

SAFETY DATA SHEET

Prepared according to the regulation on Safety Data Sheets regarding Hazardous substances and mixtures (R.G. 13/12/2014-29204).

AeroShell Fluid 2XN

Initial release date: 16.10.2014

Revision Date: 10.02.2016

Version 1.1

SDS Number: 800001000311

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

1.1 Product identifier

Trade name : AeroShell Fluid 2XN

Product code : 001A0046

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

Use of the Substance/Mixture : Corrosion inhibited mineral oil for aircraft engine preservation., For further details consult the AeroShell Book on www.shell.com/aviation.

Recommended restrictions on use : 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

Company : **Shell & Turcas Petrol A.Ş.**
Karamancılar Is Merkezi Gulbahar Mh.
Salih Tozan Sk.No:18bbk Esentepe-Sisli
TR-34394 Istanbul

Telephone : (+90) 2124441502

Telefax : (+90) 2123760600

E-mail address of person responsible for the SDS : If you have any enquiries about the content of this SDS please email lubricantSDS@shell.com

1.4 Emergency telephone number

Emergency telephone number : 0212 376 00 00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification T.R. SEA No 28848

Not a hazardous substance or mixture.

Classification T.R. SAE No 27092

Not a hazardous substance or mixture.

2.2 Label elements

Labelling T.R. SEA No 28848

Hazard pictograms : No Hazard Symbol required

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Signal word	:	No signal word
Hazard statements	:	PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	:	Prevention: No precautionary phrases. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal: No precautionary phrases.

2.3 Other hazards

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.

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

Not classified as flammable but will burn.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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

Hazardous components

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

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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 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.

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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 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 methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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 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.

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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

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 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 place. Use properly labeled and closable containers.

Store in closed containers between 50°F and 120°F.

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

Packaging material : Suitable material: For containers or container linings, use mild steel or high density polyethylene.
Unsuitable material: PVC.

7.3 Specific end use(s)

Specific use(s) : Not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form	Control parameters	Basis
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		of exposure)		
Oil mist, mineral		TWA	5 mg/m ³	US. ACGIH Threshold Limit Values

Biological occupational exposure limits

No biological limit allocated.

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

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

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 break-

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through 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 the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].
- Protective measures : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

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

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Colour	:	dark brown
Odour	:	Slight hydrocarbon
Odour Threshold	:	Data not available
pH	:	Not applicable
pour point	:	-17 °C Method: Unspecified
Initial boiling point and boiling range	:	> 280 °C estimated value(s)
Flash point	:	254 °C Method: Unspecified
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Data not available
Upper explosion limit	:	Typical 10 %(V)
Lower explosion limit	:	Typical 1 %(V)
Vapour pressure	:	< 0,5 Pa (20 °C) estimated value(s)
Relative vapour density	:	> 1 estimated value(s)
Relative density	:	0,900 (15 °C)
Density	:	900 kg/m ³ (15,0 °C) Method: Unspecified
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	Pow: > 6 (based on information on similar products)
Auto-ignition temperature	:	> 320 °C
Viscosity		

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Viscosity, dynamic : Data not available

Viscosity, kinematic : 254 mm²/s (37,8 °C)
Method: Unspecified

20 mm²/s (98,9 °C)
Method: Unspecified

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.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with strong oxidising agents.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Acute toxicity

Product:

Acute oral toxicity : LD50 (rat): > 5.000 mg/kg

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Remarks: Expected to be of low toxicity:

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

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating.
Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Product:

Remarks: Not expected to be a skin sensitiser.

Germ cell mutagenicity

Product:

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

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies.
Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Effects on fertility :

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Remarks: Not expected to impair fertility.
Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

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 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.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish (Acute toxicity) : Remarks: Expected to be practically non toxic:
LL/EL/IL50 > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Acute toxicity) : Remarks: Expected to be practically non toxic:
LL/EL/IL50 > 100 mg/l

Toxicity to algae (Acute toxicity) : Remarks: Expected to be practically non toxic:
LL/EL/IL50 > 100 mg/l

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

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Data not available

Toxicity to bacteria (Acute toxicity) : Remarks: Data not available

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but contains components that may persist in the environment.

12.3 Bioaccumulative potential

Product:

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

12.4 Mobility in soil

Product:

Mobility : Remarks: Liquid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile.

Remarks: Floats on water.

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Other adverse effects

Product:

Additional ecological information : Remarks: 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.

Remarks: Poorly soluble mixture.
May cause physical fouling of aquatic organisms.

Remarks: Mineral oil is not expected to cause any chronic

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effects to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local regulations may be more stringent than regional or national requirements and must be complied with.

Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

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

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

SECTION 15: Regulatory information

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

Other regulations : Regulations on the health and safety precautions for chemicals in the workplace. Regulations on the fire protection of buildings. Regulations on the prevention of industrial accidents and the reduction of their effects.

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

EINECS/ELINCS/EC : All components listed or polymer exempt.

TSCA : All components listed.

SECTION 16: Other information

SDS Author

Name, Surname : Eda Demirer

Address : Shell & Turcas Petrol A.Ş. Derince Tesisleri
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41900 Derince-Kocaeli

Certified Qualification date : 25 May 2015

Certificate number : GBF-1921

Further information

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

Revision changes: Revised according to regulation on Safety Data Sheets (SDSs) regarding hazardous substances and mixtures (R.G. 13/12/2014-29204)

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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