

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878 Revision date: 5/14/2025 Supersedes: 11/21/2024 Version: 1.1

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

1.1. Product identifier Product form : Mixture : Eni Rotra HY DB 80W Trade name Product code : 1277 Type of product : Lubricants Formula : 0105-2000 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 : Lubricant for gears Do not use the product for any purposes that have not been advised by the manufacturer. Function or use category : Lubricants and additives

1.3. Details of the supplier of the safety data sheet

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

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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]

Hazardous to the aquatic environment – Chronic Hazard, H411 Category 2

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

Adverse physicochemical, human health and environmental effects

Contact with eyes may cause temporary reddening and irritation. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis. May produce an allergic reaction. For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.



CLP Signal word Hazard statements (CLP)

: H411 - Toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP) EUH-statements	 P273 - Avoid release to the environment. P391 - Collect spillage. P501 - Dispose of contents/container to according to national or local regulations. EUH208 - Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May produce an allergic reaction.
2.3. Other hazards (not relevant for classific	cation)
Other hazards not contributing to the classification	: This product is combustible, but not classified as Flammable. The creation of flammable

Any substance, in case of accidents involving ressurized 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 $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

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), solvent-dewaxed heavy paraffinic (64742-65-0), Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Comments

: Composition/ Information on ingredients: Mixture of hydrocarbons Additives

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (Main component, see note [**], see note [*]) substance with national workplace exposure limit(s) (AT, BE, DK, ES, GB, HU, NL, SE)	CAS-No.: 64742-65-0 EC-No.: 265-169-7 EC Index-No.: 649-474-00-6 REACH-no: 01-2119471299- 27	90 - < 100	Not classified
Reaction products of bis(4-methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	EC-No.: 931-384-6 REACH-no: 01-2119493620- 38	0,5 - 0,9	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
C16-18-(even numbered, saturated and unsaturated)- alkylamines	CAS-No.: 1213789-63-9 EC-No.: 627-034-4 REACH-no: 01-2119473797- 19	0.2 - 0.4	Acute Tox. 4 (Oral), H302 (ATE=1689 mg/kg bodyweight) Skin Corr. 1B, H314 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Reaction products of bis(4-methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	EC-No.: 931-384-6 REACH-no: 01-2119493620- 38	(9.39 < C ≤ 100) Skin Sens. 1B; H317 (50 < C ≤ 100) Eye Irrit. 2; H319
Comments :	1 2	with one or more of the following base oils: CAS 74869-22-

this product may be formulated with one or more of the following base oils: CAS 74869-22-0/ EC: 278-012-2/ REACH Reg. # 01-2119495601-36-XXXX; CAS 64742-54-7/ EC 265-157-1/ REACH Reg. # 01-2119484627-25-XXXX 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. 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	
4.1. Description of first aid measures	
First-aid measures after inhalation	: Remove to fresh air, keep the casualty warm and at rest. If breathing is difficult, give oxygen if possible, or assisted ventilation. If necessary, give external cardiac massage and obtain medical advice. See also section 4.3.

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First-aid measures after skin contact	: Remove contaminated clothing and shoes. Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention. In case of burns, cool affected part with cold running water for at least 10 min. Cover with gauze or clean cloth. Ask for medical assistance or bring to a hospital. Do not apply salves or other substances, unless by doctor's advice.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do so. Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice. In case of burns, cool affected part with cold running water for at least 10 min. Cover with gauze or clean cloth. Ask for medical assistance or bring to a hospital. Do not apply salves or other substances, unless by doctor's advice.
First-aid measures after ingestion	: Do not induce vomiting. If the person is conscious, rinse mouth with water without swallowing. Keep at rest. Call for medical assistance or bring to an hospital. If the casualty is unconscious, place in the recovery position. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs. Do not give anything by mouth to an unconscious person.
4.2. Most important symptoms and effects,	both acute and delayed
4.2. Most important symptoms and effects, Symptoms/effects after inhalation	 both acute and delayed Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision.
	: Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness,
Symptoms/effects after inhalation	 Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. May cause an allergic skin reaction. Contact with hot product may cause
Symptoms/effects after inhalation Symptoms/effects after skin contact	 Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. May cause an allergic skin reaction. Contact with hot product may cause thermal burns. Contact with eyes may cause temporary reddening and irritation. Contact with hot product
Symptoms/effects after inhalation Symptoms/effects after skin contact Symptoms/effects after eye contact	 Inhalation of fumes or oil mists produced at high temperatures may cause irritation of the respiratory tract. Symptoms of overexposure to vapours include drowsiness, weakness, headache, dizziness, nausea, vomiting, dimming of vision. Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. May cause an allergic skin reaction. Contact with hot product may cause thermal burns. Contact with eyes may cause temporary reddening and irritation. Contact with hot product or vapours may cause burns. Accidental ingestion of small quantities of the product may cause nausea, discomfort and

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. Send the casualty immediately to hospital. Immediately begin artificial respiration if breathing has ceased. Administer oxygen if necessary.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media Unsuitable 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). 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 subst	tance or mixture
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	 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 losses from pressurized circuits, the sprays may form mists. Take into account that in this case the lower explosion limit for mists is about 45 g/m³ air. Vapours are heavier than air, spread along floors and form explosive mixtures with air. 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. If possible, move containers and drums away from the danger area, if safe to do so. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.

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Special protective equipment for firefighters	: Wear personal protection equipment. (see chapter 8). In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. EN 443. EN 469. EN 659.
Other information	: In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

SECTION 6: Accidental release	measures
6.1. Personal precautions, protectiv	e equipment and emergency procedures
General measures	Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid accidental sprays on hot surfaces or electrica contacts. Avoid direct contact with released material. 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.
For emergency responders	
Protective equipment	: Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. if necessary heat resistant and insulated. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated. Work helmet. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: a half or full-face respirator with filter(s) for organic vapours (AX), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
Emergency procedures	: If required, notify relevant authorities according to all applicable regulations.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

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

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7.1. Precautions for safe handling	
Precautions for safe handling Handling temperature Hygiene measures	 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 o 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. This product can be handled at ambient temperatures. 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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately.
7.2. Conditions for safe storage, inclu	ding any incompatibilities
Storage conditions	: Store in dry, well-ventilated area. Keep away from open flames, hot surfaces and sources o ignition. Do not smoke.
Incompatible products Storage area	 Strong oxidizing agents. 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
Packages and containers:	 and qualified personnel as defined by national, local or company regulations. If the product is supplied in containers: Keep containers tightly closed and properly labelled Keep only in the original container or in a suitable container for this kind of product.
Packaging materials	 For containers, or container linings use materials specifically approved for use with this product. Compatibility should be checked with the manufacturer, according to the specific use conditions.
Germany	
Storage class (LGK, TRGS 510)	: LGK 10 - Combustible liquids
Switzerland	
Storage class (LK)	: LK 10/12 - Liquids

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil- unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0) **Austria - Occupational Exposure Limits** MAK (OEL TWA) 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m) **Belgium - Occupational Exposure Limits** OEL TWA 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

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hydrocarbons obtained by removal of r predominantly of hydrocarbons having	d heavy paraffinic; Baseoil— unspecified; [A complex combination of normal paraffins from a petroleum fraction by solvent crystallization. It consists carbon numbers predominantly in the range of C20 through C50 and produces a an 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
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	5 ·
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 Li	imits
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 Limit	is is in the second sec
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)

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.

DNEL and PNEC

Eni Rotra HY DB 80W		
DNEL/DMEL (additional information)		
Additional information	Not applicable	
PNEC (additional information)		
Additional information	Not applicable	
Reaction products of bis(4-methylpenta amines, C12-14-alkyl (branched)	n-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and	
DNEL/DMEL (Workers)		
Acute - local effects, dermal	160 μg/cm ²	
	160 μg/cm² 12.5 mg/kg bodyweight/day	
Acute - local effects, dermal Long-term - systemic effects, dermal Long-term - local effects, dermal		

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Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		
DNEL/DMEL (General population)		
Acute - local effects, dermal	160 µg/cm²	
Long-term - systemic effects,oral	0.25 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	1.09 mg/m ³	
Long-term - systemic effects, dermal	6.25 mg/kg bodyweight/day	
Long-term - local effects, dermal	160 µg/cm²	
PNEC (Water)		
PNEC aqua (freshwater)	2.4 µg/l	
PNEC aqua (marine water)	0.24 µg/l	
PNEC aqua (intermittent, freshwater)	150 µg/l	
PNEC aqua (intermittent, marine water)	15 µg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	12.9 µg/kg dw	
PNEC sediment (marine water)	1.29 µg/kg dw	
PNEC (Soil)		
PNEC soil	1.17 μg/kg dw	
PNEC (Oral)		
PNEC oral (secondary poisoning)	10 mg/kg food	
PNEC (STP)		
PNEC sewage treatment plant	24.33 mg/l	
C16-18-(even numbered, saturated and uns	aturated)-alkylamines (1213789-63-9)	
DNEL/DMEL (Workers)		
Acute - local effects, inhalation	1 mg/m³	
Long-term - systemic effects, dermal	0.09 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0.38 mg/m³	
Long-term - local effects, inhalation	1 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	40 μg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0.035 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0.26 µg/l	
PNEC aqua (marine water)	0.026 µg/l	
PNEC aqua (intermittent, freshwater)	1.6 µg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	3.76 mg/kg dwt	
PNEC sediment (marine water)	0.376 mg/kg dwt	
PNEC (Soil)		
PNEC soil	10 mg/kg dwt	

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C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9)		
PNEC (Oral)		
PNEC oral (secondary poisoning)	0.22 mg/kg food	
PNEC (STP)		
PNEC sewage treatment plant	550 μg/l	
Distillates (petroleum), solvent-dewaxed heavy paraffinic; Baseoil— unspecified; [A complex combination of hydrocarbons obtained by removal of normal paraffins from a petroleum fraction by solvent crystallization. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity not less than 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	0.97 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	2.73 mg/m ³	
Long-term - local effects, inhalation	5.58 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	0.74 mg/kg bodyweight/day	
PNEC (Oral)		
PNEC oral (secondary poisoning)	9.33 mg/kg food	
PNEC (additional information)		
Additional information	Not derived - Not classified as hazardous for environment	
	The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.	

8.2. Exposure controls

Appropriate engineering controls

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. See also Section 16, "Other information".

Personal protection equipment

Personal protective equipment (for industrial or professional use):

Gloves. Protective clothing. Safety glasses. Safety shoes or boots. Dust/aerosol mask.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure

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Skin protection

Skin and body protection:

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

Hand protection:

Protective gloves. 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 organic vapours. (EN 136/140/145). Combination filter device (DIN EN 141). 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:

None in normal use conditions.

Environmental exposure controls

Environmental exposure controls:

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

Consumer exposure controls:

Wear protective gloves.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state :	Liquid
5	Yellow-brown.
Appearance	Liquid, bright & clear.
	Characteristics.
Odour threshold :	Not available
Melting point :	-30 °C (pour point) (ASTM D 97)
Freezing point :	Not determined
Boiling point	Not determined
Flammability	Not flammable
Lower explosion limit	Not determined
Upper explosion limit :	Not determined
Flash point :	210 °C (ASTM D 92)
Auto-ignition temperature :	Not determined
Decomposition temperature :	Not determined
pH :	Not available
Viscosity, kinematic	102 mm²/s (40 °C) (ASTM D 445)
Solubility :	Water: Immiscible and insoluble
Log Kow	Not applicable for mixtures
Log Pow	Not applicable for mixtures
Vapour pressure :	0.1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)
Vapour pressure at 50°C	Not available
Density :	900 kg/m³ (15°C) (ASTM D 4052)
Relative density	Not determined
Relative vapour density at 20°C	Not determined
Particle characteristics	Not applicable

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9.2. Other information

Other safety characteristics

Additional information

: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable product, according to its intrinsic properties.

10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. Sensitivity to heat, friction or shock cannot be assessed in advance.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong oxidants.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information	
11.1. Information on hazard classes as defined	d in Regulation (EC) No 1272/2008
Acute toxicity (oral) :	Not classified (Based on available data, the classification criteria are not met; Conclusive but not sufficient for classification)
Acute toxicity (dermal) :	Not classified (Based on available data, the classification criteria are not met; Conclusive but not sufficient for classification)
Acute toxicity (inhalation) :	Not classified (Based on available data, the classification criteria are not met; Conclusive but not sufficient for classification)
Additional information :	(according to composition)
Reaction products of bis(4-methylpentan-2-yl amines, C12-14-alkyl (branched)	dithiophosphoric acid with phosphorus oxide, propylene oxide and
LD50 oral rat	≈ 2000 mg/kg bodyweight
C16-18-(even numbered, saturated and unsatu	urated)-alkylamines (1213789-63-9)
LD50 oral rat	1689 mg/kg bodyweight (OECD 401)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	2000 mg/kg bodyweight
hydrocarbons obtained by removal of normal	y paraffinic; Baseoil— unspecified; [A complex combination of paraffins from a petroleum fraction by solvent crystallization. It consists n numbers predominantly in the range of C20 through C50 and produces a SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
LD50 oral rat	> 5000 mg/kg bodyweight Not determined
Skin corrosion/irritation :	Not classified (Based on available data, the classification criteria are not met)

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	(according to composition)
C16-18-(even numbered, saturated and unsat	urated)-alkylamines (1213789-63-9)
pH	11.7 Temp.: 20 °C
hydrocarbons obtained by removal of normal	vy paraffinic; Baseoil— unspecified; [A complex combination of I paraffins from a petroleum fraction by solvent crystallization. It consists on numbers predominantly in the range of C20 through C50 and produces a SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
рН	Not applicable
Serious eye damage/irritation:Additional information:	Not classified (Based on available data, the classification criteria are not met) (according to composition)
C16-18-(even numbered, saturated and unsat	urated)-alkylamines (1213789-63-9)
рН	11.7 Temp.: 20 °C
hydrocarbons obtained by removal of normal predominantly of hydrocarbons having carbo finished oil with a viscosity not less than 100	
pH	Not applicable
Respiratory or skin sensitisation:Additional information:Germ cell mutagenicity:Additional information:Carcinogenicity:Additional information:	Not classified (Based on available data, the classification criteria are not met) (according to composition) Not classified (Based on available data, the classification criteria are not met) (according to composition) Not classified (Based on available data, the classification criteria are not met) (according to composition) All the mineral base oils contained in this product have a value < 3 % wt of DMSO extract, according to IP 346 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)
Reproductive toxicity:Additional information:STOT-single exposure:Additional information:	Not classified (Based on available data, the classification criteria are not met) (according to composition) Not classified (Based on available data, the classification criteria are not met) (according to composition)
C16-18-(even numbered, saturated and unsat	urated)-alkylamines (1213789-63-9)
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)
Reaction products of bis(4-methylpentan-2-y amines, C12-14-alkyl (branched)	l)dithiophosphoric acid with phosphorus oxide, propylene oxide and
NOAEL (subacute, oral, animal/male, 28 days)	150 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat
C16-18-(even numbered, saturated and unsat	urated)-alkylamines (1213789-63-9)
NOAEL (oral, rat, 90 days)	3.25 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28- Day Oral Toxicity Study in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
hydrocarbons obtained by removal of normal	vy paraffinic; Baseoil— unspecified; [A complex combination of I paraffins from a petroleum fraction by solvent crystallization. It consists on numbers predominantly in the range of C20 through C50 and produces a SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Not determined
LOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg bodyweight/day

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	eavy paraffinic; Baseoil— unspecified; [A complex combination of mal paraffins from a petroleum fraction by solvent crystallization. It consists
	rbon numbers predominantly in the range of C20 through C50 and produces a 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
NOAEL (oral, rat, 90 days)	< 125 mg/kg bodyweight/day (CAS 64742-04-7, Mobil 1990) (OECD 408)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 1000 mg/kg bodyweight Not determined
NOAEC (inhalation,rat, vapour, 90 days)	220 – 980 mg/m³ (Dalbey W, Osimitz T, Kommineni C, Roy T, Feuston M and Yang J 1991 - OECD 412)
Aspiration hazard Additional information	 Not classified (Based on available data, the classification criteria are not met) (according to composition)
Eni Rotra HY DB 80W	
Viscosity, kinematic	102 mm²/s (40 °C) (ASTM D 445)
C16-18-(even numbered, saturated and un	saturated)-alkylamines (1213789-63-9)
Viscosity, kinematic	5.245 mm²/s
hydrocarbons obtained by removal of nor predominantly of hydrocarbons having ca	eavy paraffinic; Baseoil— unspecified; [A complex combination of mal paraffins from a petroleum fraction by solvent crystallization. It consists rbon numbers predominantly in the range of C20 through C50 and produces a 100 SUS at 100 °F (19cSt at 40 °C).] (64742-65-0)
Viscosity, kinematic	91 – 99 mm²/s (40 °C) (ASTM D 445)
11.2. Information on other hazards	
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	 Contact with eyes may cause temporary reddening and irritation, Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, May produce an allergic reaction None
SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: An uncontrolled release to the environment may nevertheless produce a contamination of different environmentel compartmente (air, soil, underground, surface water bedies)

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

release into the environment.

different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and

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mines, C12-14-alkyl (branched)	pentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and
LC50 fish 1	24 mg/l (Rainbow Trout)
LC50 fish 2	8.5 mg/l (Fathead Minnow)
EC50 Daphnia 1	91.4 mg/l
EC50 96h - Algae [1]	6.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	15 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (acute)	1.7 – 3.3
NOEC chronic fish	3.2 mg/l (Rainbow Trout - 4d)
NOEC chronic crustacea	0.12 mg/l (Daphnia magna - 21 d)
C16-18-(even numbered, saturated	and unsaturated)-alkylamines (1213789-63-9)
LC50 fish 1	0.84 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
LC50 fish 2	4.21 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 Daphnia 1	0.32 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia 2	0.98 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.46 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	0.38 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	0.032 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.013 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	0.013 mg/l (21d)
NOEC chronic algae	0.01 mg/l (3d)
Distillates (petroleum), solvent-dev	vaxed heavy paraffinic (64742-65-0)
LC50 fish 1	> 100 mg/l (LL 50, Exxon 1995 - OECD 203)
EC50 Daphnia 1	> 10000 mg/l (EL50, Shell 1988 - OECD 202)
NOEC (acute)	≥ 100 mg/l (Pseudokirchneriella subcapitata, 72h, OECD 201 - Petro-Canada 2008)
NOEC chronic fish	≥ 1000 mg/l (Oncorhynchus mykiss, NOELR, 14d - QSAR, Redman, A. et al. 2010)
NOEC chronic crustacea	≥ 1000 mg/l (21d, OECD 211 - Shell 1994)
NOEC chronic algae	≥ 100 mg/l (Pseudokirchneriella subcapitata, 72h)

12.2. Persistence and degradability

Eni Rotra HY DB 80W	
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 products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	
Persistence and degradability	Rapidly degradable
Biodegradation	3.6 – 7.4 % (28d - OECD 301 B)

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C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9)		
Persistence and degradability	Readily biodegradable.	
Biodegradation	66 % (28d) (OECD 301B)	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)		
Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.	
Biodegradation	31 % (28d, Exxon 1995)	
12.3. Bioaccumulative potential		
Eni Rotra HY DB 80W		
Log Pow	Not applicable for mixtures	
Log Kow	Not applicable for mixtures	
Bioaccumulative potential	Not established.	
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		
Log Kow	5.14 (25°C)	
C16-18-(even numbered, saturated and	unsaturated)-alkylamines (1213789-63-9)	
Bioconcentration factor (BCF REACH)	> 500	
Distillates (petroleum), solvent-dewaxed	d heavy paraffinic (64742-65-0)	
BCF fish 1	0.4 – 6280 l/kg	
BCF fish 2	3.16 – 71100 l/kg	
Log Pow	1.99 – 18.02	
Log Kow	Not applicable (UVCB)	
Bioaccumulative potential	The test methods for this endpoint are not applicable to UVCB substances.	
12.4. Mobility in soil		
Eni Rotra HY DB 80W		
Mobility in soil	Not determined	
Ecology - soil	No data available.	
Distillates (petroleum), solvent-dewaxed	d heavy paraffinic (64742-65-0)	
Log Koc	1.71 – 14.7	
Ecology - soil	The test methods for this endpoint are not applicable to UVCB substances.	
12.5. Results of PBT and vPvB assessment		
Eni Rotra HY DB 80W		
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		

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Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched), C16-18-(even numbered, saturated and unsaturated)-alkylamines (1213789-63-9), Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)
12.6. Endocrine disrupting properties	
endocrine disrupting properties	The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.
12.7. Other adverse effects	
	None. No other effects known

SECTION 13: Disposal considerations	3
13.1. Waste treatment methods	
Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	Do not dispose of the product, either new or used, by dumping on the ground, or discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector. Dispose of empty containers and wastes safely.
Sewage disposal recommendations	Dispose of in a safe manner in accordance with local/national regulations. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Product/Packaging disposal recommendations	: European Waste Catalogue code(s) (Decision 2001/118/CE): 13 02 05* (mineral-based non-chlorinated engine, gear and lubricating oils). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.
Ecology - waste materials	: The product as it is does not contain halogenated substances.
EURAL code (EWC) HP Code	 13 02 05* - Mineral-based non-chlorinated engine, gear and lubricating oils HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

ADR	IMDG	ΙΑΤΑ	ADN	RID	
14.1. UN number or ID n	umber				
UN 3082	UN 3082 UN 3082 UN 3082 UN 3082 UN 3082				
14.2. UN proper shippin	g name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	

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ADR	IMDG	ΙΑΤΑ	ADN	RID
Transport document descr	iption	I		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C16-18-(even numbered, saturated and unsaturated)-alkylamines ; Reaction products of bis(4- methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C16-18-(even numbered, saturated and unsaturated)-alkylamines ; Reaction products of bis(4- methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)), 9, III, MARINE	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (C16-18-(even numbered, saturated and unsaturated)-alkylamines ; Reaction products of bis(4- methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C16-18-(even numbered, saturated and unsaturated)-alkylamines ; Reaction products of bis(4- methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C16-18-(even numbered, saturated and unsaturated)-alkylamines Reaction products of bis(4 methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)), 9, III
14.3. Transport hazard o	POLLUTANT			
9	9	9	9	9
14.4. Packing group				<u>.</u>
III	III	III	III	Ш
14.5. Environmental haz	ards	-		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-A EmS-No. (Spillage): S-F	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes

14.6. Special precautions for user

Overland transport

Transport regulations (ADR)	:	Subject to the provisions
Classification code (UN)	:	M6
Special provisions (ADR)	:	274, 335, 375, 601
Limited quantities (ADR)	:	51
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Special packing provisions (ADR)	:	PP1
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T4
Portable tank and bulk container special provisions	:	TP1, TP29
(ADR)		
Tank code (ADR)	:	LGBV
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Loading, unloading	:	CV13
and handling (ADR)		
Hazard identification number (Kemler No.)	:	90

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: •3Z

: 5 L

: E1 : LP01, P001

: PP1

: T4

: A

: E1 : Y964 : 30kgG : 964 : 450L : 964 : 450L

: 9L

: M6

: 5 L

: E1

: PP

: 0

: IBC03

: TP1, TP29

90

3082

: Subject to the provisions

: Subject to the provisions

: A97, A158, A197, A215

: Subject to the provisions

: 274, 335, 375, 601

: 274, 335, 969

Orange plates

Tunnel restriction code EAC code

Transport by sea

Transport regulations (IMDG) Special provisions (IMDG) Limited quantities (IMDG) Excepted quantities (IMDG) Packing instructions (IMDG) Special packing provisions (IMDG) IBC packing instructions (IMDG) Tank instructions (IMDG) Tank special provisions (IMDG) Stowage category (IMDG)

Air transport

Transport regulations (IATA)
PCA Excepted quantities (IATA)
PCA Limited quantities (IATA)
PCA limited quantity max net quantity (IATA)
PCA packing instructions (IATA)
PCA max net quantity (IATA)
CAO packing instructions (IATA)
CAO max net quantity (IATA)
Special provisions (IATA)
ERG code (IATA)

Inland waterway transport

Transport regulations (ADN) Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN) Equipment required (ADN) Number of blue cones/lights (ADN)

Rail transport

Transport regulations (RID) Classification code (RID) Special provisions (RID) Limited quantities (RID)	 Subject to the provisions M6 274, 335, 375, 601 5L
Excepted quantities (RID)	: E1
Packing instructions (RID) Special packing provisions (RID)	: P001, IBC03, LP01, R001 : PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading and unloading (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

: Not applicable.

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Reaction products of bis(4-methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) ; C16-18- (even numbered, saturated and unsaturated)-alkylamines	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 products of bis(4-methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) ; C16-18- (even numbered, saturated and unsaturated)-alkylamines	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

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

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information

: E2

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

Finland

Finnish National Regulations

: Occupational Safety and Health Act No. 738/2002.

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France

France			
Maladies professionelles (F)			
Code Description	Description		
RG 36 Diseases caused by	Diseases caused by oils and fats of mineral or synthetic origin		
Germany			
Employment restrictions National Rules and Recommendations	 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. TRGS 400: Hazard assessment for activities involving Hazardous Substances. TRGS 401: Risks resulting from skin contact - identification, assessment, measures. TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure. TRGS 555: Working instruction and information for workers. TRGS 900: Occupational Exposure Limits. TRGS 800: Fire protection measures. 		
VbF class (D) Water hazard class (WGK) (D) WGK remark Major Accidents Ordinance (12. BImSchV)	 Not applicable. WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1). Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS). Is not subject to the Major Accidents Ordinance (12. BImSchV) 		
Netherlands			
Saneringsinspanningen SZW-lijst van kankerverwekkende stoffen SZW-lijst van mutagene stoffen SZW-lijst van reprotoxische stoffen – Borstvoedin SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: None of the components are listed		
SZW-lijst van reprotoxische stoffen – Ontwikkelin	g : 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 The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal		
Norway			
Norwegian National Regulations	: Working Environment Act (LOV-2005-06-17 NO. 62). People under the age of 18 may not work with this product at all.		
Sweden			
Swedish National Regulations	: This product is in compliance with Ordinance 1998:944. Work Environment Act (1977: 1160). Chemical Hazards in the Working Environment (AFS 2011:19).		

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Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63 322 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. 2013, item 322 as amended; consolidated text on L. 2020, item 797). The announcement of Marshal of the Sejm of the Republic of Poland dated 19 Oct 2016 concerning the consolidated text announcement of the decree on the management of the decree on the decree o	
 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 w L. 2014, item 1923). Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, 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 highest permissible concentration and intensity of noxious agents for health at worr 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 Dece 2004 on health and safety at work related to exposure to chemical agents at work 16 September 2016, item 1488) Regulation of the Minister of Health of 2 February 2011 on tests and measurement noxious agents for health at work environment (J. o L. No. 33, item 166 as amende Regulation of the Minister of Environment of 9 December 2003 on particularly haza substances to the environment (J. o L. No. 217, item 2141). ADR Agreement: Government Statement of 13 March 2023 on the entry into force amendments to Annexes A and B to the Agreement concerning the International C Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. item 891) 	dated text J. ctober gement of waste (J. o 7, item n the ork ecomber < (J. o L. of nts of the ded). zardous e of Carriage of

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) C16-18-(even numbered, saturated and unsaturated)-alkylamines

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
3	Composition/information on ingredients	Modified
3.2	Comments	Modified
8.2	Respiratory protection	Modified

Abbreviations and acronyms:		
Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for informatio 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	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	

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Abbreviations and acronyms:			
DMEL	Derived Minimal Effect level		
DNEL	Derived-No Effect Level		
EC50	Effective concentration for 50 percent of test population (median effective concentration)		
IARC	International Agency for Research on Cancer		
ΙΑΤΑ	International Air Transport Association		
IMDG	International Maritime Dangerous Goods		
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)		
LD50	Lethal dose for 50 percent of test population (median lethal dose)		
LOAEL	Lowest Observed Adverse Effect Level		
NOAEC	No-Observed Adverse Effect Concentration		
NOAEL	No-Observed Adverse Effect Level		
NOEC	No-Observed Effect Concentration		
OECD	Organisation for Economic Co-operation and Development		
РВТ	Persistent Bioaccumulative Toxic		
PNEC	Predicted No-Effect Concentration		
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006		
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways		
SDS	Safety Data Sheet		
STP	Sewage treatment plant		
vPvB	Very Persistent and Very Bioaccumulative		

Data sources

This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.
Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.
Do not use the product for any purposes that have not been advised by the manufacturer.

Training advice Other information

Full text of H- and EUH-statements:			
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4		
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1		
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1		
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2		
Asp. Tox. 1	Aspiration hazard, Category 1		
EUH208	Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May produce an allergic reaction.		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2		
H302	Harmful if swallowed.		
H304	May be fatal if swallowed and enters airways.		
H314	Causes severe skin burns and eye damage.		
H317	May cause an allergic skin reaction.		
H319	Causes serious eye irritation.		
H335	May cause respiratory irritation.		

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Full text of H- and EUH-statements:			
H373	May cause damage to organs through prolonged or repeated exposure.		
H400	Very toxic to aquatic life.		
H410	Very toxic to aquatic life with long lasting effects.		
H411	Toxic to aquatic life with long lasting effects.		
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B		
Skin Sens. 1B	Skin sensitisation, category 1B		
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2		
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation		

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:					
Aquatic Chronic 2	H411	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.