



Eni OSO 46 FF

Safety Data Sheet

According to Regulation (EU) No. 830/2015

Revision date: 29/08/2018 Supersedes: 31/01/2018 Version: 5.0

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

1.1. Product identifier

Product form	: Mixture
Trade name	: Eni OSO 46
Product code	: 2303
Type of product	: Lubricants
Formula	: 2908-2018
Product group	: Trade product

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

1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Industrial/Professional use spec	: Used in closed systems Wide dispersive use
Use of the substance/mixture	: Functional fluids Hydraulic oil ---- Do not use the product for any purposes that have not been advised by the manufacturer.
Function or use category	: Hydraulic fluids and additives, Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Eni Schmiertechnik GmbH
Paradiesstr. 14, D-97080 Würzburg
Tel (+49) 931 900 98-0, Fax (+49) 931 98442

Sachkundigen Person verantwortlich für das Sicherheitsdatenblatt (Reg. EG Nr. 1907/2006):
Abteilung Anwendungstechnik, Tel. (+49) 931 900 98-145
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1.4. Emergency telephone number

Emergency number :

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]

Not classified

Adverse physicochemical, human health and environmental effects

Contact with eyes may cause temporary reddening and irritation. For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.

2.2. Label elements

None to be reported, according to the present EU regulations.

2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification : This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels. Any substance, in case of accidents involving pressurized circuits and the like, may be accidentally

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injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop. A potential risk may arise from the release of hydrogen sulfide, when the product is stored or handled at high temperature. Hydrogen sulfide may accumulate in the tanks or other confined spaces, with danger to the workers that enter the spaces. In these cases overexposure to hydrogen sulfide may cause irritation to airways, nausea, dizziness, loss of consciousness and death.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Notes : Composition/ Information on ingredients:
Mixture of hydrocarbons
Additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (Main component, see note [**])	(CAS-No.) 101316-72-7 (EC-No.) 309-877-7 (EC Index-No.) 649-530-00-X (REACH-no) 01-2119489969-06-0000	>= 95	Not classified
Mineral base oil, severely refined (For identification of the substance, see note [*])		0,1 - 0,2	Asp. Tox. 1, H304

Notes : [*] Note: this product may be formulated with one or more of the following severely refined mineral base oils (not classified as hazardous):
CAS 64742-54-7/EC 265-157-1/REACH Reg. # 01-2119484627-25-xxxx; CAS 64742-65-0/EC 265-169-7/REACH Reg. # 01-2119471299-27-xxxx; CAS 64742-70-7/EC 265-174-4/REACH Reg. # 01-2119487080-42-xxxx.
All these substances have a value < 3 % wt of DMSO extract, according to IP 346/92 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)
Note [**]:
this product has a value of DMSO extract < 3 % wt, according to IP 346/92. According to the criteria laid out by the EU (note L, Annex VI of Regulation (CE) 1272/2008), this product must be regarded as non carcinogenic.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove to fresh air, keep the casualty warm and at rest. If breathing is difficult, give oxygen if possible, or assisted ventilation. If necessary, give external cardiac massage and obtain medical advice. See also section 4.3.

First-aid measures after skin contact : Remove contaminated clothing and shoes. Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do so. Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor.

First-aid measures after ingestion : Rinse mouth thoroughly with water. Give water to drink if victim completely conscious/alert. Do not induce vomiting.

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

Symptoms/effects after inhalation : Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision.

Symptoms/effects after skin contact : Contact with hot product may cause thermal burns.

Symptoms/effects after eye contact : Contact with eyes may cause temporary reddening and irritation. Contact with hot product or vapours may cause burns.

Symptoms/effects after ingestion : Accidental ingestion of small quantities of the product may cause nausea, discomfort and gastric disturbances.

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- Symptoms/effects upon intravenous administration : No information available.
- Chronic symptoms : None to be reported, according to the present classification criteria.

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

Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve. Seek medical attention in all cases of serious burns. If there is any suspicion of inhalation of H₂S (hydrogen sulphide), Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Send patient to hospital. Immediately begin artificial respiration if breathing has ceased. Administer oxygen if necessary.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Small-size fires: carbon dioxide, dry chemicals, foam, sand or earth. Large fires: foam or water fog (mist). These means should be used by trained personnel only. Other extinguishing gases (according to regulations).
- Unsuitable extinguishing media : Do not use water jets. They could cause splattering, and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels.
- Explosion hazard : In case of losses from pressurized circuits, the sprays may form mists. Take into account that in this case the lower explosion limit for mists is about 45 g/m³ of air. Vapours are heavier than air, spread along floors and form explosive mixtures with air.
- Hazardous decomposition products in case of fire : Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, NO_x, H₂S and SO_x (harmful/toxic gases). Oxygenated compounds (aldehydes, etc.).

5.3. Advice for firefighters

- Firefighting instructions : Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.
- Special protective equipment for firefighters : Personal protection equipment for firefighters (see also sect. 8). In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. EN 443. EN 469. EN 659.
- Other information : In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid accidental sprays on hot surfaces or electrical contacts. Avoid direct contact with released material. Keep upwind.

6.1.1. For non-emergency personnel

- Protective equipment : See Section 8.
- Emergency procedures : Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

6.1.2. For emergency responders

- Protective equipment : Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters. Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. if necessary heat resistant and insulated. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with combined dust/organic vapour filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
- Emergency procedures : Notify local authorities according to relevant regulations.

6.2. Environmental precautions

Do not let the product accumulate in confined or underground spaces. Do not let the product flow into sewers or water courses, or in any way contaminate the environment. In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations. The site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain spilled liquid with sand, earth or other suitable absorbents (non-flammable). Recover free liquid and waste materials in suitable waterproof and oil-resistant containers. Clean contaminated area. Dispose of according to local regulations. If in water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.
- Methods for cleaning up : Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations.
- Other information : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air/water temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure that proper housekeeping measures are in place. Keep away from heat/sparks/open flames/hot surfaces. Use and store only outdoors or in a well-ventilated area. Ensure good ventilation of the work station. Due to the extremely slippery nature of this material, more care than usual must be exercised in material handling practices to keep off all walking surfaces. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content, flammability, and the presence of sulphur compounds. The product may release Hydrogen Sulphide: a specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.
- Handling temperature : This product can be handled at ambient temperatures.
- Hygiene measures : Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.
- Incompatible products : Strong oxidizing agents.
- Storage area : Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
- Packages and containers: : If the product is supplied in containers: Keep containers tightly closed and properly labelled. Keep only in the original container or in a suitable container for this kind of product.
- Packaging materials : For containers, or container linings use materials specifically approved for use with this product. Compatibility should be checked with the manufacturer.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)		
Austria	MAK (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium	Limit value (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (langvarig) (mg/m ³)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (kortvarig) (mg/m ³)	2 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

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Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)		
Hungary	AK-érték	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands	MAC TGG 8h (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-ED (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-EC (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Nivågränsvärde (NVG) (mg/m ³)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Kortidsvärde (KTV) (mg/m ³)	3 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL TWA (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL STEL (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VECD (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VEMP (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-TWA (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-STEL (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Mineral base oil, severely refined		
Austria	MAK (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium	Limit value (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (langvarig) (mg/m ³)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (kortvarig) (mg/m ³)	2 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary	AK-érték	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands	MAC TGG 8h (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-ED (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-EC (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Nivågränsvärde (NVG) (mg/m ³)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Kortidsvärde (KTV) (mg/m ³)	3 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL TWA (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL STEL (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VECD (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VEMP (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-TWA (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

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Mineral base oil, severely refined		
USA - ACGIH	ACGIH TLV®-STEL (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

Monitoring methods	
Monitoring methods	Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts, Refer to relevant legislation and in any case to the good practice of industrial hygiene.

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DNEL/DMEL (additional information)	
Additional information	Not applicable
PNEC (additional information)	
Additional information	Not applicable

Note : The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), check the atmosphere for oxygen content, presence of hydrogen sulphide (H₂S) and SO_x, and flammability. See also Section 16, "Other information".

Personal protective equipment (for industrial or professional use):

Gloves. Protective clothing. Safety glasses. Safety shoes or boots. Dust/aerosol mask.

Hand protection:

When there is a risk of contact with the skin, use hydrocarbon-resistant, felt-lined gloves. Adequate materials: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins). Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard. Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing gloves, hands must be carefully washed and dried.

Eye protection:

When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure

Skin and body protection:

Long-sleeved overalls. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated.

Respiratory protection:

Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Open or well ventilated spaces: if the product is handled without adequate containment: use full or half-face masks with adequate filter for organic vapours. (EN 136/140/145). Combination filter device (DIN EN 141). Approved respiratory protection equipment shall be used in spaces where hydrogen sulphide may accumulate: full face mask with cartridge/filter type "B" (grey for inorganic vapours including H₂S) or self-contained breathing apparatus (SCBA). (EN 136/140/145). Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. (EN 136/140/145)

Personal protective equipment symbol(s):

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Thermal hazard protection:

None in normal use conditions.

Environmental exposure controls:

Do not discharge the product into the environment. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed. Prevent discharge of undissolved substance to or recover from onsite wastewater. Storage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.

Consumer exposure controls:

Not applicable.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid, bright & clear.
Colour	: Yellow-brown.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -27 °C (pour point) (ASTM D 97)
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 238 °C (ASTM D 92)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 880 kg/m ³ (15°C) (ASTM D 4052)
Solubility	: Water: Immiscible and insoluble
Log Pow	: Not applicable for mixtures
Log Kow	: Not applicable for mixtures
Viscosity, kinematic	: 46 mm ² /s (40 °C) (ASTM D 445)
Viscosity, dynamic	: No data available
Explosive properties	: None (according to composition).
Oxidising properties	: None (according to composition).
Explosive limits	: LEL ≥ 45 g/m ³ (Aerosol)

9.2. Other information

Additional information : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.

10.2. Chemical stability

Stable product, according to its intrinsic properties (in normal conditions of storage and handling).

10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. Sensitivity to heat, friction or shock cannot be assessed in advance.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Avoid the build-up of electrostatic charge.

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10.5. Incompatible materials

Strong oxidants.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may produce : Carbon dioxide, Carbon monoxide. In exceptional cases (i.e prolonged storage in tanks contaminated with water, and presence of anaerobic sulfate-reducing microbial colonies), the product may undergo a degradation and generate small amounts of sulfur compounds, including H₂S. See also Section 16, "Other information".

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
LD50 oral rat	> 5000 mg/kg (API 1986, UBTL 1983 - OECD 401)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (API 1986, UBTL 1984 - OECD 402)
LC50 inhalation rat (mg/l)	2,18 - 5,53 mg/l/4h (API 1987, Exxon Biomedical Sciences, Inc. 1988, BioResearch Laboratories, Ltd. 1984 - OECD 403)

Mineral base oil, severely refined	
LD50 oral rat	≥ 5000 mg/kg bodyweight (OECD 401)
LD50 dermal rat	≥ 5000 mg/kg bodyweight (OECD 402)
LC50 inhalation rat (mg/l)	≥ 5 mg/l/4h (OECD 403)

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition) This product contains : Lubricating oils (petroleum), C24-50, solvent-extd, dewaxed, hydrogenated; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by solvent extraction and hydrogenation of atmospheric distillation residues. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C24 through C50 and produces a finished oil with a viscosity in the order of 16cSt to 75cSt at 40 °C (104 °F).] this product has a value of DMSO extract < 3 % wt, according to IP 346/92. According to the criteria laid out by the EU (note L, Annex VI of Regulation (CE) 1272/2008), this product must be regarded as non carcinogenic. All the mineral base oils contained in this product have a value < 3 % wt of DMSO extract, according to IP 346/92 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (Mobil 1990 - OECD TG 408)
LOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg bodyweight/day (mouse, Chasey, K.L. and McKee, R.H. 1993 - OECD 453)
NOAEL (dermal, rat/rabbit, 90 days)	1000 - 2000 mg/kg bodyweight/day (API 1986, Mobil Environmental and Health Science Laboratory 1983 - OECD 410)
NOAEC (inhalation, rat, vapour, 90 days)	220 - 1500 mg/m ³ (Exxon Biomedical Sciences, Inc. 1991, Dalbey W, Osimitz T, Kommineni C, Roy T, Feuston M and Yang J 1991 - OECD 412)

Mineral base oil, severely refined	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)

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Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)
 Additional information : (according to composition)

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Viscosity, kinematic	46 mm ² /s (40 °C) (ASTM D 445)

Potential adverse human health effects and symptoms : Contact with eyes may cause temporary reddening and irritation.
 Other information : None.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. According to the components, and by comparison with other products of the same type and composition, it is expected that this product has a toxicity for aquatic organisms > 100 mg/l, and must not be regarded as dangerous to the environment. An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - water : This product is not soluble in water. It floats on water and forms a film on the surface. The damage to aquatic organisms is of mechanical kind (immobilization and entrapment)

Acute aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

Chronic aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

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EC50 Daphnia 1	> 100 mg/l (OECD 211)
NOEC chronic algae	100 mg/l (21d)

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
LC50 fish 1	> 100 mg/l (LL 50, Exxon 1995 - OECD 203)
EC50 Daphnia 1	> 10000 mg/l (WAF, 48 h, Shell 1988 - OECD 202)
NOEC (acute)	>= 100 mg/l (Pseudokirchneriella subcapitata, 72h, OECD 201 - Petro-Canada 2008)
NOEC chronic fish	>= 1000 mg/l (Oncorhynchus mykiss, NOELR, 14d - QSAR, Redman, A. et al. 2010)
NOEC chronic crustacea	>= 1000 mg/l (21d, OECD 211 - Shell 1994)

Mineral base oil, severely refined	
LC50 fish 1	> 100 mg/l (LL 50)
EC50 Daphnia 1	> 10000 mg/l WAF, 48 h (OECD 202)

12.2. Persistence and degradability

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Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.

Mineral base oil, severely refined	
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.

12.3. Bioaccumulative potential

Eni OSO 46 FF	
Log Pow	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	Not established.

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.

12.4. Mobility in soil

Eni OSO 46 FF	
Ecology - soil	No data available.

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
Ecology - soil	This product is not soluble in water. It floats on water and forms a film on the surface.

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12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
This substance does not meet the criteria for classification as PBT or vPvB. The product should be considered prudentially as "Persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)

12.6. Other adverse effects

Other adverse effects : None.

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Do not dispose of the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector. Dispose of empty containers and wastes safely.

Sewage disposal recommendations : Dispose of in a safe manner in accordance with local/national regulations. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Product/Packaging disposal recommendations : European Waste Catalogue code(s) (Decision 2001/118/CE): 13 02 05* (mineral-based non-chlorinated engine, gear and lubricating oils). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.

Ecology - waste materials : The product as it is does not contain halogenated substances.

EURAL code (EWC) : 13 02 05* - Mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

In accordance with ADN / ADR / IATA / IMDG / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
None.				

14.6. Special precautions for user

- Overland transport

Not regulated

- Transport by sea

Not regulated

- Air transport

Not regulated

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

IBC code : Not applicable.

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Mineral base oil, severely refined
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No ingredients are included in the REACH Candidate list (> 0,1 % m/m).

Contains no REACH Annex XIV substances

Other information, restriction and prohibition regulations : Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). (et sequens). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace). Directive 2012/18/CE (Control of major-accident hazards involving dangerous substances). Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds). Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding). Substances Depleting the Ozone layer (1005/2009) - Annex I Substances (ODP). Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC. Regulation EU (649/2012) - Export and Import of hazardous chemicals (PIC).

15.1.2. National regulations

National adoption of EU Directives concerning health and safety on the workplace.

National laws on classification and labeling of dangerous substances/preparations (Adoption of Directive 67/548/CE and subsequent Adaptations to Technical Progress - ATP, and Directive 1999/45/CE).

National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE).

Relevant national laws on prevention of water pollution.

Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC).

National adoption of Directives 75/439/CEE - 87/101/CEE concerning disposal of used oils.

France

Maladies professionnelles (F) : RG 36 - Affections provoquées par les huiles et graisses d'origine minérale ou de synthèse

Germany

Reference to AwSV : Water hazard class (WGK) (D) 1, low hazard to water (Classification according to AwSV, Annex 1)

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

VbF class (D) : Not applicable.

Storage class (LGK) (D) : LGK 10 - Combustible liquids

Employment restrictions : Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Other information, restrictions and prohibition regulations : TRGS 900: Occupational Exposure Limits
TRGS 800: Fire protection measures
TRGS 555: Working instruction and information for workers
TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure
TRGS 401: Risks resulting from skin contact - identification, assessment, measures
TRGS 400: Hazard assessment for activities involving Hazardous Substances

Netherlands

Saneringsinspanningen : C - Minimize discharge

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

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NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Pregnant/breastfeeding women working with the product must not be in direct contact with it

15.2. Chemical safety assessment

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]
No chemical safety assessment has been carried out

A chemical safety assessment has been carried out for the following components of this mixture:

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated
Mineral base oil, severely refined

SECTION 16: Other information

Indication of changes:

Formula.

Abbreviations and acronyms:

	Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.
	N/D = not available
	N/A = not applicable
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Effective concentration for 50 percent of test population (median effective concentration)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)
LD50	Lethal dose for 50 percent of test population (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Data sources : This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.

Training advice : Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.

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Other information

: Do not use the product for any purposes that have not been advised by the manufacturer. In exceptional cases (i.e prolonged storage in tanks contaminated with water, and presence of anaerobic sulfate-reducing microbial colonies), the product may undergo a degradation and generate small amounts of sulfur compounds, including H₂S. This situation is especially relevant in all those circumstances which require to enter a confined space, with direct exposure to the vapours. If there is any suspicion of inhalation of H₂S (hydrogen sulphide), Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Send patient to hospital. Immediately begin artificial respiration if breathing has ceased. Administer oxygen if necessary. This situation is especially relevant for those operations which involve direct exposure to the vapours in the interior of tanks or other confined spaces. If this possibility is suspected, a specific assessment of inhalation risks from the presence of H₂S in confined spaces must be made, to help determine prevention measures and controls (i.e. PPE) appropriate to local circumstances, and adequate emergency procedures.

Full text of H- and EUH-statements:

Asp. Tox. 1	Aspiration hazard, Category 1
H304	May be fatal if swallowed and enters airways.

SDS EU (REACH Annex II)

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