

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878 Revision date: 1/14/2025 Supersedes: 5/12/2023 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 Rotra ATF II E

 UFI
 : TX0D-000Y-D00P-K63E

Product code : 1267
Type of product : Lubricants
Formula : 0110-2016
Product group : Trade product

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

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 : Gearbox lubricant Function or use category : Lubricants and additives

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

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

e-mail: technik.wuerzburg@enilive.com

1.4. Emergency telephone number

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

Poison Center

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin sensitisation, Category 1 H317

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

Adverse physicochemical, human health and environmental effects

Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. May cause sensitization by skin contact. 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]

Hazard pictograms (CLP)



CLP Signal word : Warn

Contains : Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-

alkyl phosphonates; n-butyl methacrylate

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Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P302+P352 - If on skin: Wash with plenty of soap and water.

P333+P313 - If skin irritation or rash occurs, get medical advice/attention. P501 - Dispose of container to according to national or local regulations.

2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification

: This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels. 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 an 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 ≥ 0.1% assessed in accordance with REACH Annex XIII

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated light naphthenic (64742-53-6), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8), Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1), Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0), reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0), Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), n-butyl methacrylate (97-88-1)

Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated light naphthenic (64742-53-6), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8), Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1), Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0), reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0), Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), n-butyl methacrylate (97-88-1)

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

Component

Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated light naphthenic (64742-53-6), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8), Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1), Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0), reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0), Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), n-butyl methacrylate (97-88-1)

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Comments : Composition/ Information on ingredients:

Mixture of hydrocarbons

Additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), hydrotreated heavy paraffinic (see note [*], see note [**])	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627- 25	60 – 70	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated heavy paraffinic (see note [*], see note [**])	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627- 25	20 – 25	Not classified
Distillates (petroleum), solvent-refined light paraffinic (see note [*], see note [**])	CAS-No.: 64742-53-6 EC-No.: 265-156-6 EC Index-No.: 649-466-00-2 REACH-no: 01-2119480375- 34	0,1 - 2	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated light paraffinic (see note [*], see note [**])	CAS-No.: 64742-55-8 EC-No.: 265-158-7 EC Index-No.: 649-468-00-3 REACH-no: 01-2119487077- 29	0,1 - 2	Asp. Tox. 1, H304
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (see note [*], see note [**])	CAS-No.: 72623-87-1 EC-No.: 276-738-4 EC Index-No.: 649-483-00-5 REACH-no: 01-2119474889- 13	0,1 - 2	Asp. Tox. 1, H304
Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates (Additive)	EC-No.: 417-450-2 EC Index-No.: 650-042-00-4 REACH-no: 01-0000016426- 70	0,1 - 2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (see note [*], see note [**])	CAS-No.: 72623-86-0 EC-No.: 276-737-9 EC Index-No.: 649-482-00-X REACH-no: 01-2119474878- 16	0,1 - 2	Asp. Tox. 1, H304
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (Additive)	CAS-No.: 125643-61-0 EC-No.: 406-040-9 EC Index-No.: 607-530-00-7 REACH-no: 01-0000015551-	0,1 - 2	Aquatic Chronic 4, H413
Distillates (petroleum), solvent-dewaxed light paraffinic (see note [*], see note [**])	CAS-No.: 64742-56-9 EC-No.: 265-159-2 EC Index-No.: 649-469-00-9 REACH-no: 01-2119480132-	0,1 - 2	Asp. Tox. 1, H304

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), solvent-dewaxed heavy paraffinic (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	0,1 - 2	Asp. Tox. 1, H304
n-butyl methacrylate	CAS-No.: 97-88-1 EC-No.: 202-615-1 EC Index-No.: 607-033-00-5 REACH-no: 01-2119486394- 28	0,1 - 0,2	Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317

Comments : 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)

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

SECTION 4: First aid measures

11	Description	of first aid	moseuroe
4.1.	Describtion	or iirst 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

inflammation or irritation persists, seek medical advice.

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. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless

directed by doctor.

First-aid measures after ingestion : If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Call immediately for medical assistance or transport the victim to an hospital. In case of spontaneous vomiting, transport the victim to a hospital, to verify the possibility that the product has been aspired into the lungs. Do not give

anything by mouth to an unconscious person. Do not induce vomiting.

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

Symptoms/effects after inhalation : This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may build up only if the

product is used at high temperature, or in case of sprays and mists. In these cases overexposure to vapours may cause irritation to airways, nausea and dizziness.

Symptoms/effects after skin contact : Irritation may arise in case of repeated or prolonged exposure. Prolonged or repeated contact may cause skin to become dry. May cause sensitization by skin contact. Contact

with hot product may cause thermal burns.

Symptoms/effects after eye contact : 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 known.

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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

: Vapours are heavier than air, spread along floors and form explosive mixtures with air. Heat may build pressure in tank and containers, rupturing closed vessels, spreading fire and increasing risk of burns and injuries.

Hazardous decomposition products in case of fire

: Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Oxygenated compounds (aldehydes, etc.). POx.

5.3. Advice for firefighters

Firefighting instructions

: Shut off source of product, if possible. Move undamaged containers from immediate hazard area if it can be done safely. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.

Special protective equipment for firefighters

Personal protection equipment for firefighters (see also sect. 8). In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. EN 443. EN 469. EN 659.

Other information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

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

For non-emergency personnel

Protective equipment

Emergency procedures

: See Section 8.

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

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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

: Notify local authorities according to relevant regulations.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For containment

: Contain spilled liquid with sand, earth or other suitable absorbents (non-flammable). Recover free liquid and waste materials in suitable waterproof and oil-resistant containers. Clean contaminated area. Dispose of according to local regulations. If in water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.

Methods for cleaning up

: Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations.

Other information

: Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air/water temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: This material is combustible, but will not ignite readily. Provide adequate ventilation. Use adequate personal protective equipment as needed. Due to the extremely slippery nature of this material, more care than usual must be exercised in material handling practices to keep off all walking surfaces. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid release to the environment. Emptied containers can contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been drained and cleaned.

Hygiene measures

Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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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 oxidants.

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.

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

National occupational exposure and biological limit values

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)		
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Belgium - Occupational Exposure Limits		
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Denmark - Occupational Exposure Limits		
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Netherlands - Occupational Exposure Limits		
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	

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Distillates (petroleum), hydrotreated heavy p	araffinic (64742-54-7)	
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Distillates (petroleum), hydrotreated heavy p	araffinic (64742-54-7)	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Belgium - Occupational Exposure Limits		
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Denmark - Occupational Exposure Limits		
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Netherlands - Occupational Exposure Limits		
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Distillates (petroleum), solvent-refined light p	paraffinic (64742-53-6)	
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Belgium - Occupational Exposure Limits		
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Denmark - Occupational Exposure Limits		
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	

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Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits		
Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
ACGIH OEL STEL 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
Austria - Occupational Exposure Limits		
MAK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Belgium - Occupational Exposure Limits		
OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Denmark - Occupational Exposure Limits		
OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Hungary - Occupational Exposure Limits		
AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Netherlands - Occupational Exposure Limits		
MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
Sweden - Occupational Exposure Limits		
NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
ACGIH OEL STEL 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)		

Safety Data Sheet

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1)		
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Belgium - Occupational Exposure Limits		
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Denmark - Occupational Exposure Limits		
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Netherlands - Occupational Exposure Limits		
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Reaction product of: polyethylene-polyamine	-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates	
United Kingdom - Occupational Exposure Limits		
WEL TWA (OEL TWA)	3 mg/m³ respirable dust	
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	5 mg/m³ Generic OEL data (Inhalable aerosol)	
ACGIH OEL STEL	10 mg/m³ Generic OEL data (Inhalable aerosol)	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)		
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Belgium - Occupational Exposure Limits		
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Denmark - Occupational Exposure Limits	Denmark - Occupational Exposure Limits	
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	

Safety Data Sheet

AK (OEL TWA) S mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m*) S mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sysain - Occupational Exposure Limits VLA-ED (OEL TWA) S mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m*) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL TWA) 1 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 3 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) DISCHIBATE (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) DISCHIBATE (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) DISCHIBATE (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) DISCHIBATE (DEL STEL) 10 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) DISCHIBATE (DEL TWA) 5 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 5 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits MAC (TGL RWA) 5 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits MAC TGG 8h (mg/m*) 5 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) NUA-EC (mg/m*) 5 mg/m* (Mineral base oil mist, severely refined, DMSO extract <3% m/m) NUA-EC (mg/m*) 5 mg/m* (Mineral base oil mist, sever	Lubricating oils (petroleum), C15-30, hydrotre	eated neutral oil-based (72623-86-0)	
Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (Mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (DEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 3 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (potroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Demark - Occupational Exposure Limits DEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Demark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Demark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupa	Hungary - Occupational Exposure Limits		
S mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-ED (mg/m²) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEC TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEC TEL (DEL STEL) 3 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) UINTE MINERAL (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL TWA (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits WEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (potroloum), solvont-dowaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Belgium - Occupational Exposure Limits OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-ED (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m² (Mineral base oil mist	AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 15 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m²) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NCV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL STEL 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Beligium - Occupational Exposure Limits OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits WEL STEL (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) UNA-EC (mg/m²) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) UNA-EC (mg/m²) 10 mg/m³ (Mineral base oil mi	Netherlands - Occupational Exposure Limits		
VLA-ED (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NCV (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WCV (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits WL AED (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits WL TWA (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WL AEC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WL AEC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extrac	MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
VLA-EC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NCV (DEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (DEL STEL) 3 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (DEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH DEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Debmark - Occupational Exposure Limits OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Debmark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Debmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Debmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits VLA-ED (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sysein - Occupational Exposure Limits VLA-ED (DEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sysein - Occupational Exposure Limits VLA-ED (DEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sysein - Occupational Exposure Limits VLA-ED (DEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sysein - Occup	Spain - Occupational Exposure Limits		
Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Belgium - Occupational Exposure Limits OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) OEL STEL 2 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits MAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits NAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits NAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits NAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits NAC TGG Bh (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
NGV (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Belgium - Occupational Exposure Limits OEL TWA 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits AK (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits MAC TGG 8h (mg/m²) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Notherlands - Occupational Exposure Limits WLA-ED (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits WLA-ED (SETWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WLA-EC (mg/m²) 10 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits WLA-ED (SETWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits WLA-ED (SETWA) 5 mg/m² (Mineral base oil mist, severely	VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
Some stract strain stra	Sweden - Occupational Exposure Limits		
United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL STEL 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Belgium - Occupational Exposure Limits OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Dommark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits NCV (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NCV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits	NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL TWA (OEL TWA) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits ACGIH OEL TWA S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) ACGIH OEL STEL 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Austria - Occupational Exposure Limits MAK (OEL TWA) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Belgium - Occupational Exposure Limits OEL TWA S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) MGC Y (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGY (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits	KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
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Austria - Occupational Exposure Limits MAK (OEL TWA) Belgium - Occupational Exposure Limits OEL TWA S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m²) S mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
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Belgium - Occupational Exposure Limits OEL TWA Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Denmark - Occupational Exposure Limits OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	Austria - Occupational Exposure Limits		
Denmark - Occupational Exposure Limits OEL TWA 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
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OEL STEL 2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Hungary - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	Denmark - Occupational Exposure Limits		
Hungary - Occupational Exposure Limits AK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL)	OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
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Netherlands - Occupational Exposure Limits MAC TGG 8h (mg/m³) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m² (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	Hungary - Occupational Exposure Limits		
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Spain - Occupational Exposure Limits VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	Netherlands - Occupational Exposure Limits		
VLA-ED (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
VLA-EC (mg/m³) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	Spain - Occupational Exposure Limits		
Sweden - Occupational Exposure Limits NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
NGV (OEL TWA) 1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
KGV (OEL STEL) 3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	Sweden - Occupational Exposure Limits		
United Kingdom - Occupational Exposure Limits WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL TWA (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
WEL STEL (OEL STEL) 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) USA - ACGIH - Occupational Exposure Limits	United Kingdom - Occupational Exposure Limits		
USA - ACGIH - Occupational Exposure Limits	WEL TWA (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
	WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	
ACGIH OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	USA - ACGIH - Occupational Exposure Limits		
	ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)	

Safety Data Sheet

Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Distillates (petroleum), solvent-dewaxed heav	y paraπinic (64742-65-0)
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark - Occupational Exposure Limits	
OEL TWA	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
OEL STEL	2 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands - Occupational Exposure Limits	
MAC TGG 8h (mg/m³)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
VLA-EC (mg/m³)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
KGV (OEL STEL)	3 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
WEL STEL (OEL STEL)	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
ACGIH OEL STEL	10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
n-butyl methacrylate (97-88-1)	
Denmark - Occupational Exposure Limits	
OEL TWA	145 mg/m³
	25 ppm
OEL STEL	290 mg/m³
Grænseværdi (kortvarig) (ppm)	50 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	60 mg/m³
VME [ppm]	10 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	30 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	100 mg/m³
	<u> </u>

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

n-butyl methacrylate (97-88-1)	
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	300 mg/m³
Nivågränsvärde (NVG) (ppm)	50 ppm
KGV (OEL STEL)	450 mg/m³
	75 ppm

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.

Air contaminants formed

Applicable OEL and BLV for air contaminants : None known

DNFL and PNFC

DNEL and PNEC		
Eni Rotra ATF II E		
DNEL/DMEL (additional information)		
Not applicable		
Not applicable		
araffinic (64742-54-7)		
1 mg/kg bodyweight/day		
2.7 mg/m³		
5.6 mg/m³		
DNEL/DMEL (General population)		
0.74 mg/kg bodyweight/day		
1.2 mg/m³/day (DNEL, Mineral base oil mist, severely refined, DMSO extract <3% m/m)		
PNEC (Oral)		
9.33 mg/kg food		
araffinic (64742-53-6)		
0.97 mg/kg bodyweight/day		
2.73 mg/m³		
5.58 mg/m³		
DNEL/DMEL (General population)		
0.74 mg/kg bodyweight/day		
1.19 mg/m³		
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
DNEL/DMEL (Workers)		
0.97 mg/kg bodyweight/day		

Safety Data Sheet

Distillates (petroleum), hydrotreated light paraffinic (46742-55-8) Long-term - systemic effects, inhalation 5.58 mg/m¹ DNELDMEL (General population) Long-term - local effects, inhalation 1.19 mg/m² PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-4) DNELDMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 5.4 mg/m² DNELDMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNEC (oral) PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNELDMEL (Workers) Long-term - local effects, inhalation 1.2 mg/m² PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNELDMEL (Workers) Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 1.2 mg/m² PNEC DMELDMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNELDMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.20 mg/kg bodyweight/day Acute - systemic effects, dermal 0.20 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.20 mg/kg bodyweight/day			
Long-term - local effects, inhalation 5.58 mg/m² DNEL/DMEL (General population) Long-term - local effects, Inhalation 1.19 mg/m² PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNEC (oral) 1 mg/kg bodyweight/day Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, dermal 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, dermal 1.2 mg/m² DNEL/DMEL (Workers) Long-term - local effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEC (oral effects, inhalation 1.2 mg/m² PNEC (oral effects, inhalation 1.2 mg/m² PNEC (oral effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - systemic effects, dermal 0.00 mg/m² Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.00 mg/m² Long-term - systemic effects, dermal 0.000 mg/m² Long-term - systemic effects, inhalation 0.000 mg/m²	Distillates (petroleum), hydrotreated light par-	affinic (64742-55-8)	
DNELDMEL (General population) Long-term - systemic effects, inhalation 1.19 mg/m² PNEC (Oral) PNEC (Oral) Say mg/kg bodyweight/day Lubricating oils (petroleum), C20-50, hydrotrevated neutral oil-based, Baseoil - unspecified (72623-87-1) DNELDMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² DNELDMEL (General population) Long-term - systemic effects, inhalation 5.4 mg/m² DNELDMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNEC (Oral) PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNELDMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 3.74 mg/m² Long-term - systemic effects, inhalation 1.2 mg/m² Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, dermal 0.006 mg/cm²	Long-term - systemic effects, inhalation	2.73 mg/m³	
Long-term - systemic effects, inhalation 1.19 mg/m² PNEC (Oral) PNEC (oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - local effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (General population) Long-term - local effects, dermal 1.2 mg/m² PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) NEL/DMEL (General population) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.2 mg/kg bodyweight/day Long-term - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.2 mg/kg bodyweight/day Long-term - systemic effects, inhalation 3 mg/m²	Long-term - local effects, inhalation	5.58 mg/m³	
Long-term - local effects, inhalation 1.19 mg/m² PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C20-50, hydrotrested neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - local effects, inhalation 2.73 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEC (Oral) PNEC (Oral) PNEC (Oral) PNEC (Oral) Samg/kg food 1.2 mg/m² PNEC (Oral) PNEC (Oral) PNEC (Oral) Samg/kg food 1.2 mg/m² PNEC (Oral) PNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² Long-term - systemic effects, inhalation 2.73 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m² PNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Long-term - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day	DNEL/DMEL (General population)		
PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - systemic effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNEC (oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m² DNEL/DMEL (Workers) Long-term - systemic effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, dermal 1.2 mg/m² DNEL/DMEL (General population) Long-term - systemic effects, dermal 2.0 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m² Acute - systemic effects, dermal 2.0 mg/kg bodyweight/day Acute - systemic effects, dermal 2.0 mg/m² Acute - systemic effects, dermal 2.0 mg/kg bodyweight/day Acute - systemic effects, dermal 3.0 mg/m² Acute - systemic effects, dermal 3.0 mg/m² Acute - systemic effects, dermal 3.0 mg/m²	Long-term - systemic effects,oral	0.74 mg/kg bodyweight/day	
PNEC oral (secondary poisoning) Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, dermal Long-term - systemic effects, inhalation DNEL/DMEL (General population) Long-term - systemic effects, oral Long-term - systemic effects, inhalation DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m³ PNEC Oral PNEC Oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - systemic effects, inhalation 2.73 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m³ DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ Acute - systemic effects, inhalation 1.750 mg/m³ Acute - systemic effects, dermal Long-term - systemic effects, inhalation 3 mg/m³	Long-term - local effects, inhalation	1.19 mg/m³	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 0.97 mg/kg bodyweight/day Long-term - systemic effects, inhalation 5.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ PNEC Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - systemic effects, inhalation 3.4 mg/m² DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ PNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ PRECUTIONAL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ PRECUTIONAL (Workers) Acute - systemic effects, dermal 0.79 mg/kg bodyweight/day Acute - systemic effects, inhalation 1.750 mg/m² Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, inhalation 0.006 mg/cm² Long-term - systemic effects, inhalation 0.006 mg/cm²	PNEC (Oral)		
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Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, oral 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, dermal 0.008 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	DNEL/DMEL (Workers)		
Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, oral 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ PNEC (Oral) PNEC Oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - local effects, inhalation 2.73 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m² reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 1 mg/cm² Acute - local effects, dermal 1 mg/cm² Acute - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, dermal	0.97 mg/kg bodyweight/day	
DNEL/DMEL (General population) Long-term - systemic effects, inhalation 1.2 mg/m² PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - systemic effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - systemic effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, dermal 1 mg/cm² Acute - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, inhalation	2.73 mg/m³	
Long-term - systemic effects, inhalation 1.2 mg/m³ PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ PNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m²	Long-term - local effects, inhalation	5.4 mg/m³	
Long-term - local effects, inhalation 1.2 mg/m³ PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - systemic effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m²	DNEL/DMEL (General population)		
PNEC (Oral) PNEC oral (secondary poisoning) 9.33 mg/kg food Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - systemic effects, inhalation DNEL/DMEL (General population) Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal Long-term - systemic effects, dermal Long-term - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day	Long-term - systemic effects,oral	0.74 mg/kg bodyweight/day	
PNEC oral (secondary poisoning) Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - local effects, dermal Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - local effects, inhalation DNEL/DMEL (General population) Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal Long-term - systemic effects, dermal Long-term - local effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - local effects, inhalation	1.2 mg/m³	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0) DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - local effects, inhalation 2.73 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.20 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - local effects, inhalation 3 mg/m²	PNEC (Oral)		
DNEL/DMEL (Workers) Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - local effects, inhalation 3 mg/m³	PNEC oral (secondary poisoning)	9.33 mg/kg food	
Long-term - systemic effects, dermal 1 mg/kg bodyweight/day Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - systemic effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Lubricating oils (petroleum), C15-30, hydrotre	ated neutral oil-based (72623-86-0)	
Long-term - systemic effects, inhalation 2.73 mg/m³ Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	DNEL/DMEL (Workers)		
Long-term - local effects, inhalation 5.4 mg/m³ DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, dermal	1 mg/kg bodyweight/day	
DNEL/DMEL (General population) Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, inhalation	2.73 mg/m³	
Long-term - systemic effects, dermal 0.74 mg/kg bodyweight/day Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - local effects, inhalation	5.4 mg/m³	
Long-term - local effects, inhalation 1.2 mg/m³ reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	DNEL/DMEL (General population)		
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0) DNEL/DMEL (Workers) Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, dermal	0.74 mg/kg bodyweight/day	
Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Long-term - local effects, inhalation	1.2 mg/m³	
Acute - systemic effects, dermal 20 mg/kg bodyweight/day Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	reaction mass of isomers of: C7-9-alkyl 3-(3,5	-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)	
Acute - systemic effects, inhalation 1750 mg/m³ Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	DNEL/DMEL (Workers)		
Acute - local effects, dermal 1 mg/cm² Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Acute - systemic effects, dermal	20 mg/kg bodyweight/day	
Long-term - systemic effects, dermal 0.22 mg/kg bodyweight/day Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Acute - systemic effects, inhalation	1750 mg/m³	
Long-term - local effects, dermal 0.006 mg/cm² Long-term - systemic effects, inhalation 3 mg/m³	Acute - local effects, dermal	1 mg/cm ²	
Long-term - systemic effects, inhalation 3 mg/m³	Long-term - systemic effects, dermal	0.22 mg/kg bodyweight/day	
	Long-term - local effects, dermal	0.006 mg/cm ²	
DNEL/DMEL (General population)	Long-term - systemic effects, inhalation	3 mg/m³	
	DNEL/DMEL (General population)		
Acute - systemic effects, dermal 50 mg/kg bodyweight	Acute - systemic effects, dermal	50 mg/kg bodyweight	
Acute - systemic effects, inhalation 875 mg/m³	Acute - systemic effects, inhalation	875 mg/m³	
Acute - systemic effects, oral 50 mg/kg bodyweight/day	Acute - systemic effects, oral	50 mg/kg bodyweight/day	
Acute - local effects, dermal 8.33 mg/cm ²	Acute - local effects, dermal	8.33 mg/cm ²	

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reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)			
Long-term - systemic effects,oral	0.43 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	0.74 mg/m³		
Long-term - systemic effects, dermal	4.3 mg/kg bodyweight/day		
Long-term - local effects, inhalation	875 mg/m³		
PNEC (Water)			
PNEC aqua (freshwater)	4.3 µg/l		
PNEC aqua (marine water)	1.8 µg/l		
PNEC aqua (intermittent, freshwater)	43 μg/l		
PNEC (Sediment)			
PNEC sediment (freshwater)	0.37 mg/kg dwt		
PNEC sediment (marine water)	0.037 mg/kg dwt		
PNEC (Soil)			
PNEC soil	0.632 mg/kg dwt		
PNEC (Oral)			
PNEC oral (secondary poisoning)	33 µg/kg		
PNEC (STP)			
PNEC sewage treatment plant	10 mg/l		
Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)		
DNEL/DMEL (Workers)			
Long-term - systemic effects, dermal	0.97 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	2.73 mg/m³		
Long-term - local effects, inhalation	5.58 mg/m³		
DNEL/DMEL (General population)			
Long-term - systemic effects,oral	0.74 mg/kg bodyweight/day		
Long-term - local effects, inhalation	1.19 mg/m³		
PNEC (Oral)			
PNEC oral (secondary poisoning)	9.33 mg/kg food		
Distillates (petroleum), solvent-dewaxed heav	Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)		
DNEL/DMEL (Workers)			
Long-term - systemic effects, dermal	0.97 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	2.73 mg/m³		
Long-term - local effects, inhalation	5.4 mg/m³		
DNEL/DMEL (General population)	DNEL/DMEL (General population)		
Long-term - systemic effects,oral	0.74 mg/kg bodyweight/day		
Long-term - local effects, inhalation	1.2 mg/m³		
PNEC (Oral)			
PNEC oral (secondary poisoning)	9.33 mg/kg food		

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

n-butyl methacrylate (97-88-1)		
DNEL/DMEL (Workers)		
Acute - local effects, dermal	1 % in mixture	
Long-term - systemic effects, dermal	5 mg/kg bodyweight/day	
Long-term - local effects, dermal	1 % in mixture	
Long-term - systemic effects, inhalation	415.9 mg/m³	
Long-term - local effects, inhalation	409 mg/m³	
DNEL/DMEL (General population)		
Acute - local effects, dermal	1 % in mixture	
Long-term - systemic effects, inhalation	66.5 mg/m³	
Long-term - systemic effects, dermal	3 mg/kg bodyweight/day	
Long-term - local effects, dermal	1 % in mixture	
Long-term - local effects, inhalation	366.4 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0.0169 mg/l	
PNEC aqua (marine water)	0.00169 mg/l	
PNEC aqua (intermittent, freshwater)	0.056 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	4.73 mg/kg dwt	
PNEC sediment (marine water)	0.473 mg/kg dwt	
PNEC (Soil)		
PNEC soil	0.935 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	31.7 mg/l	
Note	: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.	
Control banding		

Control banding : None known

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability.

Personal protection equipment

Personal protective equipment (for industrial or professional use):

Face shield. Gloves. Protective clothing. Safety glasses. Safety shoes or boots.

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Personal protective equipment symbol(s):











Eye and face protection

Eye protection:

When there is a risk of contact with the skin, use waterproof gloves, resistant to chemical products. Gloves must be felt-lined.

Skin protection

Skin and body protection:

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

Hand protection:

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.

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: if the product is handled without adequate containment: use full or half-face masks with adequate filter for mists and organic vapours. (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. (EN 136/140/145)

Thermal hazards

Thermal hazard protection:

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

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. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Consumer exposure controls:

Wear protective gloves. Ensure adequate ventilation. Avoid excessive or improper use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Red.

Appearance : Liquid, bright & clear.

Odour : Slight odour of petroleum.

Odour threshold : Lack of data (on mixture / components of the mixture) - Data not available

Melting point : Not applicable

Freezing point : Lack of data (on mixture / components of the mixture) - Data not available

Softening point : -48 °C (ASTM D 97)
Boiling point : Not determined
Flammability : Not flammable

Lower explosion limit : Lack of data (on mixture / components of the mixture) - Data not available Upper explosion limit : Lack of data (on mixture / components of the mixture) - Data not available

Flash point : 235 °C (ASTM D 92) Auto-ignition temperature : 300 °C (DIN 51794)

Decomposition temperature : Lack of data (on mixture / components of the mixture) - Data not available

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pH : Lack of data (on mixture / components of the mixture) - Data not available Viscosity, kinematic : 33 mm²/s (40 °C) (ASTM D 445); 7,7 mm²/s (100 °C) (ASTM D 445)

Solubility : Water: Immiscible and insoluble
Log Kow : Not applicable for mixtures
Log Pow : Not applicable for mixtures

Vapour pressure : Not determined

Vapour pressure at 50°C : Lack of data (on mixture / components of the mixture) - Data not available

Density : 850 kg/m³ (15 °C) (ASTM D 4052)

Relative density : Lack of data (on mixture / components of the mixture) - Data not available Relative vapour density at 20°C : Lack of data (on mixture / components of the mixture) - Data not available

Particle characteristics : Not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosion limits : ≥ 45 g/m³ (Aerosol)

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. Heating up due to reaction with acids is possible.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong oxidants.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Carbon dioxide, Carbon monoxide, 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)

	· · · · · · · · · · · · · · · · · · ·
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 oral rat	> 5000 mg/kg (OECD 401)
LD50 dermal rat	> 5000 mg/kg (OECD 402)
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 oral rat	> 5000 mg/kg (OECD 401)
LD50 dermal rat	> 5000 mg/kg (OECD 402)

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Distillator (notroloum), hydrotroated heavy pereffinic (64742 54.7)		
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)		
LD50 dermal rabbit	> 2000 mg/kg bodyweight	
LC50 Inhalation - Rat	> 5.53 mg/l/4h (EBSI, 1988)	
Distillates (petroleum), solvent-refined light p		
LD50 oral rat	> 5000 mg/kg bodyweight	
LD50 dermal rat	> 5000 mg/kg bodyweight	
LD50 dermal rabbit	2000 – 5000 mg/kg bodyweight	
LC50 Inhalation - Rat	> 5 mg/l/4h	
Distillates (petroleum), hydrotreated light para	affinic (64742-55-8)	
LD50 oral rat	> 5000 mg/kg (OECD 401)	
LD50 dermal rat	> 5000 mg/kg (OECD 402)	
Lubricating oils (petroleum), C20-50, hydrotre	ated neutral oil-based, Baseoil - unspecified (72623-87-1)	
LD50 oral rat	> 5000 mg/kg (OECD 401)	
LD50 dermal rat	> 5000 mg/kg (OECD 402)	
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)	
Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates		
LD50 oral rat	≥ 5000 mg/kg bodyweight	
LD50 dermal rat	≥ 5000 mg/kg bodyweight	
LD50 dermal rabbit	> 2000 mg/kg bodyweight	
LC50 Inhalation - Rat	≥ 5 mg/l/4h	
Lubricating oils (petroleum), C15-30, hydrotre	ated neutral oil-based (72623-86-0)	
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)	
reaction mass of isomers of: C7-9-alkyl 3-(3,5	-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)	
LD50 oral rat	500 – 2000 mg/kg bodyweight	
LD50 dermal rat	2000 mg/kg bodyweight	
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)		
LD50 oral rat	> 5000 mg/kg (OECD 401)	
LD50 dermal rat	> 5000 mg/kg (OECD 402)	
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)		
LD50 oral rat	> 5000 mg/kg (OECD 401)	
LD50 dermal rat	> 5000 mg/kg (OECD 402)	
LC50 Inhalation - Rat	> 5 mg/l/4h (OECD 403)	
n-butyl methacrylate (97-88-1)		
LD50 oral rat	2000 mg/kg bodyweight	
LD50 dermal rabbit	2000 mg/kg bodyweight	

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pН Not applicable

pН

Additional information

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

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

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

(according to composition)

Not applicable

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Additional information :	(according to composition) This product contains: Distillates (petroleum), hydrotreated heavy paraffinic, Distillates (petroleum), solvent-refined light paraffinic, Distillates (petroleum), hydrotreated light paraffinic, Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based, Distillates (petroleum), solvent-dewaxed light paraffinic, 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.	
Reproductive toxicity : Additional information :	Not classified (Based on available data, the classification criteria are not met) (according to composition)	
Distillates (petroleum), hydrotreated heavy p	araffinic (64742-54-7)	
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight	
	Not classified (Based on available data, the classification criteria are not met) (according to composition)	
reaction mass of isomers of: C7-9-alkyl 3-(3,5	5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)	
LOAEL (oral, rat)	5 mg/kg bw/day (28 d)	
n-butyl methacrylate (97-88-1)		
STOT-single exposure	May cause respiratory irritation.	
STOT-repeated exposure : Additional information :	Not classified (Based on available data, the classification criteria are not met) (according to composition)	
Distillates (petroleum), hydrotreated heavy p	araffinic (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)	
Distillates (petroleum), hydrotreated heavy pa	araffinic (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)	
Distillates (petroleum), solvent-refined light p	paraffinic (64742-53-6)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day	
NOAEL (dermal, rat/rabbit, 90 days)	30 – 2000 mg/kg bodyweight/day	
NOAEC (inhalation,rat, vapour, 90 days)	980 mg/m³	
Distillates (petroleum), hydrotreated light par	raffinic (64742-55-8)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)	
Lubricating oils (petroleum), C20-50, hydrotro	eated neutral oil-based, Baseoil - unspecified (72623-87-1)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)		
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 (mouse, Chasey, K.L. and McKee, R.H. 1993 - OECD 453)	
NOAEL (dermal, rat/rabbit, 90 days)	1000 – 2000 mg/kg bodyweight/day (API 1986, Mobil Environmental and Health Science Laboratory 1983 - OECD 410)	
NOAEC (inhalation,rat, vapour, 90 days)	220 – 1500 mg/m³ (Exxon Biomedical Sciences, Inc. 1991, Dalbey W, Osimitz T, Kommineni C, Roy T, Feuston M and Yang J 1991 - OECD 412)	
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)	

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reaction mass of isomers of: C7-9-alkyl 3-(3,5	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)		
NOAEL (oral, rat, 90 days)	5 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)		
Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)		
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)		
Distillates (petroleum), solvent-dewaxed heav	y paraffinic (64742-65-0)		
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)		
n-butyl methacrylate (97-88-1)			
LOAEC (inhalation, rat, gas, 90 days)	952 ppm Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28- Day Study)		
NOAEL (oral, rat, 90 days)	120 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)		
	Not classified (Based on available data, the classification criteria are not met) (according to composition) Viscosity, kinematic: > 20,5 mm2/s (40 °C) (ASTM D 445)		
Eni Rotra ATF II E			
Viscosity, kinematic	33 mm²/s (40 °C) (ASTM D 445); 7,7 mm2/s (100 °C) (ASTM D 445)		
Distillates (petroleum), hydrotreated heavy pa	raffinic (64742-54-7)		
Viscosity, kinematic	17.9 mm²/s (40 °C) (ASTM D 445)		
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)			
Viscosity, kinematic	36.82 mm²/s (40 °C) (ASTM D 445)		
Distillates (petroleum), solvent-refined light p	araffinic (64742-53-6)		
Viscosity, kinematic	< 20.5 mm²/s		
Distillates (petroleum), hydrotreated light para	affinic (64742-55-8)		
Viscosity, kinematic	6.5 – 9 mm²/s (40 °C) (ASTM D 445)		
Lubricating oils (petroleum), C20-50, hydrotre	ated neutral oil-based, Baseoil - unspecified (72623-87-1)		
Viscosity, kinematic	9 mm²/s (40 °C) (ASTM D 445)		
Reaction product of: polyethylene-polyamine	-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates		
Viscosity, kinematic	> 21 mm²/s		
Lubricating oils (petroleum), C15-30, hydrotre	ated neutral oil-based (72623-86-0)		
Viscosity, kinematic	7.5 mm²/s (40°C)		
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)			
Viscosity, kinematic	15 – 16.5 mm²/s (40 °C) (ASTM D 445)		
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)			
Viscosity, kinematic	< 20.5 mm²/s (40 °C) (ASTM D 445)		
n-butyl methacrylate (97-88-1)			
Viscosity, kinematic	1.06 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)' Remarks on result: 'other:'		

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11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

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

Other information

Potential adverse human health effects and symptoms

Other information

: Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, May cause sensitization by skin contact, Inhalation of vapours may cause respiratory irritation, Avoid all eye and skin contact and do not breathe vapour and mist

: Likely routes of exposure: skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - air

This product has a low vapour pressure. A significant exposure may happen only if the product is used at high temperature, or in case of sprays and mists.

Ecology - water

NOEC chronic algae

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

Hazardous to the aquatic environment, short–term

(acute)

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

Hazardous to the aquatic environment, long-term (chronic)

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

(alloine)		
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)		
> 100 mg/l (LL 50)		
> 10000 mg/l WAF, 48 h (OECD 202)		
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)		
> 100 mg/l (LL 50)		
> 10000 mg/l WAF, 48 h (OECD 202)		
Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)		
> 100 mg/l (Pimephales promelas)		
> 10 g/l (LL50)		
> 10 g/l		
> 5000 mg/l (7d)		
> 1000 mg/l (21d)		
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
100 – 10000 mg/l (LL 50)		
> 10000 mg/l WAF, 48 h (OECD 202)		
100 mg/l (EL0, Pseudokirchneriella subcapitata)		
10 – 1000 mg/l (NOELR, Daphnia Magna)		

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100 mg/l (72h, Pseudokirchneriella subcapitata)

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Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1)			
LC50 fish 1 > 1	100 mg/l (LL 50)		
EC50 Daphnia 1 > 1	10000 mg/l WAF, 48 h (OECD 202)		
Reaction product of: polyethylene-polyamine-(C1	16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates		
LC50 fish 1 10) – 100 mg/l		
EC50 Daphnia 1 10	0 – 100 mg/l		
EC50 72h - Algae [1] 22	2 mg/l (Selenastrum capricornutum)		
ErC50 (algae) 10) – 100 mg/l		
Lubricating oils (petroleum), C15-30, hydrotreated	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)		
LC50 fish 1 > 1	100 mg/l (LL 50, Exxon 1995 - OECD 203)		
EC50 Daphnia 1 > 1	10000 mg/l (WAF, 48 h, Shell 1988 - OECD 202)		
NOEC chronic fish ≥ 1	1000 mg/l (Oncorhynchus mykiss, NOELR, 14d - QSAR, Redman, A. et al. 2010)		
NOEC chronic crustacea ≥ 1	1000 mg/l (21d, OECD 211 - Shell 1994)		
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)			
LC50 fish 1 > 7	74 mg/l (Brachydanio rerio, OECD 203)		
	2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo irdneri)		
EC50 Daphnia 1 > 1	100 mg/l (24h, OECD 202)		
EC50 Daphnia 2 > 1	1000 mg/l Test organisms (species): Daphnia magna		
EC50 72h - Algae [1] > 3	3 mg/l (Scenedesmus sp, OECD 201)		
ErC50 (algae) > 3	33.7 mg/l (OECD 201, 72 h, Pseudokirchnerella subspicata)		
NOEC (acute) 33.	3.7 mg/l (72 h, Pseudokirchnerella subspicata)		
NOEC (chronic) ≤ 0	0.01 mg/l Test organisms (species): Daphnia magna Duration: '21 d'		
NOEC chronic crustacea ≥ 1	1 mg/l (21d, Daphnia magna)		
Distillates (petroleum), solvent-dewaxed light par	raffinic (64742-56-9)		
LC50 fish 1 > 1	100 mg/l (LL 50)		
EC50 Daphnia 1 > 1	10000 mg/l WAF, 48 h (OECD 202)		
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)			
LC50 fish 1 > 1	100 mg/l (LL 50)		
EC50 Daphnia 1 > 1	10000 mg/l WAF, 48 h (OECD 202)		
n-butyl methacrylate (97-88-1)			
LC50 fish 1 5.5	57 – 11 mg/l		
LC50 fish 2 5.5	57 mg/l Test organisms (species): Oryzias latipes		
EC50 Daphnia 1 25.	5.4 – 32 mg/l		
	.2 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names:		
	aphidocelis subcapitata, Selenastrum capricornutum)		

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12.2. Persistence and degradability

12.2. Persistence and degradability		
Eni Rotra ATF II E		
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.	
Distillates (petroleum), hydrotreated heavy pa	raffinic (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.	
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)		
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.	
Distillates (petroleum), hydrotreated light nap	hthenic (64742-53-6)	
Persistence and degradability	Rapidly degradable	
Distillates (petroleum), hydrotreated light para	affinic (64742-55-8)	
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	< 60 % (28d)	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1)		
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.	
Reaction product of: polyethylene-polyamine	-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates	
Persistence and degradability	Product is biodegradable with difficulty.	
Biodegradation	0.284 % (28d)	
Lubricating oils (petroleum), C15-30, hydrotre	ated neutral oil-based (72623-86-0)	
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.	
reaction mass of isomers of: C7-9-alkyl 3-(3,5	-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)	
Persistence and degradability	Not biodegradable.	
Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)	
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.	
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.	
n-butyl methacrylate (97-88-1)		
Persistence and degradability	Rapidly degradable	

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12.3. Bioaccumulative potential

Eni Rotra ATF II E		
Log Pow	Not applicable for mixtures	
Log Kow	Not applicable for mixtures	
Bioaccumulative potential	Not established.	
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
Log Kow	<1	
Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates		
Log Pow	> 6.5	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)		
Log Kow	> 6	
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.	
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)		
Bioconcentration factor (BCF REACH)	260 (35 d, Oncorhynchus mykiss, OECD 305)	

12.4. Mobility in soil

Eni Rotra ATF II E	
Ecology - soil	No data available.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
Ecology - soil	The test methods for this endpoint are not applicable to UVCB substances.

12.5. Results of PBT and vPvB assessment

Eni Rotra ATF II E	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria	a 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	Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated light

nydrotreated neavy paraminic (64742-54-7), Distillates (petroleum), hydrotreated light naphthenic (64742-53-6), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8), Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1), Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0), reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), n-butyl methacrylate (97-88-1)

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Component

Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7), Distillates (petroleum), hydrotreated light naphthenic (64742-53-6), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8), Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified (72623-87-1), Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0), reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0), Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0), n-butyl methacrylate (97-88-1)

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: Endocrine disrupting properties (Article 57(f) — environment): None known. The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Other adverse effects
Additional information

· None

: 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 discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector. Dispose of empty containers and wastes safely.

Sewage disposal recommendations

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

Product/Packaging disposal recommendations

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

Additional information

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

Ecology - waste materials

: The product as it is does not contain halogenated substances.

EURAL code (EWC)

: 13 02 05* - Mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard o	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 haz	ards			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
None.	None.			

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

Other information, restriction and prohibition regulations

: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). (et sequens). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace). Directive 2012/18/CE (Control of major-accident hazards involving dangerous substances). Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds). Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding). Substances Depleting the Ozone layer (1005/2009) - Annex I Substances (ODP). POP (2019/1021) - Persistent Organic Pollutants. Regulation EU (649/2012) -Export and Import of hazardous chemicals (PIC). Commission Delegated Regulation (EU) 2017/2100. Commission Regulation (EU) 2018/605.

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REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	n-butyl methacrylate	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 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Eni Rotra ATF II E; Distillates (petroleum), hydrotreated heavy paraffinic; Distillates (petroleum), hydrotreated light naphthenic; Distillates (petroleum), hydrotreated light paraffinic; Lubricating oils (petroleum), C20-50, hydrotreated neutral oil- based, Baseoil - unspecified; Reaction product of: polyethylene- polyamine-(C16-C18)- alkylamides with monothio-(C2)-alkyl phosphonates; Lubricating oils (petroleum), C15-30, hydrotreated neutral oil- based; Distillates (petroleum), solvent- dewaxed light paraffinic; Distillates (petroleum), solvent-dewaxed heavy paraffinic; n-butyl methacrylate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Reaction product of: polyethylene-polyamine- (C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates; reaction mass of isomers of: C7-9- alkyl 3-(3,5-di-tert-butyl-4- hydroxyphenyl)propionate	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
40.	n-butyl methacrylate	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

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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)

National regulations

France

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

Germany

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

National Rules and Recommendations : TRGS 400: Hazard assessment for activities involving Hazardous Substances.

TRGS 401: Risks resulting from skin contact - identification, assessment, measures.

TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous

Substances: Inhalation Exposure. TRGS 500: Protective measures.

TRGS 555: Working instruction and information for workers.

TRGS 800: Fire protection measures. TRGS 900: Occupational Exposure Limits.

TRGS 907: List of sensitizing substances and activities with sensitizing substances.

VbF class (D) : Not applicable.

Water hazard class (WGK) (D) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

WGK remark : Classification is carried out on the basis of the Ordinance on facilities for handling substances that are hazardous to water (Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV)) of 18 April 2017 (BGBI 2017, Teil I, Nr. 22, Seite

905).

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

Netherlands

Saneringsinspanningen : C - Minimize discharge

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

Vruchtbaarheid

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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Poland

Polish National Regulations

: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).

Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).

The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).

Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).

Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).

Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).

The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended). Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).

ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

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

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

Distillates (petroleum), hydrotreated heavy paraffinic

Distillates (petroleum), hydrotreated heavy paraffinic

Distillates (petroleum), hydrotreated light paraffinic

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified

Reaction product of: polyethylene-polyamine-(C16-C18)-alkylamides with monothio-(C2)-alkyl phosphonates

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

Distillates (petroleum), solvent-dewaxed light paraffinic

Distillates (petroleum), solvent-dewaxed heavy paraffinic

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
1	UFI	Modified
2.2	Precautionary statements (CLP)	Modified
2.3	Other information	Removed
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

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Indication of changes		
Section	Changed item	Comments
7.1	Precautions for safe handling	Modified
8.2	Respiratory protection	Modified
8.2	Appropriate engineering controls	Modified
9	Boiling point	Modified
9	Oxidising properties	Removed
9	Explosive properties	Removed
9	Vapour pressure	Modified
9	Viscosity, kinematic	Modified
9	Flash point	Modified
9	Viscosity, dynamic	Removed
9	Density	Modified
9	Relative evaporation rate (butylacetate=1)	Removed
9.2	Softening point	Modified
10.6	Hazardous decomposition products	Modified
16	Other information	Modified

Abbreviations and acronyms:		
	Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.	
	N/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 disruptor	
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	

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Abbreviations and acronyms:		
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.

Full text of H- and EUH-statements:		
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3	
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4	
Asp. Tox. 1	Aspiration hazard, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 3	Flammable liquids, Category 3	
H226	Flammable liquid and vapour.	
H304	May be fatal if swallowed and enters airways.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H335	May cause respiratory irritation.	
H412	Harmful to aquatic life with long lasting effects.	
H413	May cause long lasting harmful effects to aquatic life.	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
Skin Sens. 1	Skin sensitisation, Category 1	
Skin Sens. 1A	Skin sensitisation, category 1A	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	

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Classification and pro	cedure used to derive th	ne classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
Skin Sens. 1	H317	Calculation method

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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.