Eni Grease MU EP 1

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878
Revision date: 5/9/2024 Supersedes: 1/27/2023 Version: 1.1

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Eni Grease MU EP 1
Product code	:	4636
Type of product	:	Lubricant grease
Formula	:	2701-2023
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	:	Non-dispersive use
Use of the substance/mixture	:	General purpose lubricant ---- 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

Enilive S.p.A, Viale Giorgio Ribotta 51, 00144 Rome, ITALY, Tel. +39 06 59821
Competent person responsible for the safety data sheet (Reg. EC nr. 1907/2006): SDS.Enilive@enilive.com

Distributed by: Enilive Schmiertechnik GmbH, Paradiesstraße 14, 97080 Würzburg, GERMANY
Department responsible for information: Application Engineering & Product Management (AEPM), Tel. +49 (0)931-900 98-0
e-mail: technik.wuerzburg@enilive.com

1.4. Emergency telephone number

Emergency number	:	CNIT +39 0382 24444 (24h) (IT + EN) Poison Center

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.

Nordic countries regulation

Denmark

MAL code	:	00-1 (Executive Order No. 301 from 1993)

2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification : Combustible. In case of contact with eyes, this product may cause irritation. Ingestion may cause nausea, vomiting and diarrhea. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. 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. Thermal decomposition generates : Toxic vapours.

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
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
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
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Distillates (petroleum), solvent-dewaxed heavy paraffinic(64742-65-0)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Residual oils (petroleum,) solvent-refined(64742-01-4)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Notes : Composition/information on ingredients
Mixture of hydrocarbons
Thickeners.
Additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (see note [*], see note [**])	CAS-No.: 64742-65-0 EC-No.: 265-169-7 EC Index-No.: 649-474-00-6 REACH-no: 01-2119471299-27	66 – 70	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	20 - 25	Not classified
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (Additive, see note [***])	CAS-No.: 68457-79-4 EC-No.: 270-608-0 REACH-no: 01-2119493628-22	≥ 1,5 < 2	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, see note [***])	CAS-No.: 68457-79-4 EC-No.: 270-608-0 REACH-no: 01-2119493628-22	(2 ≤ C < 100) Eye Irrit. 2, H319 (3 ≤ C < 100) Eye Dam. 1, H318 (15 < C ≤ 100) Skin Irrit. 2, H315

Notes : Note [*]:
this product has a value of DMSO extract < 3 % wt, according to IP 346. 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)
Note [***]:
More detailed information: See section 11.

Full text of H- and EUH-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 temporary reddening and 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.
Explosion hazard	:	No direct explosion hazard.
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, NOx (harmful/toxic gases). Oxygenated compounds (aldehydes, etc.). Combustion products include sulphur oxides (SO2 and SO3) and Hydrogen sulphide H2S. LiOx. POx. ZnOx.

5.3. Advice for firefighters

Firefighting instructions	:	Shut off source of product, if possible. If possible, move containers and drums away from the danger area, if safe to do so. 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	:	Wear personal protection equipment. (see chapter 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	:	If required, notify relevant authorities according to all applicable regulations.

6.2. Environmental precautions

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. Prevent liquid from entering sewers, watercourses, and soil.

6.3. Methods and material for containment and cleaning up

For containment	:	Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal. 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.
Methods for cleaning up	:	Wash contaminated area with large amounts of water.
Other information	:	Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary. 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.

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. 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. Do not use compressed air for filling, discharging, or handling operations. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not get in eyes, on skin, or on clothing.
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	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not smoke. Store in dry, well-ventilated area.
Incompatible products	:	Keep away from strong oxidizers.
Storage temperature	:	< 50 °C

Storage area	:	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. Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations/areas should be designed with adequate bunds in case of leaks or spills.
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

8.1.1 National occupational exposure and biological limit values

Residual oils (petroleum,) solvent-refined (64742-01-4)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark - Occupational Exposure Limits	
OEL TWA [1]	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands - Occupational Exposure Limits	
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark - Occupational Exposure Limits	
OEL TWA [1]	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands - Occupational Exposure Limits	
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

8.1.2. Recommended monitoring procedures

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.

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Eni Grease MU EP 1	
DNEL/DMEL (additional information)	
Additional information	Not applicable
PNEC (additional information)	
Additional information	Not applicable

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

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
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

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
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
PNEC (additional information)	
Additional information	Not derived - Not classified as hazardous for environment

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.

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Minimize exposure to mists/vapours/aerosol. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. 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.

8.2.2. Personal protection equipment

Personal protective equipment (for industrial or professional use):
Protective clothing. Safety glasses. Safety shoes or boots.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. DIN EN 166

8.2.2.2. Skin protection

Skin and body protection:
Non-skid safety shoes or boots, chemical resistant.

Hand protection:
When there is a risk of contact with the skin, use waterproof gloves, resistant to chemical products. Gloves must be felt-lined. Adequate materials: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins). 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. 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.

Other skin protection

Materials for protective clothing:
Protective apron. DIN EN 465. DIN EN 466

8.2.2.3. Respiratory protection

Respiratory protection:
Not necessary with sufficient ventilation. In case of insufficient ventilation, wear suitable respiratory equipment (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)

8.2.2.4. Thermal hazards

Thermal hazard protection:
None in normal use conditions.

8.2.3. Environmental exposure controls

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	:	Viscous liquid.
Colour	:	Amber.
Appearance	:	Semi-solid.
Odour	:	Characteristics.
Odour threshold	:	There are no data available on the preparation/mixture itself.
Melting point	:	Not determined
Freezing point	:	≈ 0 °C (CAS 101316-72-7)
Boiling point	:	> 250 °C (CAS 101316-72-7)
Flammability	:	Not flammable
Explosive properties	:	None (according to composition).
Oxidising properties	:	None (according to composition).
Lower explosion limit	:	Not determined
Upper explosion limit	:	Not determined
Flash point	:	> 230 °C (base oil) (ASTM D 445)
Auto-ignition temperature	:	> 300 °C (CAS 101316-72-7)
Decomposition temperature	:	Not determined
pH	:	There are no data available on the preparation/mixture itself.
Viscosity, kinematic	:	91 – 99 mm²/s (CAS 64742-65-0) (40 °C) (ASTM D 445)
Viscosity, dynamic	:	Not determined
Solubility	:	Water: Immiscible and insoluble
Log Kow	:	Not applicable for mixtures
Log Pow	:	Not applicable for mixtures
Vapour pressure	:	< 0.1 hPa (20°C, CAS 101316-72-7)
Vapour pressure at 50°C	:	Not determined
Critical pressure	:	Not applicable for mixtures
Density	:	0.9 kg/l 15°C (ASTM D 1298)
Relative density	:	Not determined
Relative vapour density at 20°C	:	Not determined
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Critical temperature	:	Not applicable for mixtures

9.2.2. Other safety characteristics

Penetration : 400 - 430 dmm ((25°C) (ASTM D 217), Class NLGI: 00)
Drop point / drop range : 185°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.

10.3. Possibility of hazardous reactions

None in normal conditions.

10.4. Conditions to avoid

None in normal conditions.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : COx, HC, NOx, chlorinated compounds, Toxic fumes. This product contains sulfur compounds which, in certain circumstances, may generate hydrogen sulfide.

SECTION 11: Toxicological information

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

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)

Residual oils (petroleum,) solvent-refined (64742-01-4)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 5 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)	> 5 mg/l/4h

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)

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).
(provided by the supplier)

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
pH	Not applicable

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.

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
pH	Not applicable

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. 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)

Residual oils (petroleum,) solvent-refined (64742-01-4)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
LOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	< 125 mg/kg bodyweight/day (CAS 64742-04-7, Mobil 1990) (OECD 408)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEC (inhalation,rat, vapour, 90 days)	220 – 980 mg/m³ (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)

Eni Grease MU EP 1	
Viscosity, kinematic	91 – 99 mm²/s (CAS 64742-65-0) (40 °C) (ASTM D 445)

Residual oils (petroleum,) solvent-refined (64742-01-4)	
Viscosity, kinematic	490 mm²/s (40 °C) (ASTM D 445)

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Viscosity, kinematic	> 50 mm²/s

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)	
Viscosity, kinematic	91 – 99 mm²/s (40 °C) (ASTM D 445)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

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). Notify authorities if product enters sewers or public waters. 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.

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)

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

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
LC50 fish 1	> 100 mg/l (LL 50, Exxon 1995 - OECD 203)
EC50 Daphnia 1	> 10000 mg/l (EL50, 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)
NOEC chronic algae	≥ 100 mg/l (Pseudokirchneriella subcapitata, 72h)

12.2. Persistence and degradability

Eni Grease MU EP 1	
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.
Biodegradation	> 80 %

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)

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
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.
Biodegradation	31 % (28d, Exxon 1995)

12.3. Bioaccumulative potential

Eni Grease MU EP 1	
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.

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

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
BCF fish 1	0.4 – 6280 l/kg
BCF fish 2	3.16 – 71100 l/kg
Log Pow	1.99 – 18.02
Log Kow	Not applicable (UVCB)
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.

12.4. Mobility in soil

Eni Grease MU EP 1	
Ecology - soil	Product adsorbs onto the soil.

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.

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
Log Koc	1.71 – 14.7
Ecology - soil	The test methods for this endpoint are not applicable to UVCB substances.

12.5. Results of PBT and vPvB assessment

Eni Grease MU EP 1	
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	
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 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)
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
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	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. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. 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 dumping on the ground, or 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, bore, burn or incinerate emptied containers, 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 ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
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. Maritime transport in bulk according to IMO instruments

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

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).

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	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
3(c)	Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	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

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

No ingredients are included in the REACH Candidate list (> 0,1 % m/m).

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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).

France

Maladies professionelles (F)	
Code	Description
RG 36	Diseases caused by oils and fats of mineral or synthetic origin

Germany

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.

National Rules and Recommendations : 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 mutagenic, carcinogenic or teratogenic substances.

VbF class (D) : Not applicable.

Water hazard class (WGK) (D) : WGK 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).

Storage class (LGK, TRGS 510) : LGK 11 - Combustible solids.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

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

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

MAL code : 00-1 (Executive Order No. 301 from 1993)

Danish National Regulations : Young people under 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with it

Switzerland

Storage class (LK) : NG - Non-hazardous

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::
Residual oils (petroleum,) solvent-refined

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Notes
1.1	Formula	Modified	
1.3	Supplier information	Modified	

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

Abbreviations and acronyms:	
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 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. 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 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.

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
EUH210	Safety data sheet available on request.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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.