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# **AeroShell Smoke Oil**

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

#### 1.1 Product identifier

Trade name : AeroShell Smoke Oil

Product code : 001C3303

Registration number EU : 01-2119487077-29

CAS-No. : 64742-55-8

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

Use of the Sub- : Machine oil., For further details consult the AeroShell Book on

stance/Mixture www.shell.com/aviation.

Uses advised against

This product must not be used in applications other than those

listed in Section 1 without first seeking the advice of the sup-

plier.

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

Manufacturer/Supplier : Shell UK Oil Products Limited

Shell Centre London SE1 7NA

United Kingdom (+44) 08007318888

Telefax

Telephone

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) 20 7934 7778 (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)

Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters air-

ways.

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#### 2.2 Label elements

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

Hazard pictograms

Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:

Not classified as a physical hazard according to CLP

criteria.

**HEALTH HAZARDS:** 

H304 May be fatal if swallowed and enters airways.

**ENVIRONMENTAL HAZARDS:** 

Not classified as environmental hazard according to

CLP criteria.

Precautionary statements : Prevention:

No precautionary phrases.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Hazardous components which must be listed on the label:

Contains Distillates (petroleum), hydrotreated light paraffinic.

#### 2.3 Other hazards

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

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Not classified as flammable but will burn.

## **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Chemical nature : Highly refined mineral oil.

Modified Ames Test (ASTM E 1687-04) MI < 1.0.

#### Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Distillates (petroleum), hy-	64742-55-8	100
drotreated light paraffinic	265-158-7	

#### **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. Flush exposed area with wa-

ter and follow by washing with soap if available.

If persistent irritation occurs, obtain medical attention.

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

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

rınsıng.

If persistent irritation occurs, obtain medical attention.

If swallowed : Call emergency number for your location / facility.

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

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

Symptoms : If material enters lungs, signs and symptoms may include

coughing, choking, wheezing, difficulty in breathing, chest

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congestion, shortness of breath, and/or fever.

The onset of respiratory symptoms may be delayed for sever-

al hours after exposure.

Defatting dermatitis signs and symptoms may include a burn-

ing sensation and/or a dried/cracked appearance.

Ingestion may result in nausea, vomiting and/or diarrhoea.

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

Treatment : Potential for chemical pneumonitis.

Call a doctor or poison control center for guidance.

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

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.

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

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.

### 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 meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

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#### 6.2 Environmental precautions

Environmental precautions : Use appropriate containment to prevent uncontrolled release.

Prevent from spreading or entering drains, ditches or rivers by

using sand, earth, or other appropriate barriers.

#### 6.3 Methods and material 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**

#### 7.1 Precautions for safe handling

Technical measures : 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.

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

ably practicable. Reference should be made to the Health and

Safety Executive's publication "COSHH Essentials".

# 7.2 Conditions for safe storage, including any incompatibilities

Further information on stor-

age stability

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

place.

Use properly labeled and closable containers.

Store at ambient temperature.

Refer to section 15 for any additional specific legislation cov-

ering the packaging and storage of this product.

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

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office.

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.

7.3 Specific end use(s)

Specific use(s) : Please refer to section 16 and/or the annexes for the regis-

tered uses under REACH.

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

#### 8.1 Control parameters

# **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Oil mist, mineral	Not As- signed	TWA (inhalable fraction)	5 mg/m3	US. ACGIH Threshold Limit Values
Oil mist, mineral		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

#### **Biological occupational exposure limits**

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name		Environmental Compartment	Value
Remarks:	tion. Conve	is a hydrocarbon with a complex, unknown or entional methods of deriving PNECs are not a le to identify a single representative PNEC for	opropriate and it is

#### 8.2 Exposure controls

## **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.

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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.

Do not ingest. If swallowed, then seek immediate medical assistance

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

protective eyewear is recommended. 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 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 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.

1 0 0

Skin and body protection : Skin protection is not ordinarily required beyond standard

work clothes.

It is good practice to wear chemical resistant gloves.

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Respiratory protection : No respiratory protection is ordinarily required under normal

conditions of use.

In accordance with good industrial hygiene practices, precau-

tions 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 appro-

priate combination of mask and filter.

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

meeting EN14387 and EN143.

Thermal hazards : Not applicable

# **SECTION 9: Physical and chemical properties**

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

Physical state : Liquid at room temperature.

Colour : clear

Odour : Slight hydrocarbon

Odour Threshold : Data not available

pour point :  $<= -45 \, ^{\circ}\text{C}$ 

Method: ASTM D97

Melting point/freezing point Data not available

Flammability

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not classified as flammable but will burn.

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / upper flammability limit

Typical 10 %(V)

Lower explosion limit / Lower flammability limit Typical 1 %(V)

Flash point :  $>= 170 \, ^{\circ}\text{C}$ 

Method: ASTM D93 (PMCC)

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>= 180 °C

Method: ISO 2592

Auto-ignition temperature : > 320 °C

Decomposition temperature

Decomposition tempera-

ture

Data not available

pH : Not applicable

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic : 9.3 mm2/s (40.0 °C)

Method: ASTM D445

2.6 mm2/s (100 °C) Method: ASTM D445

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)

Vapour pressure : < 0.5 Pa (20 °C)

estimated value(s)

Relative density : 0.806 (15 °C)

Density : 806 kg/m3 (15.0 °C)

Method: Unspecified

Relative vapour density : > 5

Particle characteristics

Particle size : Data not available

9.2 Other information

Explosive properties : Classification Code: Not classified.

Oxidizing properties : Data not available

Flammability (liquids) : Not classified as flammable but will burn.

Evaporation rate : Data not available

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

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## **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

Stable.

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

No decomposition if stored and applied as directed.

# **SECTION 11: Toxicological information**

# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **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: Aspiration into the lungs may cause chemical

pneumonitis which can be fatal.

Acute inhalation toxicity : LC 50 (Rat): > 5 mg/l

Exposure time: 4 h

Remarks: Low toxicity by inhalation.

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

Remarks: Low toxicity

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

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#### Skin corrosion/irritation

**Product:** 

Remarks : Not irritating to skin.

Prolonged/repeated contact may cause defatting of the skin

which can lead to dermatitis.

# 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 respiratory and skin sensitisation:

Not a sensitiser.

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

## Germ cell mutagenicity

**Product:** 

Genotoxicity in vivo : Remarks: Non mutagenic

Germ cell mutagenicity- As-

sessment

This product does not meet the criteria for classification in

categories 1A/1B.

## Carcinogenicity

**Product:** 

Remarks : Not a carcinogen.

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

Carcinogenicity - Assess-

ment

This product does not meet the criteria for classification in

categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Distillates (Fischer - Tropsch), heavy, C18-50 – branched, cyclic and linear	No carcinogenicity classification.

#### Reproductive toxicity

**Product:** 

Effects on fertility :

Remarks: Not a developmental toxicant., Does not impair

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fertility., Based on available data, the classification criteria are

not met.

Reproductive toxicity - As-

sessment

This product does not meet the criteria for classification in

categories 1A/1B.

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:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

11.2 Information on other hazards

**Endocrine disrupting properties** 

**Product:** 

Assessment The substance/mixture does not contain components consid-

> ered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

**Further information** 

**Product:** 

Remarks Used oils may contain harmful impurities that have accumu-

> lated 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 Classifications by other authorities under varying regulatory

frameworks may exist.

Remarks Slightly irritating to respiratory system.

Remarks Unless indicated otherwise, the data presented is representa-

tive of the product as a whole, rather than for individual com-

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ponent(s).

# **SECTION 12: Ecological information**

#### 12.1 Toxicity

Product:

Toxicity to fish : Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to algae/aquatic plants : Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to fish (Chronic tox-

icity)

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

met.

NOEC/NOEL > 1 mg/l

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

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

met.

NOEC/NOEL > 1 mg/l

Toxicity to microorganisms

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

met.

Practically non toxic: LL/EL/IL50 > 100 mg/l

## 12.2 Persistence and degradability

**Product:** 

Biodegradability : Remarks: Major constituents are inherently biodegradable, but con-

tains components that may persist in the environment.

Not Persistent per IMO criteria.

International Oil Pollution Compensation (IOPC) Fund definition: "A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340°C (645°F) and (b) at least 95% of which, by volume, distills at a temperature of 370°C (700°F) when tested by the ASTM Method D-86/78 or any subsequent revision

thereof."

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#### 12.3 Bioaccumulative potential

**Product:** 

Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

12.4 Mobility in soil

**Product:** 

Mobility : Remarks: 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 : The substance does not fulfill all screening criteria for persis-

tence, bioaccumulation and toxicity and hence is not consid-

ered to be PBT or vPvB..

## 12.6 Endocrine disrupting properties

**Product:** 

Assessment : The substance/mixture does not contain components considered to

have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### 12.7 Other adverse effects

**Product:** 

Additional ecological infor-

mation

Does not have ozone depletion potential, photochemical ozone crea-

tion potential or global warming potential.

Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions

of use.

Films formed on water may affect oxygen transfer and damage or-

ganisms.

Causes physical fouling of aquatic organisms.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

## **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

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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

13 08 99\*

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.

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## **SECTION 14: Transport information**

#### 14.1 UN number or ID number

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

i Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

: Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.5 Environmental hazards

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

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 Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

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## **SECTION 15: Regulatory information**

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances,

mixtures and articles (Annex XVII)

: Not applicable

REACH - List of substances subject to authorisation

(Annex XIV)

: Product is not subject to Authorisa-

tion under REACH.

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH),

Article 57).

Volatile organic compounds : Volatile organic compounds (VOC) content: 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 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.

#### 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.

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

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways: ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

# **Further information**

Training advice : Provide adequate information, instruction and training for op-

erators.

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

from the previous version.

This product is classified as R65 (Harmful: may cause lung damage if swallowed) respectively H304 (May be fatal if swallowed and enters airways). The risk relates to potential for aspiration. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance.

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The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Section 8 of the SDS. An exposure scenario is

not presented.

Sources of key data used to compile the Safety Data

Sheet

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU

IUCLID date base, EC 1272 regulation, etc).

Classification of the mixture:

Classification procedure:

Asp. Tox. 1 H304 Expert judgement and weight of evi-

dence determination.

Identified Uses according to the Use Descriptor System

**Uses - Worker** 

Title : Distribution of substance

- Industrial

**Uses - Worker** 

Title : Formulation & (re)packing of substances and mixtures

- Industrial

**Uses - Worker** 

Title : Functional Fluids

- Industrial

**Uses - Worker** 

Title : Functional Fluids

- Professional

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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**Exposure Scenario - Worker** 

30000010363	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	Distribution of substance- Industrial
Use Descriptor	Sector of Use: SU3 Process Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15 Environmental Release Categories: ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7, ESVOC SpERC 1.1b.v1
Scope of process	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES	
Section 2.1	Control of Worker Exposure	
<b>Product Characteristics</b>		
Physical form of product	Liquid, vapour pressure < 0.5 kPa	
	with potential for aerosol generation.	
Concentration of the Sub-	Covers use of substance/product up to 100% (unless stated	
stance in Mixture/Article	differently).,	
Frequency and Duration of		
	8 hours (unless stated differently).	
Other Operational Conditio		
	evated temperature (> 20°C above ambient temperature).	
Assumes a good basic stand	ard of occupational hygiene is implemented.	
Contributing Scenarios	Risk Management Measures	
General measures (Aspira-	Do not ingest. If swallowed, then seek immediate medical	
tion)	assistance	
General exposures (closed	No other specific measures identified.	
systems)		
General exposures (open systems)	No other specific measures identified.	
Process sampling	No other specific measures identified.	
Laboratory activities	No other specific measures identified.	
Bulk transfers(closed systems)	No other specific measures identified.	
Bulk transfers(open systems)	No other specific measures identified.	
Drum and small package filling	No other specific measures identified.	

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Equipment cleaning and maintenance	Drain down system prior to equipment opening or maintenance.		
Bulk product storage	Store substance within a closed system.		
Section 2.2	Control of Environmental Exposure		
Substance is complex UVCE	•		
Predominantly hydrophobic.	•		
Amounts Used		<u> </u>	
Fraction of EU tonnage used	in region:	0.1	
Regional use tonnage (tonne		8.5E+05	
Fraction of Regional tonnage		1	
Annual site tonnage (tonnes/		1.7E+03	
Maximum daily site tonnage		1.7E+04	
Frequency and Duration of			
Continuous release.			
Emission Days (days/year):		100	
	influenced by risk management		
Local freshwater dilution fact	<u> </u>	10	
Local marine water dilution fa		100	
	ons affecting Environmental Exposure		
	process (initial release prior to RMM):	1.0E-04	
	ter from process (initial release prior to	1.0E-07	
RMM):	·		
Release fraction to soil from	process (initial release prior to RMM):	1E-05	
	neasures at process level (source) to pro	event release	
	ss sites thus conservative process re-		
lease estimates used.			
Technical onsite condition sions and releases to soil	s and measures to reduce or limit disch	arges, air emis-	
Risk from environmental exp	osure is driven by freshwater sediment.		
Prevent discharge of undisso	olved substance to or recover from onsite		
wastewater.			
	wage treatment plant, no onsite		
wastewater treatment require			
	Treat air emission to provide a typical removal efficiency of (%)		
\·	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)		
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)			
	o prevent/limit release from site	<u> </u>	
Do not apply industrial sludge			
Sludge should be incinerated	d, contained or reclaimed.		
Conditions and Measures	related to municipal sewage treatment p	lant	
	al from wastewater via domestic sewage	94.7	
treatment (%)			
\ /	om wastewater after onsite and offsite	94.7	
	nage (MSafe) based on release following	1.1E+05	
maximum dilowable site telli	age (mean) sade on release following	1 = 100	

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Conditions and Massures related to external treatment of wests for	dianagal
Assumed domestic sewage treatment plant flow (m3/d)	2,000
total wastewater treatment removal (kg/d)	

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

Risk Management Measures are based on qualitative risk characterisation.

#### Section 3.2 - Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

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

#### Section 4.1 - Health

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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# **AeroShell Smoke Oil**

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**Exposure Scenario - Worker** 

30000010364	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	Formulation & (re)packing of substances and mixtures- Industrial
Use Descriptor	Sector of Use: SU10 Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15 Environmental Release Categories: ERC2, ESVOC SpERC 2.2.v1
Scope of process	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory 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 with potential for aerosol generation.	
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,	
Frequency and Duration of Use		
Covers daily exposures up to	8 hours (unless stated differently).	

#### Covers daily exposures up to 8 hours (unless state

Other Operational Conditions affecting Exposure

Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Assumes a good basic standard of occupational hygiene is implemented.

Contributing Scenarios	Risk Management Measures
General measures (Aspiration)	Do not ingest. If swallowed, then seek immediate medical assistance Risk Management Measures are based on qualitative risk characterisation.
General exposures (closed systems)	No other specific measures identified.
General exposures (open systems)	No other specific measures identified.
Batch processes at elevat- ed temperaturesUse in contained batch processes	No other specific measures identified.
Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.

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		1
Bulk transfersDedicated	No other specific measures identified.	
facility	TWO other specific measures identified.	
Mixing operations (open systems)	No other specific measures identified.	
ManualTransfer	No other specific measures identified.	
from/pouring from contain-	The carrier opening in case is a common at	
ersNon-dedicated facility		
Drum/batch transfersDedicated facility	No other specific measures identified.	
Production or preparation	No other specific measures identified.	
or articles by tabletting,		
compression, extrusion or		
pelletisation		
Drum and small package filling	No other specific measures identified.	
Equipment cleaning and maintenance	Drain down system prior to equipment opening or maintenance.	
Storage.	Store substance within a closed system.	
Section 2.2	Control of Environmental Exposure	
Substance is complex UVCB		
Predominantly hydrophobic.		
Amounts Used		
Fraction of EU tonnage used	in region:	0.1
Regional use tonnage (tonne		8.5E+05
Fraction of Regional tonnage		1
Annual site tonnage (tonnes/year):		3.0E+04
Maximum daily site tonnage (kg/day):		1.0E+05
Frequency and Duration of	Use	
Continuous release.		
Emission Days (days/year):		300
<b>Environmental factors not</b>	influenced by risk management	
Local freshwater dilution fact	or:	10
Local marine water dilution fa		100
Other Operational Condition	ns affecting Environmental Exposure	
	rocess (initial release prior to RMM):	2.5E-03
Release fraction to wastewater from process (initial release prior to RMM):		5.0E-06
Release fraction to soil from	process (initial release prior to RMM):	0.0001
Technical conditions and n	neasures at process level (source) to pr	event release
Common practices vary acro	ss sites thus conservative process re-	
lease estimates used.		
Technical onsite conditions sions and releases to soil	s and measures to reduce or limit disch	arges, air emis-
	osure is driven by freshwater sediment.	
	olved substance to or recover from onsite	
wastewater.		
If discharging to domestic se	wage treatment plant, no onsite	
wastewater treatment require	ed.	
·		·

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Treat air emission to provide a typical removal efficiency of (%)	0	
Treat onsite wastewater (prior to receiving water discharge) to provide	69.5	
the required removal efficiency of >= (%)		
If discharging to domestic sewage treatment plant, provide the re-	0.0	
quired onsite wastewater removal efficiency of (%)		
Organisational measures to prevent/limit release from site		
Do not apply industrial sludge to natural soils.		
Sludge should be incinerated, contained or reclaimed.		
Canditions and Massures related to mounicinal covers treatment or	laut	
Conditions and Measures related to municipal sewage treatment p		
Estimated substance removal from wastewater via domestic sewage	94.7	
treatment (%)		
Total efficiency of removal from wastewater after onsite and offsite	94.7	
(domestic treatment plant) RMMs (%)		
Maximum allowable site tonnage (MSafe) based on release following	5.7E+05	
total wastewater treatment removal (kg/d)		
Assumed domestic sewage treatment plant flow (m3/d)	2,000	
Conditions and Measures related to external treatment of waste fo	r 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 ECETOC TRA tool has b	peen used to estimate workplace exposures unless otherwise	

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

# Section 3.2 -Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO	
Section 4.1 - Health		
Measures/Operational Condi Where other Risk Manageme	expected to exceed the DN(M)EL when the Risk Management tions outlined in Section 2 are implemented. ent Measures/Operational Conditions are adopted, then users 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.

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Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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**Exposure Scenario - Worker** 

30000010400	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	Functional Fluids- Industrial
Use Descriptor	Sector of Use: SU3 Process Categories: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9 Environmental Release Categories: ERC7, ESVOC SpERC 7.13a.v1
Scope of process	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

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 with potential for aerosol generation.	
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,	
Frequency and Duration of		
Other Operational Conditio	8 hours (unless stated differently).	
Operation is carried out at ele	evated temperature (> 20°C above ambient temperature). ard of occupational hygiene is implemented.	
Contributing Scenarios	Risk Management Measures	
General measures (Aspiration)	Do not ingest. If swallowed, then seek immediate medical assistance	
Bulk transfers(closed systems)	No other specific measures identified.	
Drum/batch transfersDedicated facility	No other specific measures identified.	
Filling of arti- cles/equipment(closed sys- tems)	No other specific measures identified.	
Filling/ preparation of equipment from drums or containers.Non-dedicated facility	No other specific measures identified.	
General exposures (closed systems)	No other specific measures identified.	
General exposures (open systems)elevated tempera-	Restrict area of openings and provide extract ventilation to emission points when substance handled at elevated temper-	

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ture	atures		
Remanufacture of reject articles	No other specific measures identified.		
Equipment cleaning and maintenance	Drain down system prior to equipment opening or maintenance.		
Storage.	Store substance within a closed system.		
Section 2.2	Control of Environmental Exposure		
Substance is complex UVCE	•		
Predominantly hydrophobic.			
Amounts Used		J	
Fraction of EU tonnage used	in region:	0.1	
Regional use tonnage (tonne		1.2E+03	
Fraction of Regional tonnage		1	
Annual site tonnage (tonnes/		1.0E+01	
Maximum daily site tonnage		5.0E+02	
Frequency and Duration of		•	
Continuous release.			
Emission Days (days/year):		20	
	influenced by risk management		
	Local freshwater dilution factor: 10		
Local marine water dilution fa	actor:	100	
Other Operational Condition	ons affecting Environmental Exposure		
Release fraction to air from process (initial release prior to RMM):		5.0E-04	
	er from process (initial release prior to	1.0E-06	
Release fraction to soil from	process (initial release prior to RMM):	0.001	
Technical conditions and r	neasures at process level (source) to pr	event release	
Common practices vary acrollease estimates used.	ss sites thus conservative process re-		
Technical onsite condition sions and releases to soil	s and measures to reduce or limit disch	arges, air emis-	
	osure is driven by freshwater sediment.		
Treat air emission to provide a typical removal efficiency of (%)		0	
	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)		
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)		0.0	
Organisational measures t	o prevent/limit release from site		
Do not apply industrial sludge			
Sludge should be incinerated	d, contained or reclaimed.		
Conditions and Measures	related to municipal sewage treatment p	lant	
	al from wastewater via domestic sewage	94.7	
	om wastewater after onsite and offsite MMs (%)	98.9	
	age (MSafe) based on release following	3.3E+03	

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Assumed domestic sewage treatment plant flow (m3/d) 2,000

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

Risk Management Measures are based on qualitative risk characterisation.

# Section 3.2 - Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

# SECTION 4 GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

#### Section 4.1 - Health

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

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**Exposure Scenario - Worker** 

Exposure Scenario - Worker	
30000010397	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	Functional Fluids- Professional
Use Descriptor	Sector of Use: SU22 Process Categories: PROC1, PROC2, PROC3, PROC8a, PROC9, PROC20 Environmental Release Categories: ERC9a, ERC9b, ESVOC SpERC 9.13b.v1
Scope of process	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.

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	
	with potential for aerosol generation.	
Concentration of the Sub-	Covers use of substance/product up to 100% (unless stated	
stance in Mixture/Article	differently).,	
Frequency and Duration of		
	8 hours (unless stated differently).	
Other Operational Condition		
	evated temperature (> 20°C above ambient temperature).	
Assumes a good basic stand	ard of occupational hygiene is implemented.	
Contributing Scenarios	Risk Management Measures	
General measures (Aspiration)	Do not ingest. If swallowed, then seek immediate medical assistance	
Bulk transfers(closed systems)	No other specific measures identified.	
Drum/batch transfersDedicated facility	No other specific measures identified.	
Filling of arti- cles/equipment(closed sys- tems)	No other specific measures identified.	
Filling/ preparation of equipment from drums or containers.Non-dedicated facility	No other specific measures identified.	
General exposures (closed systems)	No other specific measures identified.	
General exposures (open	Restrict area of openings and provide extract ventilation to	
systems)elevated tempera-	emission points when substance handled at elevated temper-	

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ture	atures	
Remanufacture of reject articles	No other specific measures identified.	
Equipment cleaning and	Drain down system prior to equipment opening or mainte-	
maintenance	nance.	
Storage.	Store substance within a closed system.	
Section 2.2	Control of Environmental Exposure	
Substance is complex UVCB		
Predominantly hydrophobic.		
Amounts Used		Д.
Fraction of EU tonnage used	in region:	0.1
Regional use tonnage (tonne		1.2E+03
Fraction of Regional tonnage		1
Annual site tonnage (tonnes/		6.0E-01
Maximum daily site tonnage (		1.6E+00
Frequency and Duration of		1
Continuous release.		
Emission Days (days/year):		365
	nfluenced by risk management	1 000
Local freshwater dilution factor		10
Local marine water dilution fa		100
	ns affecting Environmental Exposure	1.00
Release fraction to air from process (initial release prior to RMM):		0.05
	er from process (initial release prior to	0.025
	process (initial release prior to RMM):	0.025
Technical conditions and m	neasures at process level (source) to pro-	
	ss sites thus conservative process re-	
	s and measures to reduce or limit disch	arges, air emis-
sions and releases to soil		argoo, air oimo
	osure is driven by freshwater sediment.	
Treat air emission to provide a typical removal efficiency of (%)		0
Treat onsite wastewater (prior to receiving water discharge) to provide		64.9
the required removal efficiency		
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)		0.0
	prevent/limit release from site	<u> </u>
Do not apply industrial sludge		
Sludge should be incinerated		
Conditions and Measures r	elated to municipal sewage treatment p	lant
	I from wastewater via domestic sewage	94.7
treatment (%)		
	om wastewater after onsite and offsite MMs (%)	94.7
	age (MSafe) based on release following	1.1E+01

According to EC No 1907/2006 as amended as at the date of this SDS

# **AeroShell Smoke Oil**

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2.4 13.08.2024 800001028534 Print Date 14.08.2024

Assumed domestic sewage treatment plant flow (m3/d) 2,000

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

Risk Management Measures are based on qualitative risk characterisation.

# Section 3.2 - Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

# SECTION 4 GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

#### Section 4.1 - Health

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).