



Eni i-Sint 5W-40

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878
Revision date: 8/9/2024 Version: 1.0

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

1.1. Product identifier

Product form	: Mixture
Trade name	: Eni i-Sint 5W-40
Product code	: 1023
Type of product	: Lubricant
Formula	: 0155-2019
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, Consumer use
Industrial/Professional use spec	: Wide dispersive use
Use of the substance/mixture	: Lubricant for internal combustion engines
Function or use category	: Lubricants and additives

1.2.2. Uses advised against

Recommended use are listed above; other uses are not recommended unless an assessment has provided that risks are controlled.

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

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Department responsible for information: Application Engineering & Product Management (AEPM), Tel. +49 (0)931-900 98-0

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1.4. Emergency telephone number

Emergency number	: CNIT +39 0382 24444 (24h) (IT + EN) Poison Center
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazardous to the aquatic environment – Chronic Hazard, H412

Category 3

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. May cause an allergic skin reaction. 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]

CLP Signal word	: -
Hazard statements (CLP)	: H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P273 - Avoid release to the environment. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH208 - Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs, calcium salts. May produce an allergic reaction.

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2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification : This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels. If the product is handled or used at high temperature, contact with hot product or vapours may cause burns. Do not wait for symptoms to develop. Any substance, in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as soon as possible, to get specialized medical treatment. 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 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 $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6), Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6), Dodecylphenol, mixed isomers, branched (121158-58-5) ⁽¹⁾
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6), Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6), Dodecylphenol, mixed isomers, branched (121158-58-5) ⁽¹⁾

⁽¹⁾ Substance(s) in concentration below 0.1 % and displayed on a voluntary basis

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	
Substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is 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	Dodecylphenol, mixed isomers, branched (121158-58-5) ⁽¹⁾
Substance(s) 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	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6), Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6)

⁽¹⁾ Substance(s) in concentration below 0.1 % and displayed on a voluntary basis

Other information : 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 %.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Composition/information on ingredients
Mixture of hydrocarbons
Additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), hydrotreated heavy paraffinic (see note [**], see note [**])	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	70 - 80	Asp. Tox. 1, H304
Mineral base oil, severely refined (For identification of the substance, see note [*], see note [**])	EC-No.: N/A	10 - 20	Not classified
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (Additive)	CAS-No.: 68784-31-6 EC-No.: 272-238-5 EC Index-No.: N/A REACH-no: 01-2119657973-23	0,5 - 1,5	Eye Dam. 1, H318 Aquatic Chronic 2, H411
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated (Additive)	EC-No.: 953-650-0 REACH-no: N/A	0,5 - 1,5	Skin Sens. 1B, H317 Repr. 2, H361d
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (Additive)	CAS-No.: 722503-68-6 EC-No.: 682-816-2 EC Index-No.: N/A REACH-no: N/A	0,1 - 0,9	Skin Sens. 1B, H317
phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (Additive) Substance included in REACH Candidate List (Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/or combinations thereof (PDDP))	CAS-No.: 121158-58-5 EC-No.: 310-154-3 EC Index-No.: 604-092-00-9 REACH-no: 01-2119513207-49	< 0.045	Skin Corr. 1C, H314 Eye Dam. 1, H318 Repr. 1B, H360F Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated (Additive)	EC-No.: 953-650-0 REACH-no: N/A	(2 ≤ C < 100) Skin Sens. 1B, H317 (17.15 ≤ C < 100) Repr. 2, H361d

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Comments	<p>: [*] Note: this product may be formulated with one or more of the following severely refined mineral base oils (not classified as hazardous): CAS 101316-72-7/EC 309-877-7/REACH Reg. # 01-2119489969-06-xxxx; CAS 64742-54-7/EC 265-157-1/REACH Reg. # 01-2119484627-25-xxxx; CAS 64742-01-4/EC 265-101-6/REACH Reg. # 01-2119488707-21-xxxx; CAS 72623-87-1/EC 276-738-4/REACH Reg. # 01-2119474889-13-xxxx; CAS 64742-71-8/EC 265-176-5/REACH Reg. # 01-2119485040-48-xxxx; CAS 64742-65-0/EC 265-169-7/REACH Reg. # 01-2119471299-27-xxxx; CAS 64742-70-7/EC 265-174-4/REACH Reg. # 01-2119487080-42-xxxx. All these substances have a value < 3 % wt of DMSO extract, according to IP 346 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3) Note [**]: this product has a value of DMSO extract < 3 % wt, according to IP 346. 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)</p>
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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	: In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure; keep at rest; if necessary, seek medical attention. 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 or rash occurs, get medical advice/attention. In case of burns, cool affected part with cold running water for at least 10 min. Cover with gauze or clean cloth. Ask for medical assistance or bring to a hospital. Do not apply salves or other substances, unless by doctor's advice. Do not put ice on the burn.
First-aid measures after eye contact	: Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist. In case of burns, cool affected part with cold running water for at least 10 min. Cover with gauze or clean cloth. Ask for medical assistance or bring to a hospital. Do not apply salves or other substances, unless by doctor's advice.
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	: This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may build up only in case of sprays and mists. In these cases overexposure to mists (e.g. through prolonged use in confined insufficiently ventilated spaces) may cause irritation to airways, nausea and dizziness.
Symptoms/effects after skin contact	: Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. May produce an allergic reaction. Contact with hot product may cause thermal burns.
Symptoms/effects after eye contact	: Contact with eyes may cause temporary reddening and irritation. Contact with hot product or vapours may cause burns.
Symptoms/effects after ingestion	: Accidental ingestion of small quantities of the product may cause nausea, discomfort and gastric disturbances.
Symptoms/effects upon intravenous administration	: No information available.
Chronic symptoms	: None to be reported, according to the present classification criteria.

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

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

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SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

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. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.
- Special protective equipment for firefighters : 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.

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.

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6.1.2. For emergency responders

- Protective equipment : Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. If necessary heat resistant and insulated. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. 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

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

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : This material is combustible, but will not ignite readily. Provide adequate ventilation. Use adequate personal protective equipment as needed. Due to the extremely slippery nature of this material, more care than usual must be exercised in material handling practices to keep off all walking surfaces. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid release to the environment. 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. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content, flammability, and the presence of sulphur compounds. The product may release Hydrogen Sulphide: a specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances. See also Section 16, "Other information".

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Hygiene measures : Ensure that proper housekeeping measures are in place. Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages. Take off immediately all contaminated clothing and wash it before reuse. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. 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 open flames, hot surfaces and sources of ignition. Do not smoke.

Incompatible products : Strong oxidizing agents.

Storage area : Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations/areas should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Packages and containers: : If the product is supplied in containers: Keep containers tightly closed and properly labelled. Keep only in the original container or in a suitable container for this kind of product.

Packaging materials : For containers, or container linings use materials specifically approved for use with this product. Compatibility should be checked with the manufacturer, according to the specific use conditions.

Germany

Storage class (LGK, TRGS 510) : LGK 10 - Combustible liquids

Switzerland

Storage class (LK) : LK 10/12 - Liquids

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

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark - Occupational Exposure Limits	
OEL TWA	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
OEL STEL	2 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands - Occupational Exposure Limits	
MAC TGG 8h (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
VLA-EC (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
KGV (OEL STEL)	3 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
WEL STEL (OEL STEL)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
ACGIH OEL STEL	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Mineral base oil, severely refined	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark - Occupational Exposure Limits	
OEL TWA	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
OEL STEL	2 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands - Occupational Exposure Limits	
MAC TGG 8h (mg/m ³)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
VLA-EC (mg/m ³)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
KGV (OEL STEL)	3 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
WEL STEL (OEL STEL)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
ACGIH OEL STEL	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m ³

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Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

Ireland - Occupational Exposure Limits

OEL TWA	4 mg/m ³
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USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	5 mg/m ³
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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.
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8.1.3. Air contaminants formed

Applicable OEL and BLV for air contaminants : None known

8.1.4. DNEL and PNEC

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DNEL/DMEL (additional information)

Additional information	Not applicable
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PNEC (additional information)

Additional information	Not applicable
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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	2.7 mg/m ³
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Long-term - local effects, inhalation	5.6 mg/m ³
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DNEL/DMEL (General population)

Long-term - systemic effects, oral	0.74 mg/kg bodyweight/day
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Long-term - local effects, inhalation	1.2 mg/m ³ /day (DNEL, Mineral base oil mist, severely refined, DMSO extract <3% m/m)
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PNEC (Oral)

PNEC oral (secondary poisoning)	9.33 mg/kg food
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Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

DNEL/DMEL (Workers)

Acute - systemic effects, dermal	100 mg/kg bodyweight/day
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Acute - systemic effects, inhalation	496.4 mg/m ³
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Long-term - systemic effects, dermal	10.42 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	2.93 mg/m ³
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DNEL/DMEL (General population)

Acute - systemic effects, dermal	50 mg/kg bodyweight/day
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Acute - systemic effects, inhalation	198.6 mg/m ³
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Acute - systemic effects, oral	29 mg/kg bodyweight/day
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Long-term - systemic effects, oral	0.21 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	11.75 mg/m ³
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Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)	
Long-term - systemic effects, dermal	2.1 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	4 µg/l
PNEC aqua (marine water)	4.6 µg/l
PNEC aqua (intermittent, freshwater)	44 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.0701 mg/kg dwt
PNEC sediment (marine water)	0.00701 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.0548 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	8.33 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	3.8 mg/l
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	14 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.5 mg/m ³
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
DNEL/DMEL (additional information)	
Additional information	Not yet determined.
PNEC (Water)	
PNEC aqua (freshwater)	0.36 mg/l
PNEC aqua (marine water)	0.036 mg/l
PNEC aqua (intermittent, freshwater)	0.493 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	6.37 mg/kg dwt
PNEC sediment (marine water)	0.637 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.06 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	71.4 mg/l
PNEC (additional information)	
Additional information	Not derived - Not classified as hazardous for environment

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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

Control banding : None known

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

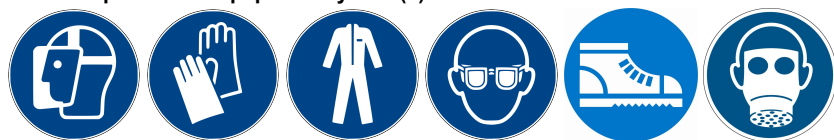
Ensure good ventilation of the work station. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), check the atmosphere for oxygen content, presence of hydrogen sulphide (H₂S) and SO_x, and flammability. See also Section 16, "Other information".

8.2.2. Personal protection equipment

Personal protective equipment (for industrial or professional use):

Face shield. Gloves. Protective clothing. Safety glasses. Safety shoes or boots. High gas/vapour concentration: gas mask with filter for organic vapours (A) or organic vapours/H₂S (A+B).

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard.

8.2.2.2. Skin protection

Skin and body protection:

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

Hand protection:

Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent). Adequate materials: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins). Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard. Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing gloves, hands must be carefully washed and dried.

8.2.2.3. Respiratory protection

Respiratory protection:

Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Combined gas/dust mask with filter type: EN 14387. Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. 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). Open or well ventilated spaces: if the product is handled without adequate containment means for the vapours: use full or half-face masks with filter for hydrocarbon vapours (AX). (EN 136/140/145)

8.2.2.4. Thermal hazards

Thermal hazard protection:

If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.

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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:

Wear protective gloves. Ensure adequate air ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow-brown.
Appearance	: Liquid, bright & clear.
Odour	: Slight odour of petroleum.
Odour threshold	: There are no data available on the preparation/mixture itself.
Melting point	: Not applicable
Freezing point	: Lack of data (on mixture / components of the mixture) - Data not available
Softening point	: -42 °C (ASTM D 5950)
Boiling point	: > 230 °C (CAS 64742-54-7)
Flammability	: Not flammable
Lower explosion limit	: 45 g/m ³
Upper explosion limit	: Lack of data (on mixture / components of the mixture) - Data not available
Flash point	: 210 °C (ASTM D 93)
Auto-ignition temperature	: > 300 °C (CAS 64742-54-7)
Decomposition temperature	: Lack of data (on mixture / components of the mixture) - Data not available
pH	: Lack of data (on mixture / components of the mixture) - Data not available
Viscosity, kinematic	: 87 mm ² /s (40 °C) (ASTM D 445)
Viscosity, dynamic	: 5900 mPa·s (-30 °C, ASTM D 5293)
Solubility	: Water: Immiscible and insoluble
Log Kow	: Not applicable for mixtures
Log Pow	: Not applicable for mixtures
Vapour pressure	: Lack of data (on mixture / components of the mixture) - Data not available
Vapour pressure at 50 °C	: Lack of data (on mixture / components of the mixture) - Data not available
Density	: 856 kg/m ³ (15 °C, ASTM D 4052)
Relative density	: Lack of data (on mixture / components of the mixture) - Data not available
Relative vapour density at 20 °C	: Lack of data (on mixture / components of the mixture) - Data not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosion limits : $\geq 45 \text{ g/m}^3$ (Aerosol)

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : Negligible.

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 of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) or alkali metals may cause a fire hazard. Sensitivity to heat, friction or shock cannot be assessed in advance.

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10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

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 may produce : Toxic fumes. 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.

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)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

LD50 oral rat	> 5000 mg/kg (OECD 401)
LD50 dermal rat	> 5000 mg/kg (OECD 402)
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)

Mineral base oil, severely refined

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401)
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402)
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

LD50 oral rat	3640 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight

phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)

LD50 oral rat	2200 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	15000 mg/kg bodyweight

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: Lack of data (on mixture / components of the mixture) - Data not available
Additional information : (according to composition)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

pH	Not applicable
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Mineral base oil, severely refined

pH	Not applicable
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Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

pH	≈ 7 Temp.: 25 °C Concentration: (≈)0,00116 other: Remarks on result: 'other:'
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Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met).
pH: Lack of data (on mixture / components of the mixture) - Data not available

Additional information : (according to composition)
This product is formulated with a component which contains substances classified as Eye Dam.1, H318. The component itself has been tested by the manufacturer and has been assessed as NOT irritant to eyes. This result has been used for classification of the final mixture (Bridging principle "Dilution").
This evaluation is based on the information provided by the suppliers.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

pH	Not applicable
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Mineral base oil, severely refined

pH	Not applicable
----	----------------

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

pH	≈ 7 Temp.: 25 °C Concentration: (≈)0,00116 other: Remarks on result: 'other:'
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Respiratory or skin sensitisation : Skin sensitization: Not classified (Based on available data, the classification criteria are not met). Respiratory sensitization: Not classified (Based on available data, the classification criteria are not met).

Additional information : (according to composition)
This product is formulated with a component containing one or more sensitizers. According to information provided by the supplier, test results on a similar formulation show that the finished product does not need to be classified as sensitizing.
On basis of test data: not sensitizing.
This result has been used for classification of the final mixture (Bridging principle "Dilution").
This evaluation is based on the information provided by the suppliers.
Exposure may produce an allergic reaction

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 : Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil of at least 100 SUS at 100°F (19cSt at 40°C). It contains a relatively large proportion of saturated hydrocarbons.], Lubricating oils (petroleum), C24-50, solvent-extd, dewaxed, hydrogenated; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by solvent extraction and hydrogenation of atmospheric distillation residues. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C24 through C50 and produces a finished oil with a viscosity in the order of 16cSt to 75cSt at 40 °C (104 °F).]

this product has a value of DMSO extract < 3 % wt, according to IP 346. According to the criteria laid out by the EU (note L, Annex VI of Regulation (CE) 1272/2008), this product must be regarded as non carcinogenic.

All the mineral base oils contained in this product have a value < 3 % wt of DMSO extract, according to IP 346 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)

No carcinogenic effect

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

Additional information : (according to composition)

This product contains components with a Specific Concentration Limit (SCL).

phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)

NOAEL (animal/male, F1)	1.5 mg/kg
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NOAEL (animal/female, F1)	15 mg/kg (OECD 416)
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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)

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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

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

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)
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Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
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Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight/day
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Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)
Viscosity, kinematic: > 20,5 mm²/s (40 °C) (ASTM D 445)

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Viscosity, kinematic	87 mm ² /s (40 °C) (ASTM D 445)
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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Viscosity, kinematic	17.9 mm ² /s (40 °C) (ASTM D 445)
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Mineral base oil, severely refined

Viscosity, kinematic	> 21 mm ² /s
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Hydrocarbon	Yes
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : None known, 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

phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)	The substance is identified for having endocrine disrupting properties but there is no additional data available (see section 2.3)
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11.2.2. Other information

Potential adverse human health effects and symptoms : Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, May cause an allergic skin reaction, 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 : An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

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Ecology - air	: This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may build up only in case of sprays and mists. In these cases overexposure to mists (e.g. through prolonged use in confined insufficiently ventilated spaces) may cause irritation to airways, nausea and dizziness.
Ecology - water	: This product is not soluble in water. It floats on water and forms a film on the surface. The damage to aquatic organisms is of mechanical kind (immobilization and entrapment)
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)	: Harmful to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

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

Mineral base oil, severely refined

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)

LC50 fish 1	46 mg/l Test organisms (species): Cyprinodon variegatus
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Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

LC50 fish 1	180 mg/l (Oryzias latipes)
EC50 Daphnia 1	85.4 mg/l
EC50 72h - Algae [1]	49.3 mg/l (Desmodesmus subspicatus)
NOEC (chronic)	25 mg/l (21d)

Dodecylphenol, mixed isomers, branched (121158-58-5)

LC50 fish 1	40 mg/l (Pimephales promelas)
EC50 Daphnia 1	92.7 µg/l Test organisms (species): Daphnia magna
EC50 other aquatic organisms 1	> 0.58 mg/l (96h, Mysidopsis Bahia)
EC50 72h - Algae [1]	> 0.765 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	0.36 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 (algae)	0.36 mg/l (21d)
LOEC (chronic)	0.012 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.0037 mg/l (21d)

12.2. Persistence and degradability

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Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.
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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

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..
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Mineral base oil, severely refined	
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions..
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6)	
Persistence and degradability	Rapidly degradable
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	
Persistence and degradability	Readily biodegradable..
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6)	
Persistence and degradability	Rapidly degradable
Dodecylphenol, mixed isomers, branched (121158-58-5)	
Persistence and degradability	Rapidly degradable
Biodegradation	25 % (28 d, OECD TG 301 B)
12.3. Bioaccumulative potential	
Eni i-Sint 5W-40	
Log Pow	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	Not established.
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	
Log Pow	2.7
Dodecylphenol, mixed isomers, branched (121158-58-5)	
Bioconcentration factor (BCF REACH)	794.33
Log Kow	7.14
12.4. Mobility in soil	
Eni i-Sint 5W-40	
Mobility in soil	Not determined
Ecology - soil	No data available.
12.5. Results of PBT and vPvB assessment	
Eni i-Sint 5W-40	
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)

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Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6), Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6), Dodecylphenol, mixed isomers, branched (121158-58-5) ⁽¹⁾
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts (68784-31-6), Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6), Dodecylphenol, mixed isomers, branched (121158-58-5) ⁽¹⁾

⁽¹⁾ Substance(s) in concentration below 0.1 % and displayed on a voluntary basis

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 %.

Component	
Dodecylphenol, mixed isomers, branched (121158-58-5)	Has an endocrine mode of action, i.e. it alters the function(s) of the endocrine system

12.7. Other adverse effects

Other adverse effects : None.
Additional information : This product has no specific properties for inhibition of bacterial activity. In any case, wastewater containing this product should be treated in plants that are suited for the specific purpose.

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 02 05* (mineral-based non-chlorinated engine, gear and lubricating oils). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.

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.

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

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

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				

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ADR	IMDG	IATA	ADN	RID
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). POP (2019/1021) - Persistent Organic Pollutants. Regulation EU (649/2012) - Export and Import of hazardous chemicals (PIC). Commission Delegated Regulation (EU) 2017/2100. Commission Regulation (EU) 2018/605.

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REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) 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
3(b)	Distillates (petroleum), hydrotreated heavy paraffinic ; Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts ; Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts ; Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated	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
30.	phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (EC 310-154-3, CAS 121158-58-5)

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)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

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).

National adoption of Directive 2008/98/CE concerning disposal of used oils.

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Finland

Finnish National Regulations : Occupational Safety and Health Act No. 738/2002.

France

Maladies professionnelles (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 500: Protective measures.
TRGS 555: Working instruction and information for workers.
TRGS 800: Fire protection measures.
TRGS 900: Occupational Exposure Limits.
TRGS 907: List of sensitizing substances and activities with sensitizing 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).

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 : Distillates (petroleum), hydrotreated heavy paraffinic, Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, Dodecylphenol, mixed isomers, branched are listed

SZW-lijst van mutagene stoffen : Distillates (petroleum), hydrotreated heavy paraffinic, Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts, Dodecylphenol, mixed isomers, branched are listed

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

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : Dodecylphenol, mixed isomers, branched is listed

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

Norway

Norwegian National Regulations : Working Environment Act (LOV-2005-06-17 NO. 62).
People under the age of 18 may not work with this product at all.

Sweden

Swedish National Regulations : This product is in compliance with Ordinance 1998:944.
Work Environment Act (1977: 1160).
Chemical Hazards in the Working Environment (AFS 2011:19).

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::

Distillates (petroleum), hydrotreated heavy paraffinic

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts

Alkyl (C18-C28) toluenesulfonic acid, calcium salts, borated

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	First issue.		

Abbreviations and acronyms:	
	Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.
	N/D = not available
	N/A = not applicable
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS-No.	Chemical Abstract Service number
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)
EC-No.	European Community number
ED	Endocrine disrupting properties
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
OEL	Occupational Exposure Limit
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
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

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Abbreviations and acronyms:

WGK	Water Hazard Class
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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 H ₂ S. 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 H ₂ S in confined spaces must be made, to help determine prevention measures and controls (i.e. PPE) appropriate to local circumstances, and adequate emergency procedures. If there is any suspicion of inhalation of H ₂ S (hydrogen sulphide), Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Send patient to hospital. Immediately begin artificial respiration if breathing has ceased. Administer oxygen if necessary. This situation is especially relevant for those operations which involve direct exposure to the vapours in the interior of tanks or other confined spaces. Therefore, it is very important to follow the above mentioned precautionary measures also with used oils.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
EUH208	Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs, calcium salts. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Sens. 1B	Skin sensitisation, category 1B

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Aquatic Chronic 3	H412	Calculation method
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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.