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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : AeroShell Turbine Oil 308

Product code : 001A0080

UFI : XAQ0-X04Q-G00H-1C4A

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the : Synthetic lubricating oil for aircraft turbine engines.. For further

details consult the AeroShell Book on www.shell.com/aviation. Substance/Mixture

Uses advised against : This product must be used, handled and applied in

accordance with the requirements of the equipment

manufacturer's manuals, bulletins and other documentation. This product must not be used in applications other than those

listed in Section 1 without first seeking the advice of the

supplier.

#### 1.3 Details of the supplier of the safety data sheet

: Shell UK Oil Products Limited Manufacturer/Supplier

> Shell Centre London SE17NA United Kingdom

: (+44) 08007318888

Telefax

**Email Contact for Safety Data** 

: If you have any enquiries about the content of this SDS Sheet

please email lubricantSDS@shell.com

1.4 Emergency telephone number

: +44 (0) 151 350 4595 (This telephone number is available 24

hours per day, 7 days per week)

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, H411: Toxic to aquatic life with long lasting effects.

Category 2

Telephone

## 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

1/27 800001016070 GB

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Hazard pictograms





Signal word Warning

Hazard statements PHYSICAL HAZARDS:

Not classified as a physical hazard

according to CLP criteria. **HEALTH HAZARDS:** 

H317 May cause an allergic skin reaction.

**ENVIRONMENTAL HAZARDS:** 

Toxic to aquatic life with long lasting effects. H411

Prevention: Precautionary statements

> Avoid release to the environment. P273

P280 Wear protective gloves/ protective clothing/

eve protection/ face protection.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P391 Collect spillage.

Storage:

No precautionary phrases.

Disposal:

P501 Dispose of contents/ container to an

approved waste disposal plant.

Hazardous components which must be listed on the label:

Contains N-phenyl-1-naphthylamine.

Sensitising components : Contains 2,6-di-tert-butyl dimethylamino p-cresol.

May produce an allergic reaction.

# 2.3 Other hazards

This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.

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**

#### 3.2 Mixtures

Chemical nature : Blend of synthetic esters and additives.

**Hazardous components** 

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Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Triaryl phosphate	1330-78-5 215-548-8	Repr.2; H361f Aquatic Acute1; H400 Aquatic Chronic1; H410	1 - 2.49
N-phenyl-1- naphthylamine	90-30-2 201-983-0 01-2119488704-27	Acute Tox.4; H302 Skin Sens.1B; H317 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	1 - 2.49
2,6-di-tert-butyl dimethylamino p- cresol	88-27-7 201-816-1	Acute Tox.4; H302 Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic1; H410	0.1 - 0.25

For explanation of abbreviations see section 16.

# **SECTION 4: First aid measures**

## 4.1 Description of first aid measures

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.

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

If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Immediately flush skin with

large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical

facility for additional treatment.

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

Remove contact lenses, if present and easy to do. Continue

rinsing.

If persistent irritation occurs, obtain medical attention.

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

are swallowed, however, get medical advice.

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#### 4.2 Most important symptoms and effects, both acute and delayed

: Skin sensitisation (allergic skin reaction) signs and symptoms **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.

#### 4.3 Indication of any immediate medical attention and special treatment needed

: Notes to doctor/physician: **Treatment** 

Treat symptomatically.

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

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

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

Unsuitable extinguishing : Do not use water in a jet.

media

#### 5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: 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.

## 5.3 Advice for firefighters

Special protective equipment

for firefighters

: 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).

Specific extinguishing

methods

Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 6.1.1 For non emergency personnel:

Avoid contact with skin and eyes. 6.1.2 For emergency responders: Avoid contact with skin and eyes.

4/27 800001016070 GB

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#### 6.2 Environmental precautions

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.

#### 6.3 Methods and materials for containment and cleaning up

Methods for 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.

#### 6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., For guidance on disposal of spilled material see Section 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.

#### 7.1 Precautions for safe handling

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

materials in order to prevent fires.

Product Transfer : Proper grounding and bonding procedures should be used

during all bulk transfer operations to avoid static accumulation.

#### 7.2 Conditions for safe storage, including any incompatibilities

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

place. Use properly labeled and closable containers. Must be

stored in a diked (bunded) area.

Store at ambient temperature.

Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

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	Pollution (Oil Storage) (England) Re	The storage of this product may be subject to the Control of Pollution (Oil Storage) (England) Regulations. Further guidance may be obtained from the local environmental agency office.	
Packaging material	<ul> <li>Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.</li> </ul>		
Container Advice		: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.	
7.3 Specific end use(s)			
Specific use(s)	: Not applicable		

# **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

## **Occupational Exposure Limits**

#### **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

#### 8.2 Exposure controls

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**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.

#### 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

The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye protection : Wear full face shield if splashes are likely to occur.

Approved to EU Standard EN166.

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

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 recognize that suitable gloves offering this level of protection

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> 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.

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

risk of splashing, also wear an apron.

Protective clothing approved to EU Standard EN14605.

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.

Thermal hazards : Not applicable

: Exposure to this product should be reduced as low as Hygiene measures

reasonably practicable. Reference should be made to the

Health and Safety Executive's publication "COSHH

Essentials".

#### **Environmental exposure controls**

General advice : Take appropriate measures to fulfill the requirements of

relevant environmental protection legislation. Avoid

contamination of the environment by following advice given in Section 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**

#### 9.1 Information on basic physical and chemical properties

: Liquid at room temperature. **Appearance** 

Colour : amber

Odour : Slight hydrocarbon Odour Threshold : Data not available

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pH : Not applicable

pour point : <= -62 °CMethod: Unspecified

Melting point/freezing point Data not available

Initial boiling point and boiling

range

: > 280 °Cestimated value(s)

Flash point : 235 °C

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)

estimated value(s)

Relative vapour density : > 1estimated value(s)

Relative density : 0.956 (15 °C)

Density : 956 kg/m3 (15.0 °C)

Method: Unspecified

Solubility(ies)

Water solubility : negligible

Solubility in other solvents : Data not available

Partition coefficient: n-

octanol/water

: log Pow: > 6(based on information on similar products)

Auto-ignition temperature :

320 °C

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : Data not available
Viscosity, kinematic : 12 mm2/s (40.0 °C)

Method: Unspecified

3.1 mm2/s (100 °C) Method: Unspecified

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> 7600 mm2/s (-51.0 °C) Method: ASTM D2532

: Not classified Explosive properties

: Data not available Oxidizing properties

9.2 Other information

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

# **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

#### 10.2 Chemical stability

No hazardous reaction is expected when handled and stored according to provisions

# 10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with strong oxidising agents.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

## 10.6 Hazardous decomposition products

Hazardous decomposition

products

: No decomposition if stored and applied as directed.

## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

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

> 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).

exposure

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

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### **Acute toxicity**

Product:

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

Remarks: Low toxicity:

Based on available data, the classification criteria are not met.

: Remarks: Based on available data, the classification criteria Acute inhalation toxicity

are not met.

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

Remarks: Low toxicity:

Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation

#### **Product:**

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

#### Serious eye damage/eye irritation

#### **Product:**

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

## Respiratory or skin sensitisation

#### **Product:**

Remarks: For skin sensitisation:, Expected to be a skin sensitizer.

Remarks: For respiratory sensitisation:, Not a sensitiser., Based on available data, the classification criteria are not met.

#### **Components:**

#### N-phenyl-1-naphthylamine:

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

## 2,6-di-tert-butyl dimethylamino p-cresol:

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

#### Germ cell mutagenicity

#### Product:

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: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

## Carcinogenicity

#### **Product:**

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Material	GHS/CLP Carcinogenicity Classification
Triaryl phosphate	No carcinogenicity classification.
N-phenyl-1-naphthylamine	No carcinogenicity classification.
2,6-di-tert-butyl dimethylamino p-cresol	No carcinogenicity classification.

## Reproductive toxicity

## **Product:**

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

## STOT - single exposure

## **Product:**

Remarks: Based on available data, the classification criteria are not met.

## STOT - repeated exposure

#### Product:

Remarks: Based on available data, the classification criteria are not met.

## **Aspiration toxicity**

## **Product:**

Not an aspiration hazard.

## **Further information**

#### **Product:**

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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 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.

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Summary on evaluation of the CMR properties

Germ cell mutagenicity-

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

Carcinogenicity -

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

Reproductive toxicity -

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

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).

**Product:** 

Toxicity to fish (Acute

toxicity)

Remarks:  $LL/EL/IL50 > 1 \le 10 \text{ mg/l}$ 

Toxicity to crustacean (Acute

toxicity)

: Remarks: LL/EL/IL50 > 1 <= 10 mg/l

Toxic

Toxicity to algae/aquatic plants (Acute toxicity)

: Remarks: LL/EL/IL50 > 1 <= 10 mg/l

Toxic

Toxicity to fish (Chronic

toxicity)

: Remarks: Data not available

Toxicity to crustacean

(Chronic toxicity)

: Remarks: Data not available

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Toxicity to microorganisms

(Acute toxicity) Remarks: Data not available

# **Components:**

## Triaryl phosphate:

M-Factor (Short-term (acute) :

aquatic hazard)

M-Factor (Long-term : 1 (chronic) aquatic hazard)
N-phenyl-1-naphthylamine :

N-pnenyi- i-naphtnyiamine

M-Factor (Short-term (acute) : 1

aquatic hazard)

M-Factor (Long-term : 1

(chronic) aquatic hazard)

#### 12.2 Persistence and degradability

# **Product:**

Biodegradability : Remarks: Not readily biodegradable., Major constituents are

inherently biodegradable, but contains components that may

persist in the environment.

#### 12.3 Bioaccumulative potential

#### **Product:**

Bioaccumulation : Remarks: Contains components with the potential to

bioaccumulate.

Partition coefficient: n-

octanol/water

: log Pow: > 6Remarks: (based on information on similar

products)

# 12.4 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.

# 12.5 Results of PBT and vPvB assessment

# **Product:**

Assessment : This mixture does not contain any REACH registered

substances that are assessed to be a PBT or a vPvB.

#### 12.6 Other adverse effects

#### **Product:**

Additional ecological

information

: Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product

is a mixture of non-volatile components, which will not be

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> released to air in any significant quantities under normal conditions of use.

Poorly soluble mixture., Causes physical fouling of aquatic

organisms.

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Recover or recycle if possible.

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses

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. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations. preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.

MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.

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.

Local legislation

Waste catalogue

EU Waste Disposal Code (EWC):

Waste Code

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13 02 06\*

Remarks : Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

Classification of waste is always the responsibility of the end

user.

Hazardous Waste (England and Wales) Regulations 2005.

# **SECTION 14: Transport information**

#### 14.1 UN number

ADR : 3082 RID : 3082 IMDG : 3082 IATA : 3082

14.2 Proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(N-phenyl-1-naphthylamine and Triaryl phosphate)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.

N.O.S.

(N-phenyl-1-naphthylamine and Triaryl phosphate)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(N-phenyl-1-naphthylamine and Triaryl phosphate)

IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(N-phenyl-1-naphthylamine and Triaryl phosphate)

# 14.3 Transport hazard class

ADR : 9
RID : 9
IMDG : 9
IATA : 9

#### 14.4 Packing group

**ADR** 

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
RID

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

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**IMDG** 

Packing group : 111 : 9 Labels

IATA

: 111 Packing group : 9 Labels

14.5 Environmental hazards

**ADR** 

Environmentally hazardous : yes

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Section 7. Handling & Storage.

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

needs to comply with in connection with transport.

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

Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

## **SECTION 15: Regulatory information**

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

REACH - List of substances subject to authorisation : Product is not subject to Authorisation under REACH. (Annex XIV)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances.

E2 **ENVIRONMENTAL HAZARDS** 

Volatile organic compounds : 0%

Other regulations : The regulatory information is not intended to be

comprehensive. Other regulations may apply to this material.

Environmental Protection Act 1990 (as amended). Health and Safety at Work etc. Act 1974. Consumers Protection Act 1987. Pollution Prevention and Control Act 1999. Environment Act 1995. Factories Act 1961. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011. Chemicals (Hazard Information and Packaging for Supply) Regulations 2009. Control of Substances Hazardous to Health Regulations 2002 (as

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amended). Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (as amended). Personal Protective Equipment Regulations 2002. Personal Protective Equipment at Work Regulations 1992. Hazardous Waste (England and Wales) Regulations 2005(as amended). Control of Major Accident Hazards Regulations 1999 (as amended). Renewable Transport Fuel Obligations Order 2007 (as amended). Energy Act 2011. Environmental Permitting (England and Wales) Regulations 2010 (as amended). Waste (England and Wales) Regulations 2011 (as amended). Planning (Hazardous Substances) Act 1990 and associated regulations. The Environmental Protection (Controls on Ozone-Depleting Substances) Regulations 2011.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), annex XIV.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), annex XVII.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work and its amendments.

Directive 1994/33/EC on the protection of young people at work and its amendments.

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding and its amendments.

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

REACH : All components listed or polymer exempt.

TSCA : All components listed.

#### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

#### **SECTION 16: Other information**

REGULATION (EC) No 1272/2008

Skin sensitisation, Category 1, H317

Long-term (chronic) aquatic hazard,

Category 2, H411

#### Classification procedure:

Expert judgement and weight of evidence

determination.

Expert judgement and weight of evidence

determination.

#### **Full text of H-Statements**

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11000		
H302	Harmful if swallowed.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H361f	Suspected of damaging fertility.	
H373	May cause damage to organs through prolong if swallowed.	ged or repeated exposure
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effect	cts.

#### Full text of other abbreviations

Acute Tox. Acute toxicity

Aquatic Acute Short-term (acute) aquatic hazard Long-term (chronic) aquatic hazard Aquatic Chronic

Eye Irrit. Eve irritation

Repr. Reproductive toxicity Skin Sens. Skin sensitisation

Specific target organ toxicity - repeated exposure STOT RF

: The standard abbreviations and acronyms used in this Abbreviations and Acronyms

document can be looked up in reference literature (e.g.

scientific dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial

Hygienists

ADR = European Agreement concerning the International

Carriage of Dangerous Goods by Road

AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials

BEL = Biological exposure limits

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

CAS = Chemical Abstracts Service

CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling

COC = Cleveland Open-Cup

DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level DSL = Canada Domestic Substance List

EC = European Commission

EC50 = Effective Concentration fifty

ECETOC = European Center on Ecotoxicology and

**Toxicology Of Chemicals** 

ECHA = European Chemicals Agency

EINECS = The European Inventory of Existing Commercial

**Chemical Substances** 

EL50 = Effective Loading fifty

ENCS = Japanese Existing and New Chemical Substances

Inventory

EWC = European Waste Code

GHS = Globally Harmonised System of Classification and

Labelling of Chemicals

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IC50 = Inhibitory Concentration fifty

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IL50 = Inhibitory Level fifty

IMDG = International Maritime Dangerous Goods

INV = Chinese Chemicals Inventory

IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables

KECI = Korea Existing Chemicals Inventory

LC50 = Lethal Concentration fifty LD50 = Lethal Dose fifty per cent.

LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading

LL50 = Lethal Loading fifty

MARPOL = International Convention for the Prevention of

Pollution From Ships

NOEC/NOEL = No Observed Effect Concentration / No

Observed Effect Level

OE HPV = Occupational Exposure - High Production Volume

PBT = Persistent. Bioaccumulative and Toxic

PICCS = Philippine Inventory of Chemicals and Chemical

Substances

PNEC = Predicted No Effect Concentration

REACH = Registration Evaluation And Authorisation Of

Chemicals

RID = Regulations Relating to International Carriage of

Dangerous Goods by Rail SKIN DES = Skin Designation STEL = Short term exposure limit TRA = Targeted Risk Assessment

TSCA = US Toxic Substances Control Act

TWA = Time-Weighted Average

vPvB = very Persistent and very Bioaccumulative

#### **Further information**

Other information : A vertical bar (|) in the left margin indicates an amendment

from the previous version.

# Identified Uses according to the Use Descriptor System

**Uses - Worker** 

Title General use of lubricants and greases in vehicles or

machinery .- Professional

Uses - Worker

General use of lubricants and greases in vehicles or Title

machinery.- Industrial

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 should not therefore be construed as guaranteeing any specific property of the product.

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**Exposure Scenario - Worker** 

30000010727	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	General use of lubricants and greases in vehicles or machinery Professional
Use Descriptor	Sector of Use: SU22 Process Categories: PROC 1, PROC 2, PROC 8a, PROC 8b, PROC 20 Environmental Release Categories: ERC9a, ERC9b, ATIEL-ATC SPERC 9.Bp.v1
Scope of process	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT
	MEASURES

Section 2.1	Control of Worker Exposure	
Product Characteristics		
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP	
Concentration of the	Covers use of substance/product up to 100% (unless stated	
Substance in Mixture/Article	differently).,	
Frequency and Duration of	Use	
Covers daily exposures up to 8 hours (unless stated differently).		
Other Operational Conditio	ns affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently).		

7.00 diffee doe di fiet more than 20 0 above ambient temperature (diffees stated differently).
Assumes a good basic standard of occupational hygiene is implemented.
Assumes a good basic standard of occupational hygiene is implemented.

Contributing Scenarios	Risk Management Measures
General measures applicable to all activities.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.  Use suitable eye protection.  Avoid direct eye contact with product, also via contamination on hands.
Operation of equipment containing engine oils and similar. Use in contained systems Use in closed process, no likelihood of	No other specific measures identified.

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exposure	
Material transfersNon-	Avoid carrying out activities involving exposure for more than
dedicated facilityTransfer of	4 hours
substance or preparation	Wear chemically resistant gloves (tested to EN374) in
(charging/ discharging)	combination with specific activity training.
from/ to vessels/ large	
containers at non-dedicated	
facilities	
Equipment cleaning and	Drain down system prior to equipment opening or
maintenanceTransfer of	maintenance.
substance or preparation	Retain drain downs in sealed storage pending disposal or for
(charging/ discharging)	subsequent recycle.
from/ to vessels/ large	
containers at dedicated	
facilitiesHeat and pressure transfer fluids in dispersive,	
professional use but closed	
systems	
Storage.Use in closed	Store substance within a closed system.
process, no likelihood of	Giord Gastianics William a sissed dystorm.
exposureUse in closed,	
continuous process with	
occasional controlled	
exposure	

Section 2.2	Control of Environmental Exposure	
Amounts Used		
EU tonnage (tonnes per year):		5,387.2
Fraction of EU tonnage used	in region:	0.1
Fraction of Regional tonnage	used locally:	0.1
Frequency and Duration of	Use	
Emission Days (days/year):		365
	nfluenced by risk management	
Local freshwater dilution factor	or:	10
Local marine water dilution fa	ctor:	100
	ns affecting Environmental Exposure	!
Negligible wastewater emission	ons as process operates without water	
contact.		
	ocess (after typical onsite RMMs):	1.00E-04
Release fraction to wastewater from process (after typical onsite		5.00E-04
RMMs and before (municipal) sewage treatment plant):		
Release fraction to soil from process (after typical onsite RMMs):		1E-03
	easures at process level (source) to	prevent release
	ss sites thus conservative process	
release estimates used.		
	and measures to reduce or limit disc	charges, air
emissions and releases to s		
_	ved substance to or recover from onsite	9
wastewater.		
Organisational measures to prevent/limit release from site		
Do not apply industrial sludge		
Sludge should be incinerated	, contained or reclaimed.	

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Conditions and Measures related to municipal sewage treatment plant		
Estimated substance removal from wastewater via domestic sewage	0.1	
treatment (%)		
Assumed domestic sewage treatment plant flow (m3/d)	2.00E+03	
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day) :	107.4	

#### Conditions and Measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or regional regulations.

#### Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or regional regulations.

#### **SECTION 3 EXPOSURE ESTIMATION**

#### Section 3.1 - Health

The Risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

#### **Section 3.2 - Environment**

Used ECETOC TRA model.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE
	EXPOSURE SCENARIO

#### Section 4.1 - Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

#### Section 4.2 - Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a sitespecific chemical safety assessment is required.

For further information see www.ATIEL.org/REACH GES.

# **AeroShell Turbine Oil 308**

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**Exposure Scenario - Worker** 

Exposure Scenario - Worke	•
30000010726	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	General use of lubricants and greases in vehicles or machinery Industrial
Use Descriptor	Sector of Use: SU3 Process Categories: PROC 1, PROC 2, PROC 8b, PROC 9 Environmental Release Categories: ERC4, ERC7, ATIEL- ATC SPERC 4.Bi.v1
Scope of process	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT
	MEASURES

Section 2.1	Control of Worker Exposure	
Product Characteristics		
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP	
Concentration of the	Covers use of substance/product up to 100% (unless stated	
Substance in Mixture/Article	differently).,	
Frequency and Duration of Use		
Covers daily exposures up to 8 hours (unless stated differently).		
Other Operational Conditions affecting Exposure		
Assumes use at not more than 20°C above ambient temperature (unless stated differently).		
Assumes a good basic standard of occupational hygiene is implemented.		

Contributing Scenarios	Risk Management Measures
General measures applicable to all activities.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.  Use suitable eye protection.  Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)Use in closed process, no likelihood of exposure	No other specific measures identified.
Initial factory fill of equipmentUse in contained	No other specific measures identified.

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systemsUse in closed,	
continuous process with	
occasional controlled	
exposureTransfer of	
substance or preparation	
into small containers	
(dedicated filling line,	
including weighing)	
Initial factory fill of	Provide a good standard of general or controlled ventilation (5
equipment(open	to 15 air changes per hour).
systems)Transfer of	Avoid carrying out activities involving exposure for more than
substance or preparation	4 hours
(charging/ discharging)	
from/ to vessels/ large	
containers at dedicated	
facilities	
Operation of equipment	No other specific measures identified.
containing engine oils and	
similar.Use in contained	
systemsUse in closed	
process, no likelihood of	
exposure	
Equipment cleaning and	Drain down system prior to equipment opening or
maintenanceTransfer of	maintenance.
substance or preparation	Provide a good standard of general ventilation (not less than
(charging/ discharging)	3 to 5 air changes per hour).
from/ to vessels/ large	Wear chemically resistant gloves (tested to EN374) in
containers at dedicated	combination with specific activity training.
facilities	Retain drain downs in sealed storage pending disposal or for
	subsequent recycle.
Equipment cleaning and	Drain down system prior to equipment opening or
maintenanceOperation is	maintenance.
carried out at elevated	Provide extract ventilation to emission points when contact
temperature (> 20°C above	with warm (>50oC) product is likely.
ambient	Wear chemically resistant gloves (tested to EN374) in
temperature).Transfer of	combination with intensive management supervision controls.
substance or preparation	Retain drain downs in sealed storage pending disposal or for
(charging/ discharging)	subsequent recycle.
from/ to vessels/ large	1
containers at dedicated	
facilities	
Storage.Use in closed	Store substance within a closed system.
process, no likelihood of	2.5.5 5.55 Garden William & Globod Gyotolin
exposureUse in closed,	
continuous process with	
occasional controlled	
exposure	
CAPUSUIG	

Section 2.2	Control of Environmental Exposure
Amounts Used	
EU tonnage (tonnes per year): 2,361.1	
Fraction of EU tonnage used	in region: 0.1

# **AeroShell Turbine Oil 308**

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Fraction of Regional tonnage used locally:	0.1
Frequency and Duration of Use	J 0. I
Emission Days (days/year):	300
Environmental factors not influenced by risk management	300
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	100
Negligible wastewater emissions as process operates without water	
contact.	
Release fraction to air from process (after typical onsite RMMs) :	5.00E-05
Release fraction to wastewater from process (after typical onsite	2.00E-03
RMMs and before (municipal) sewage treatment plant):	2.00L-11
Release fraction to soil from process (after typical onsite RMMs):	0
Technical conditions and measures at process level (source) to pr	
Common practices vary across sites thus conservative process	- CVCIII I CICASC
release estimates used.	
Technical onsite conditions and measures to reduce or limit disch	arges air
emissions and releases to soil	ai goo, aii
Treat air emission to provide a typical removal efficiency of (%)	70
Prevent discharge of undissolved substance to or recover from onsite	-
wastewater.	
User sites are assumed to be provided with oil/water separators or	
equivalent and for waste water to be discharged via public sewer	
system.	
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils.	
Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment p	
Estimated substance removal from wastewater via domestic sewage	0.1
treatment (%)	
Assumed domestic sewage treatment plant flow (m3/d)	2.00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs	9,521.6
as above (kg/day):	
Conditions and Measures related to external treatment of waste fo	
External treatment and disposal of waste should comply with applicable	e local and/or regional
regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable	local and/or regional
regulations.	

# SECTION 3 EXPOSURE ESTIMATION

# Section 3.1 - Health

The Risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

# **AeroShell Turbine Oil 308**

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Section	3.2	-Environment

Used ECETOC TRA model.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO
0 4 4 11 14	

#### Section 4.1 - Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

#### Section 4.2 -Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

For further information see www.ATIEL.org/REACH GES.