poorly soluble mixture.

May cause physical fouling of aquatic organisms.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues : Waste product should not be allowed to contaminate soil or

ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

Local regulations may be more stringent than regional or na-

tional requirements and must be complied with.

Contaminated packaging : Dispose in accordance with prevailing regulations, preferably

to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional.

national, and local laws and regulations.

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### **SECTION 14. TRANSPORT INFORMATION**

### **National Regulations**

#### **TDG**

Not regulated as a dangerous good

### **International Regulation**

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category : Not applicable
Ship type : Not applicable
Product name : Not applicable
Special precautions : Not applicable

### Special precautions for user

Remarks : Special Precautions: Refer to Chapter 7, Handling & Storage,

for special precautions which a user needs to be aware of or

needs to comply with in connection with transport.

**Additional Information**: MARPOL Annex 1 rules apply for bulk shipments by sea.

### **SECTION 15. REGULATORY INFORMATION**

# Safety, health and environmental regulations/legislation specific for the substance or mixture

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

### The components of this product are reported in the following inventories:

EINECS : All components listed or polymer exempt.

TSCA : All components listed.

DSL : All components listed.

### **SECTION 16. OTHER INFORMATION**

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN -

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Standard of the German Institute for Standardisation: DSL - Domestic Substances List (Canada): ECx - Concentration associated with x% response: ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC -No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS -Workplace Hazardous Materials Information System

A vertical bar (|) in the left margin indicates an amendment from the previous version.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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