

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

1.1 Product identifier

Product name : RUBIA OPTIMA 5100 XFE 5W-20
Product code : C37RECCJ0
Product description : Not available.
Product type : Liquid.
Other means of identification : Not available.

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

Identified uses

Motor oil

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
562 Avenue du Parc de L'île
92029 Nanterre Cedex FRANCE
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71
rm.msds-lubs@totalenergies.com

TotalEnergies Marketing UK Limited
10 Upper Bank Street (19th floor)
Canary Wharf,
London E14 5BF
UNITED KINGDOM
Tel: +44 (0)20 7339 8000
Fax: +44 (0)20 7339 8033
rm.gb-msds@totalenergies.com

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Service (NPIS): 111

Supplier

Telephone number : Emergency telephone: +44 1235 239670

Hours of operation : Edit the content of sentence <GB Telephone Number - Supplier - Hours of operation> to define this output

Information limitations : Edit the content of sentence <GB Telephone Number - Supplier - Information limitations> to define this output



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Not classified.

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown ecotoxicity : Contains 2.2% of components with unknown hazards to the aquatic environment

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Contains C14-16-18 Alkyl phenol. May produce an allergic reaction. Safety data sheet available on request.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1$ %.
This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : Hazard of slipping on spilt product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

**SECTION 3: Composition/information on ingredients**

Product/ingredient name	Identifiers	%	Classification	Type
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	REACH #: 01-2119474889-13 EC: 276-738-4 CAS: 72623-87-1 Index: 649-483-00-5	≥75 - ≤90	Asp. Tox. 1, H304	[1]
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	REACH #: 01-0000015551-76 EC: 406-040-9 CAS: 125643-61-0 Index: 607-530-00-7	≤5	Aquatic Chronic 4, H413	[1]
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≤3	Asp. Tox. 1, H304	[1]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	REACH #: 01-2119471299-27 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6	≤3	Asp. Tox. 1, H304	[1]
Distillates (petroleum), solvent-dewaxed light paraffinic	REACH #: 01-2119480132-48 EC: 265-159-2 CAS: 64742-56-9 Index: 649-469-00-9	≤3	Asp. Tox. 1, H304	[1]
Paraffin oils (petroleum), catalytic dewaxed heavy	REACH #: 01-2119487080-42 EC: 265-174-4 CAS: 64742-70-7	≤3	Asp. Tox. 1, H304	[1]
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	REACH #: 01-2119543726-33 EC: 298-577-9 CAS: 93819-94-4	<2.5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1]
C14-16-18 Alkyl phenol	REACH #: 01-2119498288-19 EC: 931-468-2	≤0.3	Skin Sens. 1B, H317 STOT RE 2, H373	[1]
			See Section 16 for the full text of the H statements declared above.	

Additional information : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

**SECTION 5: Firefighting measures****5.3 Advice for firefighters**

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

**SECTION 7: Handling and storage**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

Reportable hazardous constituent(s) contained in UVCB- and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Local
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Systemic
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	DNEL	Long term Dermal	8.6 mg/kg bw/day	Workers	Systemic



SECTION 8: Exposure controls/personal protection

Distillates (petroleum), hydrotreated heavy paraffinic	DNEL	Long term Inhalation	0.74 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	4.3 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Oral	0.43 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.006 mg/cm ²	Workers	Local	
	DNEL	Long term Oral	0.16 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.22 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	0.33 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	0.74 mg/m ³	General population	Systemic	
	DNEL	Short term Dermal	1 mg/cm ²	Workers	Local	
	DNEL	Long term Inhalation	2.33 mg/m ³	Workers	Systemic	
	DNEL	Short term Dermal	8.33 mg/cm ²	General population	Local	
	DNEL	Short term Dermal	20 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Oral	50 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	50 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	875 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	1750 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic	
	Distillates (petroleum), solvent-dewaxed heavy paraffinic	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local
		DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
DNEL		Long term Inhalation	5.58 mg/m ³	Workers	Local	
DNEL		Long term Inhalation	5.58 mg/m ³	Workers	Local	
DNEL		Long term Inhalation	2.73 mg/m ³	Workers	Systemic	
DNEL		Long term Dermal	970 µg/kg bw/day	Workers	Systemic	
DNEL		Long term Inhalation	1.19 mg/m ³	General population	Local	
DNEL		Long term Oral	740 µg/kg bw/day	General population	Systemic	
DNEL		Long term Oral	0.74 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic	
DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local		



SECTION 8: Exposure controls/personal protection

Distillates (petroleum), solvent-dewaxed light paraffinic	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local	
	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local	
Paraffin oils (petroleum), catalytic dewaxed heavy	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local	
	DNEL	Long term Oral	0.24 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.29 mg/kg bw/day	General population	Systemic	
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	DNEL	Long term Dermal	0.58 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	2.11 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	8.31 mg/m ³	Workers	Systemic	
	C14-16-18 Alkyl phenol	DNEL	Long term Inhalation	1.17 mg/m ³	Workers	Systemic
		DNEL	Long term Dermal	0.3 mg/kg bw/day	Workers	Systemic

PNECs

Product/substance	Compartment Detail	Value	Method Detail	
Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	Fresh water	0.0043 mg/l	-	
	Marine water	0.00043 mg/l	-	
	Fresh water sediment	233 mg/kg dwt	-	
	Marine water sediment	23.3 mg/kg dwt	-	
	Soil	189 mg/kg	-	
	Distillates (petroleum), hydrotreated heavy paraffinic	Secondary Poisoning	9.33 mg/kg	-
		Secondary Poisoning	9.33 mg/kg	-
	Distillates (petroleum), solvent-dewaxed heavy paraffinic zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	Fresh water	0.004 mg/l	-
		Marine water	0.0046 mg/l	-
		Fresh water sediment	0.0116 mg/kg dwt	-
Marine water sediment		0.00116 mg/kg	-	



SECTION 8: Exposure controls/personal protection

C14-16-18 Alkyl phenol	Soil	dwt 0.00528 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
	Secondary Poisoning	10.67 mg/kg dwt	-
	Fresh water	0.1 mg/l	-
	Marine water	0.01 mg/l	-
	Fresh water sediment	4266.16 mg/kg	-
	Marine water sediment	dwt 426.62 mg/kg dwt	-
	Soil	852.58 mg/kg dwt	-
	Sewage Treatment Plant	100 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. EN 166

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hydrocarbon-proof gloves
nitrile rubber
Fluorinated rubber

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : None under normal use conditions. If these are not sufficient to maintain exposure below the OEL, suitable respiratory protection must be worn (Type A/P1).

**SECTION 8: Exposure controls/personal protection**

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties**Appearance**

Physical state : Liquid.
Colour : Blue.
Odour : Characteristic.
Odour threshold : Not available.
Melting point/freezing point : Not applicable.
Initial boiling point and boiling range : Technically not possible to measure [ISO 3405]
Flammability (solid, gas) : Not applicable.
Upper/lower flammability or explosive limits : Lower: 0.9%
Upper: 7%
Flash point : Open cup: 228°C (442.4°F) [ISO 2592]
Auto-ignition temperature : >250°C (>482°F) [ASTM E 659]
Decomposition temperature : 290°C
pH : Not applicable. Product is non-soluble (in water).
Viscosity : Kinematic (40°C): 400 mm²/s [ISO 3104]
Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.
Partition coefficient: n-octanol/ water : Not applicable.
Vapour pressure : <0.013 kPa (<0.1 mm Hg) [room temperature]
Not applicable. [50°C (122°F)]
Relative density : 0.858 [ISO 12185]
Density : 0.858 g/cm³ [15°C (59°F)] [ISO 12185]
Vapour density : >2 [Air = 1]
Particle characteristics
Median particle size : Not applicable.

9.2 Other information

Oxidising properties : This product is not considered oxidising based on chemical structure considerations

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
- 10.5 Incompatible materials** : Strong oxidising agents
- 10.6 Hazardous decomposition products** : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Product/substance	Result	Species	Dose	Exposure	Test
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	Read across OECD 401
Distillates (petroleum), hydrotreated heavy paraffinic	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours	Read across OECD 403
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	Read across OECD 401
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	Read across OECD 403
	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 420
Distillates (petroleum), solvent-dewaxed light paraffinic	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401
Paraffin oils (petroleum), catalytic dewaxed heavy	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	-
	LC50 Inhalation Vapour	Rat	80.4 mg/l	1 hours	-

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zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	LC50 Inhalation Vapour	Rat	20.1 mg/l	4 hours	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-	-
	LD50 Oral	Rat	>5000 mg/kg	-	-
	LC50 Inhalation Dusts and mists	Rat - Male	>2 mg/l	1 hours	OECD 403
C14-16-18 Alkyl phenol	LD50 Dermal	Rabbit - Male, Female	>3160 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male	2600 mg/kg	-	-
	LD50 Dermal	Rat	2000 mg/kg	-	-
	LD50 Oral	Rat	2000 mg/kg	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	N/A	N/A	N/A	N/A	5.1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	N/A	N/A	N/A	40.05	N/A
Paraffin oils (petroleum), catalytic dewaxed heavy	N/A	N/A	N/A	20.1	5.1
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	2600	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	Eyes - Irritant	Rabbit	-	-	-
	Skin - Irritant	Rabbit	-	4 hours	OECD 404

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitisation

Conclusion/Summary :

Skin : Based on available data, the classification criteria are not met. Contains sensitizer. May produce an allergic reaction.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Product/substance	Test	Experiment	Result
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.



SECTION 11: Toxicological information

Carcinogenicity

Product/substance	Result	Species	Dose	Exposure
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	Negative - Oral - TC	Rat - Male, Female	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	Negative	Negative	Negative	Rat - Male, Female	Oral	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Product/substance	Result	Species	Dose	Exposure
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	Negative - Oral	Rat - Male, Female	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Product/substance	Category	Route of exposure	Target organs
14-16-18 Alkyl phenol	Category 2	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-dewaxed light paraffinic	ASPIRATION HAZARD - Category 1
Paraffin oils (petroleum), catalytic dewaxed heavy	ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
 irritation
 dryness
 cracking
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Product/substance	Result	Species	Dose	Exposure
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	Sub-chronic LOAEL Dermal	Rabbit - Male, Female	70 mg/kg	-
	Sub-chronic NOAEL Oral	Rat - Male, Female	160 mg/kg	-

- Conclusion/Summary** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : During use in engines, contamination of oil with low levels of combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.



SECTION 12: Ecological information

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Acute EL50 >100 mg/l	Algae - Pseudokirchneriella subcapitata	48 hours	OECD 201
	Acute EL50 >10000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LL50 >100 mg/l	Fish - Pimephales promelas	96 hours	OECD 203
	Chronic NOEL >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Chronic NOEL >1000 mg/l	Crustaceans - Daphnia magna	21 days	OECD 211
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Acute EC50 >10000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Chronic NOEL >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Chronic NOEL >1000 mg/l	Crustaceans - Daphnia magna	21 days	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Acute EC50 >100 mg/l	Algae - Pseudokirchnerella subcapitata	72 hours	OECD 201
	Acute EC50 >10000 mg/l	Daphnia - Daphnia magna	48 hours	OECD 202
	Chronic NOEL 10 mg/l	Daphnia - Daphnia magna	21 days	OECD 211
	Chronic NOEL >1000 mg/l	Fish - Oncorhynchus mykiss	21 days	-
Distillates (petroleum), solvent-dewaxed light paraffinic	Acute EL50 >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Acute EL50 10000 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute EL50 ≥100 mg/l	Fish - Pimephales promelas	96 hours	OECD 203
	Chronic NOEL >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
	Chronic NOEL >1000 mg/l	Crustaceans - Daphnia magna	21 days	OECD 211
Paraffin oils (petroleum), catalytic dewaxed heavy	Acute EC50 10000 mg/l	Daphnia	48 hours	-
	Acute NOEL 101 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	Acute EC50 2 mg/l	Algae - Selenastrum capricornutum	96 hours	OECD 201
	Acute EC50 5.4 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
	Acute LC50 4.5 mg/l	Fish - Oncorhynchus mykiss	96 hours	OECD 203



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TotalEnergies

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SECTION 12: Ecological information

C14-16-18 Alkyl phenol	Chronic NOEC 1 mg/l	Algae - Selenastrum capricornutum	96 hours	OECD 201
	Chronic NOEC 0.4 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 211
	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours	OECD 202

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 301F	31 % - Not readily - 28 days	-	Activated sludge
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	OECD 301B	2 % - Not readily - 28 days	-	Activated sludge
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 301F	31 % - Not readily - 28 days	-	Activated sludge
Distillates (petroleum), solvent-dewaxed light paraffinic	OECD 301F	31 % - Not readily - 28 days	-	Activated sludge
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	OECD 301B	0 % - Not readily - 28 days	-	Activated sludge

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	-	-	Not readily
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	-	-	Not readily
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
Distillates (petroleum), solvent-dewaxed heavy paraffinic	-	-	Readily
Distillates (petroleum), solvent-dewaxed light paraffinic	-	-	Not readily
Paraffin oils (petroleum), catalytic dewaxed heavy	-	-	Not readily
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	-	-	Not readily

12.3 Bioaccumulative potential

**SECTION 12: Ecological information**

Product/substance	LogP _{ow}	BCF	Potential
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	9.2	260	low
Distillates (petroleum), hydrotreated heavy paraffinic	>4	-	high
Distillates (petroleum), solvent-dewaxed light paraffinic	3.1	-	low
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	0.9	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**SECTION 13: Disposal considerations**

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 02 05*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB) /REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances



SECTION 15: Regulatory information

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia inventory (AIIC)** : Not determined.
- Canada inventory** : All components are listed or exempted.
- China inventory (IECSC)** : All components are listed or exempted.
- Europe inventory** : All components are listed or exempted.
- Japan inventory** : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

**SECTION 15: Regulatory information**

New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: Not determined.
Taiwan Chemical Substances Inventory (TCSI)	: Not determined.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- PNEC = Predicted No Effect Concentration
- LC50 = Median lethal concentration
- LD50 = Median lethal dose
- OEL = Occupational Exposure Limit
- VOC = Volatile Organic Compound
- UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
- NOEC No Observed Effect Concentration
- QSAR = Quantitative Structure–Activity Relationship

Procedure used to derive the classification

Not classified.

Full text of abbreviated H statements

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications

**SECTION 16: Other information**

Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.