

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

1.1 Product identifier

Product name : RUBIA OPTIMA 3500 FE 5W-30
Product code : C3CRDMHPK
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

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 61.9% 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 hazard statement.

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.

Labelling element REACH Annex XVII : 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

Product/ingredient name	Identifiers	%	Classification	Type
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7	≥ 50 - ≤ 75	Asp. Tox. 1, H304	[1]
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≤ 10	Asp. Tox. 1, H304	[1]
Lubricating oils (petroleum),	REACH #:	≤ 5	Asp. Tox. 1, H304	[1]

SECTION 3: Composition/information on ingredients

C15-30, hydrotreated neutral oil-based	01-2119474878-16 EC: 276-737-9 CAS: 72623-86-0 Index: 649-482-00-X REACH #:	≤5	Aquatic Chronic 4, H413	[1]
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	01-0000015551-76 EC: 406-040-9 CAS: 125643-61-0 REACH #:	≤5	Asp. Tox. 1, H304	[1]
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	01-2119474889-13 EC: 276-738-4 CAS: 72623-87-1 Index: 649-483-00-5 REACH #:	≤3	Asp. Tox. 1, H304	[1]
Paraffin oils (petroleum), catalytic dewaxed heavy	01-2119487080-42 EC: 265-174-4 CAS: 64742-70-7 REACH #:	≤3	Asp. Tox. 1, H304	[1]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	01-2119471299-27 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6 REACH #:	≤3	Asp. Tox. 1, H304	[1]
Distillates (petroleum), solvent-dewaxed light paraffinic	01-2119480132-48 EC: 265-159-2 CAS: 64742-56-9 Index: 649-469-00-9 REACH #:	<2.5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1]
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	01-2119543726-33 EC: 298-577-9 CAS: 93819-94-4 REACH #:	≤0.3	Skin Sens. 1B, H317 STOT RE 2, H373	[1]
C14-16-18 Alkyl phenol	01-2119498288-19 EC: 931-468-2		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** : Irritation
redness
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
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

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. Absorb with an inert 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. 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. Dispose of via a licensed waste disposal contractor.

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).
 See Section 10 for incompatible materials before handling or use.
- 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

Do not store above the following temperature: 60°C (140°F). 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.

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.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) 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	Result
OTHER LUBRICANT BASE OILS IP 346 < 3% w/w; Viscosity ≤ 20.5 mm ² /s at 40°C	DNEL - General population - Long term - Oral 0.74 mg/kg bw/day <u>Effects</u>: Systemic DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects</u>: Systemic DNEL - General population - Long term - Inhalation 1.19 mg/m³ <u>Effects</u>: Local DNEL - Workers - Long term - Inhalation 2.73 mg/m³ <u>Effects</u>: Systemic DNEL - Workers - Long term - Inhalation 5.58 mg/m³ <u>Effects</u>: Local
Distillates (petroleum), hydrotreated heavy	DNEL - General population - Long term - Oral

SECTION 8: Exposure controls/personal protection

paraffinic	0.74 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 1.19 mg/m³ <u>Effects:</u> Local DNEL - Workers - Long term - Inhalation 2.73 mg/m³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation 5.58 mg/m³ <u>Effects:</u> Local
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	DNEL - Workers - Long term - Inhalation 5.4 mg/m³ <u>Effects:</u> Local DNEL - General population - Long term - Inhalation 1.2 mg/m³ <u>Effects:</u> Local DNEL - General population - Long term - Oral 0.74 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 1.19 mg/m³ <u>Effects:</u> Local DNEL - Workers - Long term - Inhalation 2.73 mg/m³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation 5.58 mg/m³ <u>Effects:</u> Local
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl) propionate	DNEL - Workers - Long term - Dermal 0.006 mg/cm² <u>Effects:</u> Local DNEL - General population - Long term - Oral 0.16 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 0.22 mg/kg bw/day

SECTION 8: Exposure controls/personal protection

Effects: Systemic

DNEL - General population - Long term - Dermal

0.33 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

0.74 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Dermal

1 mg/cm²

Effects: Local

DNEL - Workers - Long term - Inhalation

2.33 mg/m³

Effects: Systemic

DNEL - General population - Short term - Dermal

8.33 mg/cm²

Effects: Local

DNEL - Workers - Short term - Dermal

20 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Oral

50 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Dermal

50 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

875 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

1750 mg/m³

Effects: Systemic

OTHER LUBRICANT BASE OILS IP 346 <
3% w/w; Viscosity ≤ 20.5 mm²/s at 40°C

DNEL - General population - Long term - Oral

0.74 mg/kg bw/day

Effects: Local

DNEL - General population - Long term - Oral

0.74 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

0.97 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

1.19 mg/m³

Effects: Local

SECTION 8: Exposure controls/personal protection

Paraffin oils (petroleum), catalytic dewaxed heavy	DNEL - Workers - Long term - Inhalation 2.73 mg/m ³ <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Inhalation 5.58 mg/m ³ <u>Effects:</u> Local
	DNEL - General population - Long term - Oral 0.74 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - General population - Long term - Inhalation 1.19 mg/m ³ <u>Effects:</u> Local
	DNEL - Workers - Long term - Inhalation 2.73 mg/m ³ <u>Effects:</u> Systemic
Distillates (petroleum), solvent-dewaxed heavy paraffinic	DNEL - Workers - Long term - Inhalation 5.58 mg/m ³ <u>Effects:</u> Local
	DNEL - General population - Long term - Oral 0.74 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - General population - Long term - Inhalation 1.19 mg/m ³ <u>Effects:</u> Local
	DNEL - Workers - Long term - Inhalation 2.73 mg/m ³ <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Inhalation 5.58 mg/m ³ <u>Effects:</u> Local
Distillates (petroleum), solvent-dewaxed light paraffinic	DNEL - General population - Long term - Oral 0.74 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 0.97 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - General population - Long term - Inhalation
	DNEL - Workers - Long term - Inhalation

SECTION 8: Exposure controls/personal protection

	1.19 mg/m ³ <u>Effects:</u> Local
	DNEL - Workers - Long term - Inhalation 2.73 mg/m ³ <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Inhalation 5.58 mg/m ³ <u>Effects:</u> Local
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	DNEL - General population - Long term - Oral 0.24 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - General population - Long term - Dermal 0.29 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 0.58 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - General population - Long term - Inhalation 2.11 mg/m ³ <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Inhalation 8.31 mg/m ³ <u>Effects:</u> Systemic
C14-16-18 Alkyl phenol	DNEL - Workers - Long term - Inhalation 1.17 mg/m ³ <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 0.3 mg/kg bw/day <u>Effects:</u> Systemic

PNECs

Product/substance	Result
OTHER LUBRICANT BASE OILS IP 346 < 3% w/w; Viscosity ≤ 20.5 mm ² /s at 40°C	Secondary Poisoning 9.33 mg/kg
Distillates (petroleum), hydrotreated heavy paraffinic	Secondary Poisoning 9.33 mg/kg
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl) propionate	Fresh water 0.0043 mg/l
	Marine water 0.00043 mg/l
	Fresh water sediment 233 mg/kg dwt

SECTION 8: Exposure controls/personal protection

	Marine water sediment 23.3 mg/kg dwt
	Soil 189 mg/kg
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Secondary Poisoning 9.33 mg/kg
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 dwt
	Soil 0.00528 mg/kg
	Sewage Treatment Plant 100 mg/l
	Secondary Poisoning 10.67 mg/kg dwt
C14-16-18 Alkyl phenol	Fresh water 0.1 mg/l
	Marine water 0.01 mg/l
	Fresh water sediment 4266.16 mg/kg dwt
	Marine water sediment 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

SECTION 8: Exposure controls/personal protection

- 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** : In case of contact through splashing: 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** : ☒ Wear work clothing with long sleeves.
Protective shoes or boots.
- 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).
- 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. [Clear]
- Colour** : ☒ Brown.
- Odour** : Characteristic.
- Melting point/freezing point** : Technically not possible to measure
- Initial boiling point and boiling range** : ☒ 316°C (>600.8°F) [ISO 3405]
- Flammability (solid, gas)** : Non-flammable.
- Upper/lower flammability or explosive limits** : Lower: 0.9%
Upper: 7%
- Flash point** : ☒ Open cup: 211°C (411.8°F) [Cleveland Open Cup (COC)]
- Auto-ignition temperature** : ☒ 211°C (>411.8°F) [ASTM E 659]
- Decomposition temperature** : Not applicable.
- pH** : Not applicable. Product is non-soluble (in water).

SECTION 9: Physical and chemical properties

Viscosity : ☒ Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): 72.2 mm²/s [ISO 3104]

Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure : ☒ 0.01 kPa (<0.075 mm Hg) [room temperature] [ISO 3104]
Not applicable. [50°C (122°F)]

Relative density : ☒ 0.852 [ISO 12185]

Density : ☒ 0.852 g/cm³ [15°C (59°F)] [ISO 12185]

Vapour density : >2 [Air = 1]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Pour point : ☒ -36°C (-32.8°F)

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 : ☒ No specific data.

10.5 Incompatible materials : Strong oxidising agents

10.6 Hazardous decomposition products : ☒ Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	Result

SECTION 11: Toxicological information

Distillates (petroleum), hydrotreated heavy paraffinic

Rat - Male, Female - Oral - LD50

>5000 mg/kg

OECD [401 Read across]

Rabbit - Male, Female - Dermal - LD50

>5000 mg/kg

OECD [402 Read across]

Rat - Male, Female - Inhalation - LC50 Dusts and mists

>5 mg/l [4 hours]

OECD [403 Read across]

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

Rat - Oral - LD50

>5000 mg/kg

OECD [401]

Rabbit - Dermal - LD50

>5000 mg/kg

OECD [402]

Rat - Inhalation - LC50 Dusts and mists

5.53 mg/l [4 hours]

OECD [403]

OTHER LUBRICANT BASE OILS IP 346 < 3% w/w; Viscosity ≤ 20.5 mm²/s at 40°C

Rat - Male, Female - Oral - LD50

>5000 mg/kg

OECD [401 Read across]

Rabbit - Male, Female - Dermal - LD50

>5000 mg/kg

OECD [402 Read across]

Rat - Inhalation - LC50 Dusts and mists

5.1 mg/l [4 hours]

OECD [403]

Paraffin oils (petroleum), catalytic dewaxed heavy

Rat - Oral - LD50

>5000 mg/kg

Rabbit - Dermal - LD50

>5000 mg/kg

Rat - Inhalation - LC50 Vapour

80.4 mg/l [1 hours]

Rat - Inhalation - LC50 Vapour

20.1 mg/l [4 hours]

Rat - Inhalation - LC50 Dusts and mists

5.1 mg/l [4 hours]

Distillates (petroleum), solvent-dewaxed heavy paraffinic

Rabbit - Dermal - LD50

>5000 mg/kg

OECD [402]

Rat - Oral - LD50

>5000 mg/kg

SECTION 11: Toxicological information

OECD [420]

Rat - Inhalation - LC50 Dusts and mists

>5 mg/l [4 hours]

OECD [403]

Distillates (petroleum), solvent-dewaxed light paraffinic

Rat - Oral - LD50

>5000 mg/kg

OECD [401]

Rabbit - Dermal - LD50

>5000 mg/kg

OECD [402]

Rat - Inhalation - LC50 Dusts and mists

>5 mg/l [4 hours]

OECD [403]

zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)

Rat - Male - Oral - LD50

2600 mg/kg

Rabbit - Male, Female - Dermal - LD50

>3160 mg/kg

OECD [402]

Rat - Male - Inhalation - LC50 Dusts and mists

>2 mg/l [1 hours]

OECD [403]

C14-16-18 Alkyl phenol

Rat - Oral - LD50

2000 mg/kg

Rat - Dermal - LD50

2000 mg/kg

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), C15-30, hydrotreated neutral oil-based	N/A	N/A	N/A	N/A	5.53
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	N/A	N/A	N/A	N/A	5.1
Paraffin oils (petroleum), catalytic dewaxed heavy	N/A	N/A	N/A	20.1	5.1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	N/A	N/A	N/A	40.05	N/A
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	2600	N/A	N/A	N/A	N/A

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

Skin corrosion/irritation

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

Serious eye damage/eye irritation

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

SECTION 11: Toxicological information

Respiratory corrosion/irritation

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

Respiratory or skin sensitization

Skin

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

Respiratory

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

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Product/substance	Result
14-16-18 Alkyl phenol	STOT RE 2, H373

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

Aspiration hazard

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.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Irritation
redness
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.

SECTION 11: Toxicological information

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
☒ Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	Sub-chronic - Rat - Male, Female - Oral - NOAEL OECD [422] 160 mg/kg Sub-chronic - Rabbit - Male, Female - Dermal - LOAEL OECD [410] 70 mg/kg

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

☒ The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/substance	Result
☒ Distillates (petroleum), hydrotreated heavy paraffinic	Acute - EC50 OECD [202] Crustaceans - <i>Daphnia magna</i> >10000 mg/l [48 hours] <u>Effect</u> : Mobility Acute - EC50 OECD [201] Algae - <i>Pseudokirchneriella subcapitata</i> >100 mg/l [72 hours] <u>Effect</u> : (growth rate) Chronic - NOEL Crustaceans - <i>Daphnia magna</i> >1000 mg/l [21 days] <u>Effect</u> : Reproduction

SECTION 12: Ecological information

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

Chronic - NOEL

OECD [201]
Algae - *Pseudokirchneriella subcapitata*
>100 mg/l [72 hours]
Effect: (growth rate)

Acute - LL50

OECD 203
Fish - *Pimephales promelas*
>1000 mg/l [96 hours]

Acute - EL50

OECD [202]
Crustaceans - *Daphnia magna*
>10000 mg/l [48 hours]
Effect: Mobility

Acute - EL50

OECD 201
Algae - *Pseudokirchneriella subcapitata*
>100 mg/l [72 hours]
Effect: (growth rate)

Chronic - NOEL

OECD 211
Crustaceans - *Daphnia magna*
>1000 mg/l [21 days]
Effect: Reproduction

Chronic - NOEL

OECD 201
Algae - *Pseudokirchneriella subcapitata*
>100 mg/l [72 hours]
Effect: (growth rate)

OTHER LUBRICANT BASE OILS IP 346 <
3% w/w; Viscosity ≤ 20.5 mm²/s at 40°C

Acute - LL50

OECD [203]
Fish - *Pimephales promelas*
>100 mg/l [96 hours]

Acute - EL50

OECD [202]
Crustaceans - *Daphnia magna*
>10000 mg/l [48 hours]
Effect: Mobility

Acute - EL50

OECD [201]
Algae - *Pseudokirchneriella subcapitata*
>100 mg/l [48 hours]
Effect: (growth rate)

Chronic - NOEL

OECD [211]
Crustaceans - *Daphnia magna*

SECTION 12: Ecological information

	>1000 mg/l [21 days] <u>Effect</u>: Reproduction Chronic - NOEL OECD [201] Algae - <i>Pseudokirchneriella subcapitata</i> >100 mg/l [72 hours] <u>Effect</u>: (growth rate)
Paraffin oils (petroleum), catalytic dewaxed heavy	Acute - NOEL Algae - <i>Pseudokirchneriella subcapitata</i> 101 mg/l [72 hours] Acute - EC50 Daphnia 10000 mg/l [48 hours]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Acute - EC50 OECD [202] Daphnia - <i>Daphnia magna</i> >10000 mg/l [48 hours] Chronic - NOEL Fish - <i>Oncorhynchus mykiss</i> >1000 mg/l [21 days] Chronic - NOEL OECD [211] Daphnia - <i>Daphnia magna</i> 10 mg/l [21 days] Acute - EC50 OECD [201] Algae - <i>Pseudokirchnerella subcapitata</i> >100 mg/l [72 hours]
Distillates (petroleum), solvent-dewaxed light paraffinic	Acute - EL50 OECD [203] Fish - <i>Pimephales promelas</i> ≥100 mg/l [96 hours] Acute - EL50 OECD 202 Crustaceans - <i>Daphnia magna</i> 10000 mg/l [48 hours] <u>Effect</u>: Mobility Acute - EL50 OECD 201 Algae - <i>Pseudokirchneriella subcapitata</i> >100 mg/l [72 hours] <u>Effect</u>: (growth rate) Chronic - NOEL OECD [211] Crustaceans - <i>Daphnia magna</i>

SECTION 12: Ecological information

	>1000 mg/l [21 days] <u>Effect</u> : Reproduction
	Chronic - NOEL OECD [201] Algae - <i>Pseudokirchneriella subcapitata</i> >100 mg/l [72 hours] <u>Effect</u> : (growth rate)
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	Acute - LC50 OECD 203 Fish - <i>Oncorhynchus mykiss</i> 4.5 mg/l [96 hours]
	Acute - EC50 OECD [202] Crustaceans - <i>Daphnia magna</i> 5.4 mg/l [48 hours] <u>Effect</u> : Mobility
	Acute - EC50 OECD [201] Algae - <i>Selenastrum capricornutum</i> 2 mg/l [96 hours] <u>Effect</u> : (growth rate)
	Chronic - NOEC OECD 211 Crustaceans - <i>Daphnia magna</i> 0.4 mg/l [48 hours] <u>Effect</u> : Reproduction
	Chronic - NOEC OECD [201] Algae - <i>Selenastrum capricornutum</i> 1 mg/l [96 hours] <u>Effect</u> : (growth rate)
C14-16-18 Alkyl phenol	Acute - EC50 OECD [202] Daphnia - <i>Daphnia magna</i> >100 mg/l [48 hours]

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

12.2 Persistence and degradability

Product/substance	Result
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 301F 31% [28 days] - Not readily
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 301F 31% [28 days] - Not readily
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	OECD 301B 2% [28 days] - Not readily

SECTION 12: Ecological information

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 301F 31% [28 days] - Not readily
Distillates (petroleum), solvent-dewaxed light paraffinic	OECD 301F 31% [28 days] - Not readily
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	OECD 301B 0% [28 days] - Not readily

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
Lubricating oils (petroleum), C15-30, 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
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	-	-	Not readily
Paraffin oils (petroleum), catalytic dewaxed heavy	-	-	Not readily
Distillates (petroleum), solvent-dewaxed heavy paraffinic	-	-	Readily
Distillates (petroleum), solvent-dewaxed light paraffinic	-	-	Not readily
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Distillates (petroleum), hydrotreated heavy paraffinic	>4	-	High
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	6.1	-	High
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	9.2	260 [OECD 305]	Low
Distillates (petroleum), solvent-dewaxed light	3.1	-	Low

SECTION 12: Ecological information

paraffinic zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	0.9	-	Low
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12.4 Mobility in soil

Soil/water partition coefficient

Not available.

Results of PMT and vPvM assessment

Product/substance	PMT	P	M	T	vPvM	vP	vM
Distillates (petroleum), hydrotreated heavy paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), hydrotreated heavy paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
Lubricating oils (petroleum), C15-30, hydrotreated	No	N/A	N/A	No	N/A	N/A	N/A
neutral oil-based reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert- butyl-4-hydroxyphenyl) propionate	No	N/A	N/A	No	N/A	N/A	N/A
Lubricating oils (petroleum), C20-50, hydrotreated	No	N/A	N/A	No	N/A	N/A	N/A
neutral oil-based Paraffin oils (petroleum), catalytic dewaxed heavy	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed heavy	No	N/A	N/A	No	N/A	N/A	N/A
paraffinic Distillates (petroleum), solvent-dewaxed light	No	N/A	N/A	No	N/A	N/A	N/A
paraffinic zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	No	N/A	N/A	No	N/A	N/A	N/A
C14-16-18 Alkyl phenol	N/A	N/A	N/A	Yes	N/A	N/A	N/A

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

Product/substance	PBT	P	B	T	vPvB	vP	vB
OTHER LUBRICANT BASE OILS IP 346 < 3% w/w; Viscosity ≤ 20.5 mm²/s at 40°C	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), hydrotreated heavy paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
Lubricating oils (petroleum), C15-30, hydrotreated	No	N/A	N/A	No	N/A	N/A	N/A

SECTION 12: Ecological information

neutral oil-based reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl) propionate	No	N/A	No	No	No	N/A	No
OTHER LUBRICANT BASE OILS IP 346 < 3% w/w; Viscosity ≤ 20.5 mm ² /s at 40°C	No	N/A	N/A	No	N/A	N/A	N/A
Paraffin oils (petroleum), catalytic dewaxed heavy	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed heavy paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed light paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis (dithiophosphate)	No	N/A	N/A	No	N/A	N/A	N/A
C14-16-18 Alkyl phenol	N/A	N/A	N/A	Yes	N/A	N/A	N/A

12.6 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

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 : Yes.
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.

SECTION 13: Disposal considerations

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

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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

SECTION 15: Regulatory information

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

: Risk management measures and safety conditions of use are included in the relevant sections of the SDS

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ACGIH = American Conference of Governmental Industrial Hygienists
 ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 B = Bioaccumulative
 BCF = Bioconcentration Factor
 DNEL = Derived No Effect Level
 DMEL = Derived Minimal Effect Level
 DMSO = Dimethyl Sulfoxide
 EC50 = Half maximal effective concentration
 EL50 = median Effective Loading
 EUH statement = CLP-specific Hazard statement
 HSE = Health, Safety and Environment
 IATA = International Air Transport Association
 IC50 = Half maximal inhibitory concentration
 IDHL = Immediately dangerous to life or health
 IMDG = International Maritime Dangerous Goods
 IMO = International Maritime Organization
 LC50 = Median lethal concentration
 LD50 = Median lethal dose
 LL50 = median Lethal Loading
 LogKow = logarithm of the octanol/water partition coefficient
 M = Mobile
 N/A = Not available
 NIOSH = National Institute of Occupational Safety and Health
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 NOEL = No Observed Effect Level
 NOELR = No observed Effect Loading Rate
 OECD = Organisation for Economic Co-operation and Development
 OEL = Occupational Exposure Limit
 OSHA = Occupational Safety and Health Administration.
 P = Persistent
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 POP = Persistent Organic Pollutants
 QSAR = Quantitative Structure–Activity Relationship
 REL = Recommended Exposure Limit
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 SGG = Segregation Group
 STEL = Short Term Exposure Limit
 T = Toxic

SECTION 16: Other information

TLV = Threshold Limit Value
TWA = Time Weight Average
vB = Very Bioaccumulative
vM = Very Mobile
VOC = Volatile Organic Compound
vP = Very Persistent
vPvB = Very Persistent and Very Bioaccumulative
vPvM = Very Persistent and Very Mobile
Unique Formula Identifier (UFI)
UVCB Substance of unknown or Variable composition, Complex reaction products
or Biological material

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

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.