

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 15-5-2018 Revision date: 11-6-2024 Supersedes version of: 20-9-2023 Version: 1.6

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

1.1. Product identifier

Product form : Mixture
Trade name : Gear Heavy
Product code : PG.10.00
Type of product : Lubricants
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use, Consumer use

Use of the substance/mixture : Transmission oil

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Putoline Oil
Dollegoorweg 15
NL 7602 EC Almelo
Netherlands
T 0031 (0)546 81 81 65
vib@putoline.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : 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.

EUH210 - Safety data sheet available on request.

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2.3. Other hazards

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), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

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 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments

: Highly refined mineral oils and additives.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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	0,3 – 2,5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
White mineral oil (petroleum)	CAS-No.: 8042-47-5 EC-No.: 232-455-8 REACH-no: 01-2119487078- 27	< 2,5	Asp. Tox. 1, H304
Distillates (petroleum), solvent-dewaxed light paraffinic substance with a Community workplace exposure limit (Note L)	CAS-No.: 64742-56-9 EC-No.: 265-159-2 EC Index-No.: 649-469-00-9 REACH-no: 01-2119480132-	< 2,5	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated heavy paraffinic (Note L)	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627- 25	< 2,5	Asp. Tox. 1, H304
Distillates (petroleum), solvent-dewaxed heavy paraffinic (Note L)	CAS-No.: 64742-65-0 EC-No.: 265-169-7 EC Index-No.: 649-474-00-6 REACH-no: 01-2119471299- 27	< 2,5	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated light paraffinic (Note L)	CAS-No.: 64742-55-8 EC-No.: 265-158-7 EC Index-No.: 649-468-00-3 REACH-no: 01-2119487077-	< 2,5	Asp. Tox. 1, H304

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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 (50,01 < C ≤ 100) Eye Irrit. 2, H319	

Comments : The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.

Note L: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of

dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in

which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

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 general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : No additional information available.

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep container closed when not in use. Keep in a cool, well-ventilated place away from

heat.

Storage temperature : 0-40 °C

Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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Gear Heavy		
EU - Indicative Occupational Exposure Limit (IOEL)		
Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended	5 mg/m³ - ACGIH TLV (inhalable fraction).	
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)		
EU - Indicative Occupational Exposure Limit (IOEL)		

5 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

IOEL TWA

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

Eye protection			
Туре	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

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Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥0.35		EN ISO 374

Other skin protection

Materials for protective clothing:

Wear suitable protective clothing

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : brown. Odour : characteristic. Odour threshold : Not available Melting point : Not applicable

Freezing point : -30 °C - ASTM D5950 (pour point)

Boiling point : Not available : Not applicable Flammability

: Presents no particular fire or explosion hazard. Explosive properties

Lower explosion limit : Not available Upper explosion limit : Not available

Flash point : 232 °C - ASTM D92 (COC)

Auto-ignition temperature : Not available Decomposition temperature : Not available рΗ : Not available

Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Solubility : Water: Insoluble / Slightly miscible

Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure Not available Vapour pressure at 50°C : Not available

Density : 0,9 kg/l (15 °C) - ASTM D4052

Relative density : Not available Relative vapour density at 20°C : Not available Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 0 %

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts violently with (strong) oxidizers.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Acute toxicity (inhalation)	Not classified		
White mineral oil (petroleum) (8042-47-5)			
LD50 oral rat	> 5000 mg/kg		
LD50 dermal rabbit	> 2000 mg/kg		
LC50 Inhalation - Rat (Dust/Mist)	> 5 mg/l/4h		
Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)		
LD50 oral rat	> 5000 mg/kg		
LD50 dermal rabbit	> 5000 mg/kg		
LC50 Inhalation - Rat (Dust/Mist)	5,53 mg/l/4h		
Distillates (petroleum), hydrotreated heavy pa	araffinic (64742-54-7)		
LD50 oral rat	> 5000 mg/kg		
LD50 dermal rabbit	> 2000 mg/kg		
LC50 Inhalation - Rat	> 5,53 mg/l/4h		
Distillates (petroleum), solvent-dewaxed heav	y paraffinic (64742-65-0)		
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)		
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)			
LD50 oral rat	> 5000 mg/kg		
LD50 dermal rabbit	> 2000 mg/kg		

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5,53 mg/l/4h

LC50 Inhalation - Rat (Dust/Mist)

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LD50 oral rat 2000 mg/kg (OECD 401 method) Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Carcinogenicity : Not classified STOT-single exposure : Not classified STOT-si		l)dithiophosphoric acid with phosphorus oxide, propylene oxide and		
Skin corresion/irritation : Not classified Serious eye damage/irritation : Not classified Serious eye damage/irritation : Not classified Serious eye damage/irritation : Not classified Germ call mulagenicity : Not classified Reproductive toxiolity : Not classified Reproductive toxiolity : Not classified STOT-single exposure : Not class	amines, C12-14-alkyl (branched)	0000 (1, (0500 404 (1, 1)		
Serious eye damage/irritation				
Respiratory or skin sensilisation : Not classified Germ cell nutagenicity : Not classified Germ cell nutagenicity : Not classified Reproductive toxicity : Not classified Reproductive toxicity : Not classified STOT-single exposure : Not classified Distiliates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) LOAEL (rail, rat, 90 days) : 22000 mg/kg bodyweight/day NOAEL (subchronic, oral, animal/menale, 90 days) : 22000 mg/kg bodyweight NOAEL (subchronic, oral, animal/menale, 90 days) : 22000 mg/kg bodyweight Animal: rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (dermal, rat/rabbit, 90 days) : 215 mg/kg bodyweight Animal: rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) Distiliates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) : 125 mg/kg bodyweight Animal: rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Products of bis(4-methylpentan-2-y) dithiophosphoric acid with phosphorus oxide, propylene oxide and animas, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) : 150 mg/kg bodyweight Animal: rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Products of bis(4-methylpentan-2-y) dithiophosphoric acid with phosphorus oxide, propylene oxide and animas, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) : 150 mg/kg bodyweight Animal: rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Products of bis(4-methylpentan-2-y) dithiophosphoric acid with phosphorus oxide, propylene oxide animal rat, Animal sex: male. Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Products of Brown o				
Garnicogenicity : Not classified Carcinogenicity : Not classified Carcinogenicity : Not classified Serioducity toxicity : Not classified STOT-repeated Exposure : Not				
Carcinogenicity selective toxicity selective toxici				
Reproductive toxicity : Not classified STOT-ingealed exposure : Not classified STOT-ingealed S				
STOT-repeated exposure : Not classified Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) LOAEL (oral, rat, 90 days) 25 mg/kg bodyweight day NOAEL (subchronic, oral, animal/male, 90 days) 2000 mg/kg bodyweight Distillates (petroleum), solvent-dewaxed heav=v paraffinic (64742-55-0) 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) NOAEL (dermal, rat/rabbit, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (dermal, rat/rabbit, 90 days) 1000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Roaction products of bis(4-methylpentan-2-y-Jbithiophosphoric acid with phosphorus oxide, propylone oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard No days	Reproductive toxicity :	Not classified		
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight/day NOAEL (subchronic, oral, animal/male, 90 days) 2000 mg/kg bodyweight NOAEL (subchronic, oral, animal/male, 90 days) 2000 mg/kg bodyweight Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-55-0) 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) NOAEL (dermal, rat/rabbit, 90 days) 2100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity) Study in Rodents) NOAEL (dermal, rat/rabbit, 90 days) 2100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) 215 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yt)-dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard 150 mg/kg bodyweight Animal: rat Aspir	STOT-single exposure :	Not classified		
LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight/day NOAEL (subchronic, oral, animal/male, 90 days) 2000 mg/kg bodyweight NOAEL (subchronic, oral, animal/male, 90 days) 2000 mg/kg bodyweight Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) LOAEL (oral, rat, 90 days) 25 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (dermal, rat/rabbit, 90 days) 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose 90-Day Oral Toxicity Study) in Rodents) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yt)-dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard 150 mg/kg bodyweight Animal: rat Aspirat	STOT-repeated exposure :	Not classified		
NOAEL (subchronic, oral, animal/male, 90 days) NOAEL (subchronic, oral, animal/menale, 90 days) NOAEL (subchronic, oral, animal/menale, 90 days) NOAEL (coral, rat, 90 days) NOAEL (dermal, rat/rabbit, 90 days) NOAEL (dral, rat, 90 days) NOAEL	Distillates (petroleum), solvent-dewaxed light	t paraffinic (64742-56-9)		
NOAEL (subchronic, oral, animal/female, 90 days) Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) LOAEL (oral, rat, 90 days) NOAEL (dermal, rat/rabbit, 90 days) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) Reaction products of bis(4-methylpentan-2-ylatithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) Spiral Toxicity: 21/28-Day Study) Reaction products of bis(4-methylpentan-2-ylatithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) Spiral Toxicity: 21/28-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) Spiral Toxicity: 21/28-Day Study) 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphorus oxide, propylene oxide and amines, C12-14-alkyl distribution in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphorus oxide, propylene oxide and amines, C12-14-alkyl distribution in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphorus oxide, propylene oxide and amines, C12-14-alkyl distribution in Rodents) Reaction products of bis(4-methylpentan-2-ylatithiophosphorus oxide, propylene oxide and a	LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day		
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) NOAEL (dermal, rat/rabbit, 90 days) *1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study) Distillates (petroleum), hydrotreated light parafffinic (64742-55-8) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard : Not classified Gear Heavy Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-54-7) Viscosity, kinematic 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic 20,5 mm²/s	NOAEL (subchronic, oral, animal/male, 90 days)	≥ 2000 mg/kg bodyweight		
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) NOAEL (dermal, rat/rabbit, 90 days) 2 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study) Distillates (petroleum), hydrotreated light parafffinic (64742-55-8) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard 150 mg/kg bodyweight Animal: rat Aspiration hazard Not classified Gear Heavy Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic 20,5 mm²/s 40,0 mm²/s 20,5 mm²/s Not classified	NOAEL (subchronic, oral, animal/female, 90 days)	≥ 2000 mg/kg bodyweight		
Repeated Dose 90-Day Oral Toxicity Study in Rodents NOAEL (dermal, rat/rabbit, 90 days) ≈ 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study) Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yl-dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard Not classified	Distillates (petroleum), solvent-dewaxed hear	vy paraffinic (64742-65-0)		
Dermal Toxicity: 21/28-Day Study) Distillates (petroleum), hydrotreated light par-fflinic (64742-55-8) LOAEL (oral, rat, 90 days) Reaction products of bis(4-methylpentan-2-yl)-dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard Not classified Gear Heavy Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light parafflinic (64742-56-9) Viscosity, kinematic 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-56-0) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-65-8) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Viscosity, kinematic < 20,5 mm²/s (40°C)-45-8-8)	LOAEL (oral, rat, 90 days)			
LOAEL (oral, rat, 90 days) 125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 Reaction products of bis(4-methylpentan) sold and amines, C12-14-alkyl (branched) 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat. Animal sex: male, Guideline: OECD Guideline 408 150 mg/kg bodyweight Animal: rat. Animal sex: male, Guideline: OECD Gu	NOAEL (dermal, rat/rabbit, 90 days)			
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) 150 mg/kg bodyweight Animal: rat Aspiration hazard Not classified Gear Heavy Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic < 20.5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20.5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20.5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20.5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20.5 mm²/s	Distillates (petroleum), hydrotreated light par	raffinic (64742-55-8)		
amines, C12-14-alkyl (branched) NOAEL (oral, rat, 90 days) Aspiration hazard : Not classified Gear Heavy Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic Aliphatic, alicyclic or aromatic hydrocarbon Viscosity, kinematic 20,5 mm²/s Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic 420,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic 420,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic 420,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic 420,5 mm²/s	LOAEL (oral, rat, 90 days)			
Aspiration hazard : Not classified Gear Heavy Viscosity, kinematic		l)dithiophosphoric acid with phosphorus oxide, propylene oxide and		
Viscosity, kinematic 149 mm²/s (40 °C) - ASTM D7042 Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat		
Viscosity, kinematic Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic Aliphatic, alicyclic or aromatic hydrocarbon Ves Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Aspiration hazard :	Not classified		
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Ves Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s 4 20,5 mm²/s	Gear Heavy			
Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Viscosity, kinematic	149 mm²/s (40 °C) - ASTM D7042		
Aliphatic, alicyclic or aromatic hydrocarbon Pistillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic Aliphatic, alicyclic or aromatic hydrocarbon Pistillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic Viscosity, kinematic Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic	Distillates (petroleum), solvent-dewaxed light	t paraffinic (64742-56-9)		
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Viscosity, kinematic	< 20,5 mm²/s		
Viscosity, kinematic < 20,5 mm²/s Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Aliphatic, alicyclic or aromatic hydrocarbon	Yes		
Aliphatic, alicyclic or aromatic hydrocarbon Ves Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s < 20,5 mm²/s	Distillates (petroleum), hydrotreated heavy p	araffinic (64742-54-7)		
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0) Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Viscosity, kinematic	< 20,5 mm²/s		
Viscosity, kinematic < 20,5 mm²/s @40°C Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Aliphatic, alicyclic or aromatic hydrocarbon	Yes		
Aliphatic, alicyclic or aromatic hydrocarbon Yes Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Distillates (petroleum), solvent-dewaxed hear	vy paraffinic (64742-65-0)		
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8) Viscosity, kinematic < 20,5 mm²/s	Viscosity, kinematic	< 20,5 mm²/s @40°C		
Viscosity, kinematic < 20,5 mm²/s	Aliphatic, alicyclic or aromatic hydrocarbon	Yes		
	Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)			
Aliphatic, alicyclic or aromatic hydrocarbon Yes	Viscosity, kinematic	< 20,5 mm²/s		
	Aliphatic, alicyclic or aromatic hydrocarbon	Yes		

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11.2. Information on other hazards

No additional information available

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.

Hazardous to the aquatic environment, short-term

: Not classified : Not classified

Hazardous to the aquatic environment, long-term

(chronic)

Gear Heavy	
ErC50 algae	> 100 mg/l
NOEC chronic fish	> 100 mg/l
NOEC chronic crustacea	> 100 mg/l
NOEC chronic algae	> 100 mg/l

White mineral oil (petroleum) (8042-47-5)

LC50 - Fish [1]	> 400000 p	pm

LC50 - Fish [1] > 100 mg/l (Pimephales promelas, 96h) (OECD 203 method)		
EC50 - Crustacea [1]	> 10000 mg/l (Gammarus pulex, 48h) (OECD 202 method)	
EC50 72h - Algae [1]	> 100 mg/l	
NOEC (acute)	≥ 100 mg/l (Pseudokirchnerella subcapitata, 72h) (OECD 201 method)	
NOEC chronic crustacea	10 mg/l (Daphnia magna, 21d) (OECD 211 method)	

Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

LC50 - Fish [1]	> 100 mg/l 96h
EC50 - Crustacea [1]	> 10000 mg/l
EC50 72h - Algae [1]	≥ 100 mg/l
NOEC chronic crustacea	10 mg/l 21d

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

LC50 - Fish [1]	24 mg/l (Oncorhynchus mykiss, 96h) (OECD 203 method)	
LC50 - Fish [2]	8,5 mg/l (Pimephales promelas, 96h) (OECD 203 method)	
EC50 - Crustacea [1]	91,4 mg/l (Daphnia magna, 48h) (OECD 202 method)	
EC50 72h - Algae [1]	6,4 mg/l (Pseudokirchnerella subcapitata, 96h) (OECD 201 method)	
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 chronic crustacea	0,12 mg/l (Daphnia magna, 21d) (OECD 211 method)	
NOEC chronic algae	1,7 mg/l (Pseudokirchnerella subcapitata, 96h) (OECD 201 method)	

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12.2. Persistence and degradability

Gear Heavy			
Persistence and degradability Not rapidly degradable			
White mineral oil (petroleum) (8042-47-5)			
Persistence and degradability	Rapidly degradable		
Distillates (petroleum), solvent-dewaxed light	paraffinic (64742-56-9)		
Persistence and degradability	Potentially biodegradable.		
Distillates (petroleum), hydrotreated heavy pa	raffinic (64742-54-7)		
Persistence and degradability Not rapidly degradable			
Biodegradation	31 % (28d) (OECD 301F method)		
Distillates (petroleum), solvent-dewaxed heav	y paraffinic (64742-65-0)		
Persistence and degradability Not rapidly degradable			
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)			
Persistence and degradability	Not established.		
Biodegradation	31 % (OECD 301F method)		
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			
Persistence and degradability	Not rapidly degradable		
Biodegradation	3,6 % Sturm (28 d) [ASTM D-5864-95]		

12.3. Bioaccumulative potential

Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)			
Partition coefficient n-octanol/water (Log Pow) > 3			
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)			
Partition coefficient n-octanol/water (Log Pow) > 6			
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)			
Partition coefficient n-octanol/water (Log Pow) < 0,3 (40°C) (OECD 117 method)			

12.4. Mobility in soil

Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)	
Ecology - soil	Insoluble in water.

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9), Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation

Waste treatment methods

Sewage disposal recommendations
Product/Packaging disposal recommendations

Additional information

European List of Waste (LoW, EC 2000/532)

HP Code

- : Disposal must be done according to official regulations.
- : Do not allow into drains or water courses. Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Disposal must be done according to official regulations.
- : Dispose in a safe manner in accordance with local/national regulations.
- : Do not re-use empty containers.
- : 13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils
- : HP4 "Irritant skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

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	IATA	ADN	RID
4.1. UN number or ID I	number			
Not regulated for transport				
14.2. UN proper shippir	ng name			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard	class(es)			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental ha	zards			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

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Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

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)	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)	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)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

Dual-Use Regulation (428/2009)

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

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

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

Drug Precursors Regulation (273/2004)

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

15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out:

Distillates (petroleum), solvent-dewaxed light paraffinic

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
	Type of product	Added	
1.2	Function or use category	Removed	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Removed	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures general	Added	
4.2	Symptoms/effects after skin contact	Added	
4.2	Symptoms/effects after inhalation	Added	
4.2	Symptoms/effects after ingestion	Added	
4.2	Symptoms/effects after eye contact	Added	
5.2	Explosion hazard	Added	
5.2	Fire hazard	Modified	
5.2	Hazardous decomposition products in case of fire	Modified	
5.3	Firefighting instructions	Added	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Added	
6.1	General measures	Added	
6.3	For containment	Added	
7.1	Additional hazards when processed	Added	
7.2	Packaging materials	Added	
7.2	Technical measures	Added	
8.2	Personal protective equipment	Added	
13.1	Sewage disposal recommendations	Added	
13.1	Additional information	Added	
13.1	Regional waste regulation	Added	

Abbreviations and acronyms:	
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

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and ac	ronyms:
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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.

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Full text of H- and EUH-statements:	
EUH210	Safety data sheet available on request.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
Skin Sens. 1B	Skin sensitisation, category 1B

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.