SAFETY DATA SHEET

Lucas Oil Semi-Synthetic 10W-40 Engine Oil

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

1.1 Product identifier

Product name : Lucas Oil Semi-Synthetic 10W-40 Engine Oil

Viscosity or Type : SAE 10W-40

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

Material uses : Lubricating oil for automotive engines

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor :

Lucas Oil Products UK (GB)
Unit 4 Cunliffe Drive Llangefni
Industrial Estate
LL77 7JA Llangefni
Great Britain
Tel. +44 (0) 1248 723 666
email: info@LucasOil.co.uk
web: www.lucasoil.co.uk

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Lucas Oil Products Europe Ltd
Block 3 Harcourt Centre
Dublin 2 Ireland
Tel. +44 344 225 5400
email: info@LucasOil.eu.com
web: www.lucasoil.eu.com

1.4 Emergency telephone number

Telephone number : ChemTel:
+1-800-255-3924 (USA, Canada, Puerto Rico, US V.I.)
+1-813-248-0585 (International)

National advisory body/Poison Centre

Ireland : NPIC Beaumont Hospital (8am-10pm, 7 days a week)
Telephone Number: +353 (0)1 809 2166

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 Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

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

General : P103 - Read label before use.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

SECTION 2: Hazards identification

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts. 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.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : 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.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Severely refined mineral oil (C15 - C50) * - Not classified.	-	≥50 - ≤75	Not classified.	-	[2]
Severely refined mineral oil (C15 - C50) * - H304	-	≥10 - ≤25	Asp. Tox. 1, H304	-	[1] [2]
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	REACH #: 01-2119657973-23 EC: 272-238-5 CAS: 68784-31-6	<2.5	Eye Dam. 1, H318 Aquatic Chronic 2, H411	-	[1]
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	EC: 682-816-2 CAS: 722503-68-6	≤1	Skin Sens. 1B, H317 **See Section 16 for the full text of the H statements declared above.**	Skin Sens. 1, H317: C ≥ 2%	[1]

* Contains one or more of the following:
CAS: 72623-87-1, EC: 276-738-4, EU REACH: 01-2119474889-13
CAS: 64742-54-7, EC: 265-157-1, EU REACH: 01-2119484627-25
CAS: 64742-55-8, EC: 265-158-7, EU REACH: 01-2119487077-29
CAS: 64742-56-9, EC: 265-159-2, EU REACH: 01-2119480132-48
CAS: 64742-65-0, EC: 265-169-7, EU REACH: 01-2119471299-27

SECTION 3: Composition/information on ingredients

The mineral base oils contained in this product are severely refined and contain less than 3% DMSO extract according to IP 346 method, and are therefore not classified as carcinogen according to Regulation (EC) No 1272/2008, note L.

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
[2] Substance with a workplace exposure limit

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. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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, CO_2, alcohol-resistant foam or water spray (fog).

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 : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
phosphorus oxides
metal oxide/oxides

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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. 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.

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

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

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Severely refined mineral oil (C15 - C50) * - Not classified.	**EU OEL (Europe)** TWA 8 hours: 5 mg/m³. Form: Mist. STEL 15 minutes: 10 mg/m³. Form: Mist.
Severely refined mineral oil (C15 - C50) * - H304	**EU OEL (Europe)** TWA 8 hours: 5 mg/m³. Form: Mist. STEL 15 minutes: 10 mg/m³. Form: Mist.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard 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.

DNELs/DMELs

Product/ingredient name **Result**

SECTION 8: Exposure controls/personal protection

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	**DNEL - General population - Long term - Oral** 0.21 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 2.1 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 2.93 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 10.42 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 11.75 mg/m³ Effects: Systemic **DNEL - General population - Short term - Dermal** 50 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Dermal** 100 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Inhalation** 198.6 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 496.4 mg/m³ Effects: Systemic **DNEL - General population - Short term - Oral** 29 mg/kg bw/day Effects: Systemic

PNECs

Not available.

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.

Skin protection

SECTION 8: Exposure controls/personal 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. Wear suitable gloves tested to EN374. Recommended: < 1 hour (breakthrough time): nitrile rubber 0.17 mm. Provide employee with skin care programmes.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2. Gas and combination filter cartridges should comply with the European standard EN14387.

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 and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Oily liquid.]

Appearance : Clear

Colour : Brown

Odour : Slight

Odour threshold : Not available.

Melting point/freezing point : Not applicable.

Pour point : <-33°C (<-27.4°F) [ASTM D 97]

Boiling point or initial boiling point and boiling range : >300°C (>572°F)

Flammability : Not applicable.

Lower and upper explosion limit : Not available.

Flash point : Closed cup: >200°C (>392°F) [ASTM D 93]

Auto-ignition temperature : >300°C (>572°F)

Decomposition temperature : >300°C

pH : Not applicable.

Viscosity : Kinematic (40°C (104°F)): 98.5 mm^2/s (98.5 cSt) [ASTM D 445]
Kinematic (100°C (212°F)): 14.5 mm^2/s (14.5 cSt) [ASTM D 445]

Solubility :

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient n-octanol/water (log Pow) : Not applicable.

Vapour pressure : <0.01 kPa (<0.075006 mm Hg)

Density : 0.87 g/cm^3 [15°C (59°F)] [ASTM D 4052]

SECTION 9: Physical and chemical properties

Relative vapour density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not applicable.

Oxidising properties : Not applicable.

9.2.2 Other safety characteristics

Not applicable.

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 : The product is stable.

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 : Reactive or incompatible with the following materials:
Strong oxidising materials

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/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Rabbit - Dermal - LD50** >5000 mg/kg **Rat - Oral - LD50** >5000 mg/kg **Rat - Male, Female - Inhalation - LC50 Dusts and mists** 5.53 mg/l [4 hours] Acute Inhalation Toxicity
Severely refined mineral oil (C15 - C50) * - H304	**Rabbit - Dermal - LD50** >5000 mg/kg **Rat - Oral - LD50** >5000 mg/kg **Rat - Male, Female - Inhalation - LC50 Dusts and mists** 5.53 mg/l [4 hours] Acute Inhalation Toxicity
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	**Rat - Oral - LD50** 3.4 g/kg Toxic effects: Behavioral - Food intake (animal) Gastrointestinal - Changes in structure or function of salivary

SECTION 11: Toxicological information

glands Gastrointestinal - Hypermotility, diarrhea

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Severely refined mineral oil (C15 - C50) * - Not classified.	N/A	N/A	N/A	N/A	5.53
Severely refined mineral oil (C15 - C50) * - H304	N/A	N/A	N/A	N/A	5.53
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	3400	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Rabbit - Skin - Erythema/Eschar** Duration of treatment/exposure: 72 hours Observation period: 7 days Irritation score: 0.17 Fully reversible in 7 days or less **Rabbit - Skin - Oedema** Duration of treatment/exposure: 72 hours Observation period: 7 days Irritation score: 0 Fully reversible in 7 days or less
Severely refined mineral oil (C15 - C50) * - H304	**Rabbit - Skin - Erythema/Eschar** Duration of treatment/exposure: 72 hours Observation period: 7 days Irritation score: 0.17 Fully reversible in 7 days or less **Rabbit - Skin - Oedema** Duration of treatment/exposure: 72 hours Observation period: 7 days Irritation score: 0 Fully reversible in 7 days or less

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Rabbit - Eyes - Iris lesion** Acute Eye Irritation/Corrosion Duration of treatment/exposure: 48 hours Observation period: 72 hours Irritation score: 0 Fully reversible in 7 days or less **Rabbit - Eyes - Redness of the conjunctivae** Acute Eye Irritation/Corrosion Duration of treatment/exposure: 48 hours Observation period: 72 hours Irritation score: 0.33 Fully reversible in 7 days or less

SECTION 11: Toxicological information

Severely refined mineral oil (C15 - C50) * - H304	**Rabbit - Eyes - Iris lesion** Acute Eye Irritation/Corrosion Duration of treatment/exposure: 48 hours Observation period: 72 hours Irritation score: 0 Fully reversible in 7 days or less **Rabbit - Eyes - Redness of the conjunctivae** Acute Eye Irritation/Corrosion Duration of treatment/exposure: 48 hours Observation period: 72 hours Irritation score: 0.33 Fully reversible in 7 days or less

Conclusion/Summary [Product] : The eye irritation hazard is based on an evaluation of the data for similar products. These data show that a specific component present in this product antagonizes (or decreases the severity of) the eye irritation of the ZnDTP.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Guinea pig - skin** Skin Sensitization Result: Not sensitizing
Severely refined mineral oil (C15 - C50) * - H304	**Guinea pig - skin** Skin Sensitization Result: Not sensitizing

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**In vivo - Mammalian-Animal - Somatic - Intraperitoneal** Mammalian Erythrocyte Micronucleus Test Result: Negative
Severely refined mineral oil (C15 - C50) * - H304	**In vivo - Mammalian-Animal - Somatic - Intraperitoneal** Mammalian Erythrocyte Micronucleus Test Result: Negative

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Product/ingredient name	Result

SECTION 11: Toxicological information

Severely refined mineral oil (C15 - C50) * - Not classified.	**Mouse - Female - Dermal - TC** Carcinogenicity Studies 78 weeks Result: Negative
Severely refined mineral oil (C15 - C50) * - H304	**Mouse - Female - Dermal - TC** Carcinogenicity Studies 78 weeks Result: Negative

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Rat - Male, Female - Oral** Reproduction/Developmental Toxicity Screening Test 1000 mg/kg Effects: No effect level. Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
Severely refined mineral oil (C15 - C50) * - H304	**Rat - Male, Female - Oral** Reproduction/Developmental Toxicity Screening Test 1000 mg/kg Effects: No effect level. Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - H304	ASPIRATION HAZARD - Category 1

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.

SECTION 11: Toxicological information

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/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Sub-chronic - Rat - Male, Female - Oral - NOAEL** Subchronic Dermal Toxicity: 90-day Study ≥2000 mg/kg [5 days per week] [13 weeks] **Sub-acute - Rat - Male - Oral - LOAEL** Repeated Dose 90-Day Oral Toxicity Study in Rodents 125 mg/kg [5 hours per day] [13 weeks] **Sub-acute - Rat - Male - Inhalation - NOAEL** >980 mg/m³ [5 days per week] [4 weeks]
Severely refined mineral oil (C15 - C50) * - H304	**Sub-chronic - Rat - Male, Female - Oral - NOAEL** Subchronic Dermal Toxicity: 90-day Study ≥2000 mg/kg [5 days per week] [13 weeks] **Sub-acute - Rat - Male - Oral - LOAEL** Repeated Dose 90-Day Oral Toxicity Study in Rodents 125 mg/kg [5 hours per day] [13 weeks] **Sub-acute - Rat - Male - Inhalation - NOAEL** >980 mg/m³ [5 days per week] [4 weeks]

Conclusion/Summary [Product] : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

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

Conclusion/Summary [Product] : 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/ingredient name	Result
Severely refined mineral oil (C15 - C50) * - Not classified.	**Acute - NEL - Fresh water** Fish, Acute Toxicity Test Fish - *Pimephales promelas* ≥100 mg/l [96 hours] **Acute - NEL - Fresh water** Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia - *Daphnia Magma* >10000 mg/l [48 hours] **Chronic - NEL - Fresh water** Daphnia Magna Reproduction Test Daphnia - *Daphnia magna* 10 mg/l [21 days] Effect: Reproduction **Acute - NEL - Fresh water** Alga, Growth Inhibition Test Algae >100 mg/l [72 hours] Effect: (growth rate)
Severely refined mineral oil (C15 - C50) * - H304	**Acute - NEL - Fresh water** Fish, Acute Toxicity Test Fish - *Pimephales promelas* ≥100 mg/l [96 hours] **Acute - NEL - Fresh water** Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia - *Daphnia Magma* >10000 mg/l [48 hours] **Chronic - NEL - Fresh water** Daphnia Magna Reproduction Test Daphnia - *Daphnia magna* 10 mg/l [21 days] Effect: Reproduction **Acute - NEL - Fresh water** Alga, Growth Inhibition Test Algae >100 mg/l [72 hours] Effect: (growth rate)

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Severely refined mineral oil (C15 - C50) * - Not classified.	-	-	Inherent
Severely refined mineral oil (C15 - C50) * - H304	-	-	Inherent

SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	4	-	High

12.4 Mobility in soil

Soil/water partition coefficient

Not available.

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Severely refined mineral oil (C15 - C50) * - Not classified.	No	No	No	No	No	No	No
Severely refined mineral oil (C15 - C50) * - H304	No	No	No	No	No	No	No
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	No	No	No	No	No	No	No
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Severely refined mineral oil (C15 - C50) * - Not classified.	No	No	No	No	No	No	No
Severely refined mineral oil (C15 - C50) * - H304	No	No	No	No	No	No	No
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	No	No	No	No	No	No	No
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	No	No	No	No	No	No	No

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Severely refined mineral oil (C15 - C50) * - Not classified.	No	No	No	No	No	No	No
Severely refined mineral oil (C15 - C50) * - H304	No	No	No	No	No	No	No
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	No	No	No	No	No	No	No

SECTION 12: Ecological information

Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Conclusion/Summary [Product] : 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.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

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	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)	-	-	-	-

SECTION 14: Transport information

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

EU Regulation (EC) No. 1907/2006 (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.

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

No listed substance

Other EU regulations

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

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

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants (1021/2019/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Germany

Hazard class for water (WGK) : 1

Switzerland

VOC content : Exempt.

SECTION 15: Regulatory information

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	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	Not determined.
Eurasian Economic Union	:	**Russian Federation inventory**: Not determined.
Japan	:	**Japan inventory (CSCL)**: All components are listed or exempted. **Japan inventory (ISHL)**: Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States of America	:	All components are active or exempted.
Viet Nam	:	Not determined.

15.2 Chemical safety assessment : Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : 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
ASTM = American Society for Testing and Materials
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DIN = German Institute for Standardization
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = European Commission
EC50 = Half maximal effective concentration
EN = European Standard (Norm)
EUH statement = CLP-specific Hazard statement
GHS - Globally Harmonised System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container

SECTION 16: Other information

IC50 = Half maximal inhibitory concentration
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organisation
ISO = International Organization for Standardization
LC50 = Median lethal concentration
LD50 = Median lethal dose
LOAEL / LOAEC = Lowest Observed Adverse Effect Level / Concentration
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
NOAEL / NOAEC = No Observed Adverse Effect Level / Concentration
NOEL / NOEC = No Observed Effect Level / Concentration
OECD = Organisation for Economic Co-operation and Development
OEL = Occupational Exposure Limit
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS = Safety Data Sheet
SVHC = Substances of Very High Concern
STEL = Short Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weighted Average
UFI = Unique Formula Identifier
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Full text of abbreviated H statements

H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B

Training advice : Ensure operatives are trained to minimise exposures.

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Date of previous issue : No previous validation

Version : 1

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.