

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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

1.1 Product identifier

Trade name : Shell Turbo Fluid DR 46
Product code : 001A9774

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

Use of the Substance/Mixture : Fire-resistant hydraulic fluid.
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 supplier.

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
Telephone : (+44) 08007318888
Telefax :
Email Contact for Safety Data Sheet : If you have any enquiries about the content of this SDS please email lubricantSDS@shell.com

1.4 Emergency telephone number : +44-(0) 151-350-4595

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.
Specific target organ toxicity - repeated exposure, Category 2, Oral	H373: May cause damage to organs through prolonged or repeated exposure if swallowed.
Reproductive toxicity, Category 1B	H360F: May damage fertility.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

SAFETY DATA SHEET


Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	<p>PHYSICAL HAZARDS: Not classified as a physical hazard according to CLP criteria.</p> <p>HEALTH HAZARDS: H360F May damage fertility. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.</p> <p>ENVIRONMENTAL HAZARDS: H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p>Prevention: P201 Obtain special instructions before use. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Response: P308 + P313 IF exposed or concerned: Get medical advice/ attention. P391 Collect spillage.</p> <p>Storage: No precautionary phrases.</p> <p>Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.</p>

Hazardous components which must be listed on the label:
Contains trixylyl phosphate.

2.3 Other hazards

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

High-pressure injection under the skin may cause serious damage including local necrosis.

Fire resistant fluid that is unlikely to burn without assistance from combustible materials.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Blend of synthetic esters and additives.

Hazardous components

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Trixylyl Phosphate	25155-23-1 246-677-8 / 01- 2119531415-46	Repr.1B; H360F STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	95 - 100
Triaryl phosphate	1330-78-5 215-548-8	Repr.2; H361f Aquatic Acute1; H400 Aquatic Chronic1; H410	0.25 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Not expected to be a health hazard when used under normal conditions.
- 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 water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
- When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
- In case of eye contact : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- If swallowed : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Oil acne/folliculitis signs and symptoms may include formation

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

of black pustules and spots on the skin of exposed areas.
Ingestion may result in nausea, vomiting and/or diarrhoea.

Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Notes to doctor/physician:
Treat symptomatically.

High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function.
Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

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 media : Do not use water in a jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Fire resistant fluid that is unlikely to burn without assistance from combustible materials.

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

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

- 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.

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.

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

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 Chapter 8 of this Safety Data Sheet.,
For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

SECTION 7: Handling and storage

- General Precautions : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

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.

7.2 Conditions for safe storage, including any incompatibilities

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

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

place. Use properly labeled and closable containers. Must be stored in a diked (bunded) area.

Refer to section 15 for any additional specific legislation covering 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 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 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.

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

Triaryl phosphate : Fresh water
Value: 0.000146 mg/l

Marine water
Value: < 0.000015 mg/l

Fresh water sediment
Value: 0.404 mg/kg

Marine sediment
Value: 0.00404 mg/kg

Sewage treatment plant
Value: 100 mg/l

Soil
Value: 0.052 mg/kg

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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 Sécurité, (INRS), France <http://www.inrs.fr/accueil>

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.

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 : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Approved to EU Standard EN166.

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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.

Skin and body protection : Skin protection is not ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use.
In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
Select a filter suitable for combined particulate/organic gases and vapours [Type A/Type P boiling point > 65°C (149°F)] meeting EN14387 and EN143.

Thermal hazards : Not applicable

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Hygiene measures : Exposure to this product should be reduced as low as 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 Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Liquid at room temperature.

Colour : colourless

Odour : slight

Odour Threshold : Data not available

pH : Not applicable

pour point : -20 °C Method: ISO 3016

Initial boiling point and boiling range : > 300 °C estimated value(s)

Flash point : 270 °C
Method: ASTM D92

Evaporation rate : Data not available

Flammability (solid, gas) : Data not available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : 0.440 hPa (200 °C)

Relative vapour density : > 1 estimated value(s)

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Relative density	: 1.13 (15 °C)
Density	: 1,130 kg/m ³ (15.0 °C) Method: ISO 3675
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n-octanol/water	: Pow: 5.63
Auto-ignition temperature	: 575 °C
Viscosity	
Viscosity, dynamic	: Data not available
Viscosity, kinematic	: 5 mm ² /s (100 °C) Method: ISO 3104
	43.4 mm ² /s (40.0 °C) Method: ISO 3104
Explosive properties	: Not classified
Oxidizing properties	: Data not available

9.2 Other information

Conductivity	: This material is not expected to be a static accumulator.
Decomposition temperature	: Data not available

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.

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.
Strong acids.
Strong bases.

10.6 Hazardous decomposition products

Hazardous decomposition products : Oxides of phosphorous

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Basis for assessment : Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Acute toxicity

Product:

Acute oral toxicity : LD50 rat: > 5,000 mg/kg
Remarks: Expected to be of low toxicity:

Acute inhalation toxicity : Remarks: Not considered to be an inhalation hazard under normal conditions of use.

Acute dermal toxicity : LD50 Rabbit: > 5,000 mg/kg
Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Product:

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Remarks: For respiratory and skin sensitisation:, Not expected to be a sensitiser.

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Material	GHS/CLP Carcinogenicity Classification
Trixylyl Phosphate	No carcinogenicity classification.

Reproductive toxicity

Product:

:
Remarks: May impair fertility at doses which produce other toxic effects.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

STOT - repeated exposure

Product:

Remarks: May cause damage to organs or organ systems through prolonged or repeated exposure.

Aspiration toxicity

Product:

Not considered an aspiration hazard.

Further information

Product:

Remarks: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

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: Expected to be very toxic: LL/EL/IL50 < 1 mg/l

Toxicity to crustacean (Acute toxicity) : Remarks: Expected to be very toxic: LL/EL/IL50 < 1 mg/l

Toxicity to algae/aquatic plants (Acute toxicity) : Remarks: Expected to be very toxic: LL/EL/IL50 < 1 mg/l

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Toxicity to crustacean (Chronic toxicity) : Remarks: Data not available
Toxicity to microorganisms (Acute toxicity) : Remarks: Data not available

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Expected to be not readily biodegradable.

12.3 Bioaccumulative potential

Product:

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

Partition coefficient: n-octanol/water : Pow: 5.63

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

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

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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

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 :

16 03 05*

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.
(Trixylyl phosphates)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Trixylyl phosphates)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Trixylyl phosphates)

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Trixylyl phosphates)

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

IMDG
Packing group : III
Labels : 9

IATA
Packing group : III
Labels : 9

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Chapter 7, Handling & Storage,
for special precautions which a user needs to be aware of or
needs to comply with in connection with transport.

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

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

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

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

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 (Annex XIV) : Product is not subject to Authorisation under REACH.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Trixylyl Phosphate

Volatile organic compounds : 0 %

Other regulations : 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:

EINECS : All components listed.
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

Classification procedure:

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

Chronic aquatic toxicity, Category 1,
H410
Specific target organ toxicity - repeated
exposure, Category 2, H373
Reproductive toxicity, Category 1B,
H360F

Expert judgement and weight of evidence
determination.
Expert judgement and weight of evidence
determination.
Expert judgement and weight of evidence
determination.

Full text of H-Statements

H360F May damage fertility.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute Acute aquatic toxicity
Aquatic Chronic Chronic aquatic toxicity
Repr. Reproductive toxicity
STOT RE Specific target organ toxicity - repeated exposure

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

SAFETY DATA SHEET

Regulation 1907/2006/EC

Shell Turbo Fluid DR 46

Version 5.3

Revision Date 08.03.2016

Print Date 09.03.2016

IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Inhibitory Concentration fifty
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_HP V = 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.

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.