Eni Grease SM

Safety Data Sheet

According to Regulation (EU) No. 830/2015

Revision date: 13/07/2020 Supersedes: 18/12/2017 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 Grease SM
Product code	:	4672
Type of product	:	Lubricant grease
Formula	:	1307-2020
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	:	Wide dispersive use Used in closed systems
Use of the substance/mixture	:	General purpose lubricant Lubricant grease ---- Do not use the product for any purposes that have not been advised by the manufacturer.
Function or use category	:	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 S.p.A.

P.le E. Mattei 1 - 00144 Rome Italy

Phone: (+39) 06 59821

www.eni.com

Contact:

Refining & Marketing

Competent person responsible for the Safety Data Sheet (Reg. EC nr. 1907/2006): SDSInfo@eni.com

1.4. Emergency telephone number

Emergency number	:	CNIT +39 0382 24444 (24h) (IT + EN) Poison centre (UK): National Poisons Information Service Edinburgh (24h) (+44) 844 892 0111 0870 600 6266 (UK only) (Source: UN-WHO)

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

None to be reported, according to the present EU regulations. For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements	:	EUH210 - Safety data sheet available on request.

2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification : Combustible product. In case of contact with eyes, this product may cause irritation. Thermal decomposition generates toxic vapours. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. Ingestion may cause nausea, vomiting and diarrhea. May cause long-term adverse effects in the environment. 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

Thickeners

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (see note [*], 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	>= 62 < 66	Not classified
Residual oils (petroleum,) solvent-refined (see note [*], see note [**])	(CAS-No.) 64742-01-4 (EC-No.) 265-101-6 (EC Index-No.) 649-459-00-4 (REACH-no) 01-2119488707-21	>= 24 < 25,5	Not classified
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (Additive)	(CAS-No.) 68457-79-4 (EC-No.) 270-608-0 (EC Index-No.) N/A (REACH-no) 01-2119493628-22	>= 1 < 1,5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (Additive)	(CAS-No.) 68457-79-4 (EC-No.) 270-608-0 (EC Index-No.) N/A (REACH-no) 01-2119493628-22	(15 <C <= 100) Skin Irrit. 2, H315

Notes : 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.

Note [**]:

substance with occupational exposure limits for some EU countries affecting the category of mineral oils (finely refined mineral base oil mists; see section 8.1)

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. Seek medical advice. See also section 4.3.

First-aid measures after skin contact : Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

First-aid measures after ingestion : Do NOT induce vomiting. If the person is conscious, rinse mouth with water without swallowing. Keep at rest. Call for medical assistance or bring to an hospital. If the casualty is unconscious, place in the recovery position. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs. Do not give anything by mouth to an unconscious person.

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

Symptoms/effects after inhalation	:	None under normal conditions at ambient temperatures.
Symptoms/effects after skin contact	:	Prolonged and repeated skin contact may cause reddening, irritation and dermatitis.
Symptoms/effects after eye contact	:	Contact with eyes may cause a light transient irritation.
Symptoms/effects after ingestion	:	Accidental ingestion of small quantities of the product may cause nausea, discomfort and gastric disturbances.
Symptoms/effects upon intravenous administration	:	No information available.
Chronic symptoms	:	None known.

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. 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	:	Dry chemical, CO2, or water spray or regular foam.
Unsuitable extinguishing media	:	Do not use a heavy water stream. Use water stream to cool containers.

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. Flammable aerosols are released in thermal decomposition.
Explosion hazard	:	No direct explosion hazard.
Hazardous decomposition products in case of fire	:	Incomplete combustion will generate poisonous carbon monoxide, carbon dioxide and other toxic gases. Oxygenated compounds (aldehydes, etc.). Combustion products include sulphur oxides (SO2 and SO3) and Hydrogen sulphide H2S. POx. ZnOx. LiOx.

5.3. Advice for firefighters

Firefighting instructions	:	Shut off source of product, if possible. Move undamaged containers from immediate hazard area if it can be done safely. 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 direct contact with released material. Avoid accidental sprays on hot surfaces or electrical contacts. Keep upwind. Spill area may be slippery.

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	:	Do not attempt to take action without suitable protective equipment. Personal protective equipment Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated. Work helmet. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (A) (or A+B when applicable for H2S), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. 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

Prevent product from entering sewers, rivers or other bodies of water. 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.

6.3. Methods and material for containment and cleaning up

For containment : Contain the product and contaminated materials with mechanical means. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.

Methods for cleaning up : Wash contaminated area with large amounts of water.

Other information : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air 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 : This material is combustible, but will not ignite readily. 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. Avoid contact with skin, eyes and clothing. Do not use compressed air for filling, discharging, or handling operations. Keep away from heat/sparks/open flames/hot surfaces. Use and store only outdoors or in a well-ventilated area. Emptied containers can contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been drained and cleaned.

Hygiene measures : Ensure that proper housekeeping measures are in place. 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. 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 heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not smoke.

Incompatible products : Keep away from: strong oxidants.

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.

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/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium	Limit value (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (langvarig) (mg/m³)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (kortvarig) (mg/m³)	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary	AK-érték	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands	MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-ED (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)		
Sweden	Nivågränsvärde (NVG) (mg/m3)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Kortidsvärde (KTV) (mg/m3)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL TWA (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL STEL (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VECD (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VEMP (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-TWA (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-STEL (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (STEL) (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

Residual oils (petroleum,) solvent-refined (64742-01-4)		
Austria	MAK (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium	Limit value (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (langvarig) (mg/m³)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (kortvarig) (mg/m³)	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary	AK-érték	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands	MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-ED (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Nivågränsvärde (NVG) (mg/m3)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Kortidsvärde (KTV) (mg/m3)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL TWA (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL STEL (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-TWA (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-STEL (mg/m³)	10 mg/m³ (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.

Eni Grease SM	
DNEL/DMEL (additional information)	
Additional information	Not applicable
PNEC (additional information)	
Additional information	Not applicable

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated (101316-72-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2,7 mg/m³
Long-term - local effects, inhalation	5,6 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,74 mg/kg bodyweight/day
PNEC (Oral)	
PNEC oral (secondary poisoning)	9,33 mg/kg food

Residual oils (petroleum,) solvent-refined (64742-01-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0,97 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2,73 mg/m³
Long-term - local effects, inhalation	5,58 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,74 mg/kg bodyweight/day
Long-term - local effects, inhalation	1,19 mg/m³
PNEC (Oral)	
PNEC oral (secondary poisoning)	9,33 mg/kg food

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	11,87 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8,13 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0,24 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2,06 mg/m³
Long-term - systemic effects, dermal	5,93 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	4 µg/l
PNEC aqua (marine water)	4,6 µg/l
PNEC aqua (intermittent, freshwater)	45 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,024 mg/kg dwt
PNEC sediment (marine water)	0,002 mg/kg dwt
PNEC (Soil)	
PNEC soil	2,49 µg/kg dw
PNEC (Oral)	
PNEC oral (secondary poisoning)	10,67 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

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. Minimize exposure to mists/vapours/aerosol. Before entering storage tanks and commencing any operation in a confined area, carry out an adequate clean-up, and check the atmosphere for oxygen content, flammability, and the presence of sulphur compounds.

Personal protective equipment (for industrial or professional use):

Protective clothing. Safety glasses. Safety shoes or boots.

Materials for protective clothing:

Protective apron. DIN EN 465. DIN EN 466

Hand protection:

When there is a risk of contact with the skin, use hydrocarbon-resistant, felt-lined gloves. Adequate materials: nitrile (NBR) or neoprene 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.

Eye protection:

Chemical goggles or safety glasses. DIN EN 166

Skin and body protection:

Non-skid safety shoes or boots, chemical resistant.

Respiratory protection:

Not necessary with sufficient ventilation. In case of inadequate ventilation wear respiratory protection (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)

Personal protective equipment symbol(s):

Thermal hazard protection:

None in normal use conditions.

Environmental exposure controls:

Do not discharge the product into the environment. 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. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Consumer exposure controls:

Not applicable.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Soft paste. Slightly hazy.
Colour	:	Black.
Odour	:	characteristic.
Odour threshold	:	There are no data available on the preparation/mixture itself.
pH	:	There are no data available on the preparation/mixture itself.
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	≈ 0 °C (CAS 101316-72-7)
Boiling point	:	> 250 °C (CAS 101316-72-7)
Flash point	:	> 230 °C (base oil) (ASTM D 445)
Critical temperature	:	Not applicable for mixtures
Auto-ignition temperature	:	> 300 °C (CAS 101316-72-7)
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Critical pressure	:	Not applicable for mixtures
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	0,9 kg/l 15°C (ASTM D 1298)
Solubility	:	Water: Immiscible and insoluble
Log Pow	:	Not applicable for mixtures
Log Kow	:	Not applicable for mixtures
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	None (according to composition).

Oxidising properties : None (according to composition).
Explosive limits : No data available

9.2. Other information

Penetration : 270 dmm ((25°C) (ASTM D 217), Class NLGI: 2)
Drop point / drop range : > 180°C (ASTM D 566)

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).

10.4. Conditions to avoid

None in normal conditions.

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 generates : Toxic fumes. A potential risk may arise from the release of hydrogen sulfide, when the product is stored or handled at high temperature.

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)

Residual oils (petroleum,) solvent-refined (64742-01-4)	
LD50 oral rat	5000 mg/kg bodyweight
LD50 dermal rat	2000 - 5000 mg/kg bodyweight
LC50 inhalation rat (mg/l)	2,18 - 5,53 mg/l/4h

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LD50 oral rat	3600 mg/kg (OECD 401)
LD50 dermal rabbit	20000 mg/kg bodyweight (OECD 402)
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 5 mg/l/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: There are no data available on the preparation/mixture itself.
Additional information : (according to composition)
This product contains components with a Specific Concentration Limit (SCL).
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: There are no data available on the preparation/mixture itself.
Additional information : (according to composition)
This product contains components with a Specific Concentration Limit (SCL).
On basis of test data: Not irritating to eyes
This evaluation is based on the information provided by the suppliers.
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).], Residual oils (petroleum) solvent-refined; Baseoil— unspecified; [A complex combination by hydrocarbons obtained as the solvent insoluble fraction from solvent refining of a residuum using a polar organic solvent such as phenol or furfural. It consists of hydrocarbons having carbon numbers predominantly higher than C25 and boiling above approximately 400°C (752°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.
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/m³ (Exxon Biomedical Sciences, Inc. 1991, Dalbey W, Osimitz T, Kommineni C, Roy T, Feuston M and Yang J 1991 - OECD 412)

Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Additional information	:	(according to composition)
Potential adverse human health effects and symptoms	:	Contact with eyes may cause temporary reddening and irritation. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. Inhalation of vapours may cause respiratory irritation. Avoid all eye and skin contact and do not breathe vapour and mist.
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. An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment. Notify authorities if product enters sewers or public waters.
Ecology - water	:	This product is not soluble in water. It floats on water and forms a film on the surface.
Hazardous to the aquatic environment, short-term (acute)	:	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	:	Not classified (Based on available data, the classification criteria are not met)

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)

Residual oils (petroleum,) solvent-refined (64742-01-4)	
LC50 fish 1	100 mg/l
EC50 Daphnia 1	10 g/l

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LC50 fish 1	4,5 mg/l (Cyprinodon variegatus)
EC50 Daphnia 1	23 mg/l (Daphnia Magna)
EC50 72h algae (1)	21 mg/l

12.2. Persistence and degradability

Eni Grease SM	
Persistence and degradability	A fraction of the 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.

Residual oils (petroleum,) solvent-refined (64742-01-4)	
Persistence and degradability	Substance is complex UVCB. The test methods for this endpoint are not applicable to UVCB substances.

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Persistence and degradability	Inherently biodegradable.
Biodegradation	1,5 % (28 d) (OECD TG 301 B)

12.3. Bioaccumulative potential

Eni Grease SM	
Log Pow	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	Not established. According to the characteristics of the components, the product has a low biodegradability in anaerobic conditions, and may be persistent. Some of the chemical compounds that are present in the product have a potential for bioaccumulation, and may be harmful to aquatic organisms.

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.

Residual oils (petroleum,) solvent-refined (64742-01-4)	
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Log Pow	0,69

12.4. Mobility in soil

Eni Grease SM	
Ecology - soil	Product adsorbs onto the soil.

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

Residual oils (petroleum,) solvent-refined (64742-01-4)	
Ecology - soil	The test methods for this endpoint are not applicable to UVCB substances.

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Ecology - soil	Product adsorbs onto the soil.

12.5. Results of PBT and vPvB assessment

Eni Grease SM	
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	
Results of PBT-vPvB assessment	The components in this formulation do 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)

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)
Residual oils (petroleum,) solvent-refined (64742-01-4)	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
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	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

12.6. Other adverse effects

Other adverse effects : None.

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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.

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

Product/Packaging disposal recommendations : European Waste Catalogue code(s) (Decision 2001/118/CE): 13 08 99* (oil wastes not otherwise specified - wastes not otherwise specified). 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.

Additional information : Empty containers may contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been cleaned, and declared safe.

EURAL code (EWC) : 13 08 99* - wastes not otherwise specified

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.

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	Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts
3(c) 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 class 4.1	Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts

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 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 professionelles (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, Slightly hazardous to water (Classification according to AwSV, Annex 1)
WGK remark	:	Classification is carried out on the basis of the Ordinance on facilities for handling substances that are hazardous to water (Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV)) of 18 April 2017 (BGBl 2017, Teil I, Nr. 22, Seite 905).
VbF class (D)	:	Not applicable.
Storage class (LGK) (D)	:	LGK 11 - Combustible solids
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. BlmSchV (Hazardous Incident Ordinance)
Other information, restrictions and prohibition regulations	:	TRGS 400: Hazard assessment for activities involving Hazardous Substances TRGS 401: Risks resulting from skin contact - identification, assessment, measures TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure TRGS 555: Working instruction and information for workers TRGS 800: Fire protection measures TRGS 900: Occupational Exposure Limits TRGS 905: List of carcinogenic, mutagenic or toxic for reproduction 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
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
Residual oils (petroleum,) solvent-refined
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Notes
1.1	Formula	Modified	
1.1	Trade name	Modified	
1.1	Name	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Modified	
2.3	Other hazards not contributing to the classification	Modified	
3	Composition/information on ingredients	Modified	
3.2	Comments	Added	
3.2	Notes	Added	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after eye contact	Modified	
4.2	Symptoms/effects after ingestion	Modified	
4.3	Other medical advice or treatment	Modified	
5.1	Suitable extinguishing media	Modified	
5.2	Hazardous decomposition products in case of fire	Added	
5.2	Fire hazard	Modified	
5.3	Special protective equipment for firefighters	Modified	
6.1	Protective equipment	Modified	
6.3	Methods for cleaning up	Added	
6.3	For containment	Modified	
7.1	Precautions for safe handling	Modified	
7.1	Hygiene measures	Modified	
7.2	Storage temperature	Removed	
8.1	DNEL/DMEL and PNEC values	Added	
8.2	Respiratory protection	Modified	
8.2	Eye protection	Modified	
8.2	Hand protection	Modified	
8.2	Personal protective equipment (for industrial or professional use)	Modified	
8.2	Appropriate engineering controls	Modified	
9.1	Log Kow	Added	
9.1	Oxidising properties	Modified	
9.1	Explosive properties	Modified	
9.1	Critical pressure	Added	
9.1	Flammability (solid, gas)	Added	
9.1	Freezing point	Added	
9.1	Critical temperature	Added	
9.1	Boiling point	Added	
9.1	Auto-ignition temperature	Added	
9.1	Flash point	Modified	
9.1	Appearance	Modified	
9.1	Physical state	Modified	
9.2	Additional information	Modified	
10.6	Hazardous decomposition products	Modified	
11.1	Additional information	Modified	
11.1	Additional information	Modified	

11.1	Potential adverse human health effects and symptoms	Modified	
12.3	Log Kow	Added	
14.2	Proper Shipping Name	Removed	
14.6	Special transport precautions	Removed	
15.1	Storage class (LGK) (D)	Modified	
15.1	Other information, restrictions and prohibition regulations	Added	
15.1	Employment restrictions	Added	
15.1	Water hazard class (WGK) (D)	Modified	
15.1	WGK remark	Modified	
15.1	REACH Annex XVII	Modified	
15.1	Other information, restriction and prohibition regulations	Added	
16	Other information	Modified	
16	Abbreviations and acronyms	Modified	
16	Indication of changes	Added	

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/A = not applicable
	N/D = not available
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.

Other information : Do not use the product for any purposes that have not been advised by the manufacturer. In exceptional cases (i.e prolunged 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 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:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1

Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

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.