



Eni i-Sigma monograde SAE 50

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878
Revision date: 7/22/2024 Supersedes: 7/26/2023 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 i-Sigma monograde SAE 50
Product code	: 1090
Type of product	: Lubricant
Formula	: 0019-2012
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	: Used in closed systems 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

Distributed by: Enilive Schmiertechnik GmbH, Paradiesstraße 14, 97080 Würzburg, GERMANY, www.oilproducts.eni.com

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
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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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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	: [None]
Hazard statements (CLP)	: H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P273 - Avoid release to the environment. P501 - Dispose of contents and container to according to national or local regulations.

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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. In case of contact with eyes, this product may cause irritation. If the product is handled or used at high temperature, contact with hot product or vapours may cause burns. 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 a hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop.

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	Residual oils (petroleum,) solvent-refined (64742-01-4), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), Calcium carbonate (471-34-1), Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts, Phenol, dodecyl-, branched, sulfurized (96152-43-1), Dodecylphenol, mixed isomers, branched (121158-58-5), Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0) ⁽¹⁾ , 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.] (64742-54-7) ⁽¹⁾
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Residual oils (petroleum,) solvent-refined (64742-01-4), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), Calcium carbonate (471-34-1), Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts, Phenol, dodecyl-, branched, sulfurized (96152-43-1), Dodecylphenol, mixed isomers, branched (121158-58-5), Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0) ⁽¹⁾ , 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.] (64742-54-7) ⁽¹⁾

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

The mixture contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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

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)
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	Residual oils (petroleum,) solvent-refined (64742-01-4), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), Calcium carbonate (471-34-1), Phenol, dodecyl-, branched, sulfurized (96152-43-1), Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts, 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.] (64742-54-7) ⁽¹⁾ , Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0) ⁽¹⁾

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

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]
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	45 - 55	Not classified
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	40 - 50	Not classified
Calcium carbonate (see note [****])	CAS-No.: 471-34-1 EC-No.: 207-439-9 EC Index-No.: N/A REACH-no: 01-2119486795-18-0059	0,1 - 0,5	Not classified
Mineral base oil, severely refined (For identification of the substance, see note [*] , see note [***])	EC-No.: N/A	0,1 - 0,5	Not classified
Phenol, dodecyl-, branched, sulfurized	CAS-No.: 96152-43-1 EC-No.: 306-115-5 REACH-no: 01-2119524001-62	0,1 - 0,2	Repr. 1B, H360F Aquatic Chronic 4, H413
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts (Additive, see note [*****])	EC-No.: 939-603-7 REACH-no: 01-2119978241-36	0,1 - 0,2	Not classified
phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (see note [*****]) 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	0.1 – 0.15	Skin Corr. 1C, H314 Eye Dam. 1, H318 Repr. 1B, H360F Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
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.] (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	0.01 – 0.1	Asp. Tox. 1, H304
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (see note [****])	CAS-No.: 70024-69-0 EC-No.: 701-492-6 EC Index-No.: N/A REACH-no: 01-2119492616-28	0.01 – 0.04	Not classified

Comments

[*] Note: this product may be formulated with one or more of the following severely refined mineral base oils (not classified as hazardous):
CAS 64742-54-7/EC 265-157-1/REACH Reg. # 01-2119484627-25-xxxx; CAS 64742-65-0/EC 265-169-7/REACH Reg. # 01-2119471299-27-xxxx; CAS 64742-70-7/EC 265-174-4/REACH Reg. # 01-2119487080-42-xxxx; CAS 64742-56-9/EC 2265-159-2/ REACH Reg. # 01-2119480132-48-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)
Note [****]:
substance with national workplace exposure limit(s)
Note [****]:
Total Base Number (TBN): > 300 mgKOH/g (ASTM D 2896)
More detailed information: See section 11.
Note [*****]:
Substance included in REACH Candidate List
See Section 15

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 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. Body hypothermia must be avoided. Do not put ice on the burn.

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First-aid measures after eye contact	: Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. Remove contact lenses, if present and easy to do. Continue rinsing. 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 / injuries (general indications)	: Not expected to present a significant hazard under anticipated conditions of normal use.
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	: 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.

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	: Heat may build pressure in tank and containers, rupturing closed vessels, spreading fire and increasing risk of burns and injuries. The vapours are flammable and may form explosive mixtures with air.
Hazardous decomposition products in case of fire	: Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Oxygenated compounds (aldehydes, etc.). POx. ZnOx. CaOx.

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.

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Other information : In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

Protective equipment : 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 (AX), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
Emergency procedures : 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.

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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 and flammability. See also Section 16, "Other information".
- 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 : Keep away from strong oxidizers.
- 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

Residual oils (petroleum,) solvent-refined (64742-01-4)	
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)

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Residual oils (petroleum,) solvent-refined (64742-01-4)	
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)
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/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)

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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)	
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)
Calcium carbonate (471-34-1)	
Finland - Occupational Exposure Limits	
Local name	Kalsiumkarbonaatti pöly
HTP (OEL TWA)	10 mg/m ³
Regulatory reference	Sosiaali- ja Terveysministeriö, HTP-arvot/HTP-värden

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Calcium carbonate (471-34-1)	
France - Occupational Exposure Limits	
VLE [mg/m ³]	10 mg/m ³ (Inhalable dust)
Greece - Occupational Exposure Limits	
OEL TWA (mg/m ³)	10 mg/m ³
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	10 mg/m ³ (Inhalable dust)
Ireland - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (Inhalable dust)
Latvia - Occupational Exposure Limits	
OEL TWA	6 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m ³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	4 mg/m ³ (Respirable dust)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	3 mg/m ³ (Respirable dust)
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.] (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)
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)

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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.] (64742-54-7)

WEL STEL (OEL STEL)	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
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USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	5 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
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ACGIH OEL STEL	10 mg/m ³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
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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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Residual oils (petroleum,) solvent-refined (64742-01-4)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	0.97 mg/kg bodyweight/day
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Long-term - systemic effects, inhalation	2.73 mg/m ³
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Long-term - local effects, inhalation	5.58 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	1.19 mg/m ³
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PNEC (Oral)

PNEC oral (secondary poisoning)	9.33 mg/kg food
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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
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Long-term - systemic effects, inhalation	2.73 mg/m ³
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Long-term - local effects, inhalation	5.58 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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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)	
PNEC (Oral)	
PNEC oral (secondary poisoning)	9.33 mg/kg food
PNEC (additional information)	
Additional information	Not derived - Not classified as hazardous for environment
Calcium carbonate (471-34-1)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	6.36 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, oral	6.1 mg/kg bodyweight
Long-term - systemic effects, oral	6.1 mg/kg bodyweight/day
Long-term - local effects, inhalation	1.06 mg/m ³
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
DNEL/DMEL (Workers)	
Acute - local effects, dermal	1.04 mg/cm ²
Long-term - systemic effects, dermal	25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	35.26 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, dermal	0.518 mg/cm ²
Long-term - systemic effects, oral	2.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8.7 mg/m ³
Long-term - systemic effects, dermal	12.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	45211 mg/kg dwt
PNEC sediment (marine water)	45211 mg/kg dwt
PNEC (Soil)	
PNEC soil	47025 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1000 mg/l

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Phenol, dodecyl-, branched, sulfurized (96152-43-1)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	80 mg/kg bodyweight/day
Acute - systemic effects, inhalation	66.8 mg/m ³
Long-term - systemic effects, dermal	3.12 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.526 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	40 mg/kg bodyweight/day
Acute - systemic effects, inhalation	66.8 mg/m ³
Acute - systemic effects, oral	25 mg/kg bodyweight/day
Long-term - systemic effects, oral	0.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.87 mg/m ³
Long-term - systemic effects, dermal	1.56 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.25 mg/l
PNEC aqua (marine water)	0.024 mg/l
PNEC aqua (intermittent, freshwater)	2.5 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.223 mg/kg dwt
PNEC sediment (marine water)	0.021 mg/kg dwt
PNEC (Soil)	
PNEC soil	260.04 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	6.67 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	6.5 mg/l
phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	166 mg/kg bodyweight/day
Acute - systemic effects, inhalation	44.18 mg/m ³
Long-term - systemic effects, dermal	0.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.762 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	50 mg/kg bodyweight
Acute - systemic effects, inhalation	13.26 mg/m ³
Acute - systemic effects, oral	1.26 mg/kg bodyweight
Long-term - systemic effects, oral	0.075 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.79 mg/m ³
Long-term - systemic effects, dermal	0.075 mg/kg bodyweight/day

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phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)	
PNEC (Water)	
PNEC aqua (freshwater)	0.074 µg/l
PNEC aqua (marine water)	0.0074 µg/l
PNEC aqua (intermittent, freshwater)	0.37 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.226 mg/kg dwt
PNEC sediment (marine water)	0.0266 mg/kg dwt
PNEC (Soil)	
PNEC soil	118 µg/kg dw
PNEC (Oral)	
PNEC oral (secondary poisoning)	4 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	2.5 mg/kg bodyweight/day
Long-term - local effects, dermal	1.03 mg/cm ²
Long-term - systemic effects, inhalation	0.332 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.833 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.0589 mg/m ³
Long-term - systemic effects, dermal	0.298 mg/kg bodyweight/day
Long-term - local effects, dermal	0.513 mg/cm ²
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	723500000 mg/kg dwt
PNEC sediment (marine water)	723500000 mg/kg dwt
PNEC (Soil)	
PNEC soil	868700000 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	16667 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

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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.] (64742-54-7)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	50 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	140 mg/m ³
Long-term - local effects, inhalation	5.4 mg/m ³

DNEL/DMEL (General population)

Long-term - systemic effects, oral	0.74 mg/kg bodyweight/day
Long-term - local effects, inhalation	1.2 mg/m ³ /day

PNEC (Oral)

PNEC oral (secondary poisoning)	9.33 mg/kg food
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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 that there is a suitable ventilation system. 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 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.

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.

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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). 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. Open or well ventilated spaces: in presence of mists and if the product is handled without adequate containment means: use full or half-face masks with filter for mists/aerosols. (EN 136/140/145). 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.

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.

8.2.3. Environmental exposure controls

Environmental exposure controls:

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

Consumer exposure controls:

No special requirements.

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	: Not determined
Softening point	: -15 °C (ASTM D 5950)
Boiling point	: Not determined
Flammability	: Not flammable
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.
Lower explosion limit	: Not determined
Upper explosion limit	: Not determined
Flash point	: 240 °C (ASTM D 92)
Auto-ignition temperature	: Not determined
Decomposition temperature	: Not determined
pH	: Lack of data (on mixture / components of the mixture) - Data not available
Viscosity, kinematic	: 265 mm ² /s (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) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)
Vapour pressure at 50°C	: Not determined
Critical pressure	: Not determined
Density	: 900 kg/m ³ (15 °C) (ASTM D 4052)
Relative density	: Not determined
Relative vapour density at 20°C	: Not determined
Particle characteristics	: Not applicable

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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

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.

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 generates : Toxic fumes.

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

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)
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Mineral base oil, severely refined

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401)
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402)

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Mineral base oil, severely refined	
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)
Calcium carbonate (471-34-1)	
LD50 oral rat	2000 mg/kg bodyweight
LD50 dermal rat	2000 mg/kg bodyweight
LC50 Inhalation - Rat	3 mg/l/4h
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
LD50 oral rat	> 5000 mg/kg bodyweight ((Sanitised, F. (1989), OECD Guideline 401))
LD50 dermal rat	> 2000 mg/kg bodyweight ((Sanitised, G. (1989), OECD Guideline 402))
LC50 Inhalation - Rat	> 1.9 mg/l/4h ((Hoffman, G.M. (1986), EPA OPP 81-3))
Phenol, dodecyl-, branched, sulfurized (96152-43-1)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 4000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LD50 oral rat	≥ 5000 mg/kg bodyweight (OECD 401)
LD50 dermal rabbit	≥ 5000 mg/kg bodyweight (OECD 402)
LC50 Inhalation - Rat	≥ 1.7 mg/l/4h (EPA OPP 81-3)
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.] (64742-54-7)	
LD50 oral rat	> 5000 mg/kg (OECD 401)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402)
LC50 Inhalation - Rat	> 5.53 mg/l/4h (OECD 403) (EBSI, 1988)
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), 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
Mineral base oil, severely refined	
pH	Not applicable

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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.] (64742-54-7)

pH | Not applicable

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)

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

Mineral base oil, severely refined

pH | Not applicable

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.] (64742-54-7)

pH | Not applicable

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)
For the substances: alkyl benzenesulfonic acids, calcium salts, a number of sensitization tests (on animals and human volunteers) have identified a specific lower concentration limit of 10 % (m/m) for sensitizing effects (Alworth K, Schwartz H & Erienne JA, 1995; Eisenberg RR, 1994; Shanahan RW & Erienne JA, 1994).
An amount less than this value will NOT require classification of the final mixture as Skin sensitizer (H317).
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.
Total Base Number (TBN): > 300 mgKOH/g (ASTM D 2896)
On basis of test data: not sensitising.

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, Distillates (petroleum), solvent-dewaxed heavy paraffinic
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)

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Additional information : (according to composition)
This product contains an UVCB substance (Dodecylphenol, branched, sulfurized) classified as Repr. 1B, H360F according to the criteria of EU
This product contains also : Dodecylphenol, mixed isomers, branched
May damage fertility.
May damage the unborn child.

phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched (121158-58-5)	
NOAEL (animal/male, F1)	1.5 mg/kg
NOAEL (animal/female, F1)	15 mg/kg (OECD 416)

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.] (64742-54-7)	
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
Additional information : (according to composition)

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
NOAEL (dermal, rat/rabbit)	2500 mg/kg bodyweight
NOAEC (inhalation, rat, vapour)	881.58 mg/m ³

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)
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/m ³ (Dalbey W, Osimitz T, Kommineni C, Roy T, Feuston M and Yang J 1991 - OECD 412)

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

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
NOAEL (subacute, oral, animal/male, 28 days)	> 500 mg/kg bodyweight (OECD Guideline 407)
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 (OECD Guideline 410)

Phenol, dodecyl-, branched, sulfurized (96152-43-1)	
NOAEL (dermal, rat/rabbit, 90 days)	≈ 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

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Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (subacute, oral, animal/male, 28 days)	≥ 500 mg/kg bodyweight (OECD Guideline 407)
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.] (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition) Viscosity, kinematic: > 20,5 mm ² /s (40 °C) (ASTM D 445)
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Viscosity, kinematic	265 mm ² /s (40 °C) (ASTM D 445)
Residual oils (petroleum,) solvent-refined (64742-01-4)	
Viscosity, kinematic	490 mm ² /s (40 °C) (ASTM D 445)
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 mm ² /s (40 °C) (ASTM D 445)
Mineral base oil, severely refined	
Viscosity, kinematic	> 21 mm ² /s
Hydrocarbon	Yes
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
Viscosity, kinematic	447 mm ² /s (20°C, DIN 51562)
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.] (64742-54-7)	
Viscosity, kinematic	17.9 mm ² /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 contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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, Shows an adverse effect in an intact organism or its progeny, which is a change in the morphology, physiology, growth, development, reproduction or life span of an organism, system or (sub)population that results in an impairment of functional capacity, an impairment of the capacity to compensate for additional stress or an increase in susceptibility to other influences, The adverse effect is a consequence of the endocrine mode of action
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	: Contact with eyes may cause reddening and 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	: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. An uncontrolled release to the environment may 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. Notify authorities if product enters sewers or public waters.
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)
Ecology - water	: Harmful to aquatic life.
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.

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

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

Calcium carbonate (471-34-1)	
EC50 72h - Algae [1]	14 mg/l

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
LC50 fish 1	≥ 100 mg/l LL50/96h, OECD 203 (WAF) (Read-across) - Oncorhynchus mykiss - Goodband, T.J. (2005a)
LC50 fish 2	≥ 10000 mg/l LL50/96h, OECD 203 (WAF) (Read-across) - Cyprinodon variegatus - Nicholson, R.B. (1986)
EC50 Daphnia 1	≥ 1000 mg/l EC50/48h, EPA OTS 797.1300 (WAF) (Read-across) - Ward, T.J (1993)
EC50 72h - Algae [1]	≥ 100 mg/l LL50/96h, OECD 201 (WAF) (Read-across) - Scenedesmus subspicatus - Mead, C. (2005)

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Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
ErC50 (algae)	≥ 1000 mg/l EC50/72h, EPA OTS 797.1050 (WAF) (Read-across) - Pseudokirchnerella subcapitata - Ward, T.J (1994)
Phenol, dodecyl-, branched, sulfurized (96152-43-1)	
LC50 fish 1	≥ 500 mg/l (LL50 - 96h)
EC50 Daphnia 1	≥ 750 mg/l (LL50 - 96h)
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)
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LC50 fish 1	≥ 1000 mg/l LL50/96h, OECD 203 (WAF) - Pimephales promelas - Ward, T.J (1993)
LC50 fish 2	≥ 10000 mg/l LL50/96h, OECD 203 (WAF) - Cyprinodon variegatus - Nicholson, R.B. (1986)
EC50 Daphnia 1	≥ 1000 mg/l EC50/48h, EPA OTS 797.1300 (WAF) - Ward, T.J (1993)
ErC50 (algae)	≥ 1000 mg/l EC50/72h, EPA OTS 797.1050 (WAF) - Pseudokirchnerella subcapitata - Ward, T.J (1994)
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.] (64742-54-7)	
LC50 fish 1	> 100 mg/l (LL 50)
EC50 Daphnia 1	> 10000 mg/l WAF, 48 h (OECD 202)
12.2. Persistence and degradability	
Eni i-Sigma monograde SAE 50	
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.
Residual oils (petroleum,) solvent-refined (64742-01-4)	
Persistence and degradability	Substance is complex UVCB, The test methods for this endpoint are not applicable to UVCB substances.
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)

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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..
Calcium carbonate (471-34-1)	
Persistence and degradability	Rapidly degradable
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
Persistence and degradability	Not readily biodegradable.
Biodegradation	8 % (28d - OECD Guideline 301 D)
Phenol, dodecyl-, branched, sulfurized (96152-43-1)	
Persistence and degradability	Rapidly degradable
Biodegradation	13.4 % (28d)
Dodecylphenol, mixed isomers, branched (121158-58-5)	
Persistence and degradability	Rapidly degradable
Biodegradation	25 % (28 d, OECD TG 301 B)
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	1.5 – 9.1 % 28d - OECD 301 B / D / F
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.] (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..
12.3. Bioaccumulative potential	
Eni i-Sigma monograde SAE 50	
Log Pow	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	Not established.
Residual oils (petroleum,) solvent-refined (64742-01-4)	
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.
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.
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
BCF fish 1	70.8 (L/Kg w/w)

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Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
Log Pow	6.91
Log Kow	8 (OECD Guideline 107 (EU Method A.8))
Dodecylphenol, mixed isomers, branched (121158-58-5)	
Bioconcentration factor (BCF REACH)	794.33
Log Kow	7.14
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Log Kow	4.46 – 10.88 (OECD 107/117)

12.4. Mobility in soil

Eni i-Sigma monograde SAE 50	
Ecology - soil	No data available.
Residual oils (petroleum,) solvent-refined (64742-01-4)	
Ecology - soil	The test methods for this endpoint are not applicable to UVCB substances.
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.
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	
Log Koc	15.65 – 15.75 (QSAR, Chemservice S.A. (2013a))

12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
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	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Residual oils (petroleum,) solvent-refined (64742-01-4), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), Calcium carbonate (471-34-1), Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts, Phenol, dodecyl-, branched, sulfurized (96152-43-1), Dodecylphenol, mixed isomers, branched (121158-58-5), Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)(¹), 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.] (64742-54-7)(¹)

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Component	
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Residual oils (petroleum,) solvent-refined (64742-01-4), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), Calcium carbonate (471-34-1), Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts, Phenol, dodecyl-, branched, sulfurized (96152-43-1), Dodecylphenol, mixed isomers, branched (121158-58-5), Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0) ⁽¹⁾ , 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.] (64742-54-7) ⁽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 contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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. Endocrine disrupting properties (Article 57(f) — environment): Has an endocrine mode of action, i.e. it alters the function(s) of the endocrine system. Shows an adverse effect in non-target organisms, which is a change in the morphology, physiology, growth, development, reproduction or life span of an organism, system or (sub)population that results in an impairment of functional capacity, an impairment of the capacity to compensate for additional stress or an increase in susceptibility to other influences.

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. Dispose of empty containers and wastes safely.

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

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

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

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

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	Phenol, dodecyl-, branched, sulfurized ; phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched	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)	Phenol, dodecyl-, branched, sulfurized ; phenol, dodecyl-, branched; phenol, 2-dodecyl-, branched; phenol, 3-dodecyl-, branched	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)

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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)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control 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.

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 800: Fire protection measures.
TRGS 500: Protective measures.
TRGS 555: Working instruction and information for workers.
TRGS 900: Occupational Exposure Limits.
TRGS 905: List of mutagenic, carcinogenic or teratogenic substances.
TRGS 910: Risk-related concept of measures for activities involving carcinogenic hazardous 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

- Waterbezwaarlijkheid : 8 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
9 - Harmful to aquatic organisms
- Saneringsinspanningen : C - Minimize discharge
- SZW-lijst van kankerverwekkende stoffen : Residual oils (petroleum,) solvent-refined, Distillates (petroleum), solvent-dewaxed heavy paraffinic, Phenol, dodecyl-, branched, sulfurized, Dodecylphenol, mixed isomers, branched, 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.] are listed

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SZW-lijst van mutagene stoffen	: Residual oils (petroleum,) solvent-refined, Distillates (petroleum), solvent-dewaxed heavy paraffinic, Phenol, dodecyl-, branched, sulfurized, Dodecylphenol, mixed isomers, branched, 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.] 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

Denmark

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
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15.2. Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out

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

Residual oils (petroleum,) solvent-refined

Phenol, dodecyl-, branched, sulfurized

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.]

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
1.3	Supplier information	Modified	
2.3	Other hazards not contributing to the classification	Modified	
3	Composition/information on ingredients	Modified	
4.3	Other medical advice or treatment	Modified	
5.2	Hazardous decomposition products in case of fire	Modified	
6.1	Protective equipment	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Storage conditions	Modified	
7.2	Incompatible products	Modified	
8.2	Appropriate engineering controls	Modified	
8.2	Personal protective equipment (for industrial or professional use)	Modified	
8.2	Respiratory protection	Modified	
10.6	Hazardous decomposition products	Modified	
16	Other information	Modified	

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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
WGK	Water Hazard Class

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.

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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 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
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.
H318	Causes serious eye damage.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aquatic Chronic 3	H412	Calculation method

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.