

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

1.1 Product identifier

Product name : MULTIS EP 2
Product code : 31157
Product description : Not available.
Product type : Solid.
Other means of identification : Not available.

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

Identified uses
Lubricating grease

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

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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]

Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown ecotoxicity : Contains 7.9% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Signal word : No signal word.

Hazard statements : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Response : Not applicable.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Contains Polysulfides, di-tert-Bu and Naphthenic acids, zinc salts. May produce an allergic reaction.

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 : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
Polysulfides, di-tert-Bu	EC: 273-103-3 CAS: 68937-96-2	≤2.2	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Phosphorodithioic acid, mixed O, O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	REACH #: 01-2119948548-22 EC: 270-478-5 CAS: 68442-22-8	≤2.2	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1]
Naphthenic acids, zinc salts	REACH #: 01-2120783834-41 EC: 234-409-2 CAS: 12001-85-3	<1	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1]

Additional information : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 The product is made from synthetic base oils

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.
- 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.
- 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

SECTION 4: First aid measures

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 : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : carbon monoxide
carbon dioxide
Silicon Dioxide
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc 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 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".

SECTION 6: Accidental release measures

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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. 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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
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

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
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	DNEL - General population - Long term - Oral 0.24 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 1.98 mg/m ³ <u>Effects:</u> Systemic DNEL - General population - Long term - Dermal 5.71 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation 8.05 mg/m ³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 11.4 mg/kg bw/day <u>Effects:</u> Systemic
Naphthenic acids, zinc salts	DNEL - General population - Long term - Oral 0.17 ng/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 0.29 mg/m ³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation 1.18 mg/m ³ <u>Effects:</u> Systemic DNEL - General population - Long term - Dermal 1.7 mg/kg bw/day

SECTION 8: Exposure controls/personal protection

Effects: Systemic

DNEL - Workers - Long term - Dermal

3.3 mg/kg bw/day

Effects: Systemic

PNECs

Product/substance	Result
Polysulfides, di-tert-Bu	Fresh water - Assessment Factors 0.000255 mg/l Marine water - Assessment Factors 0.0000255 mg/l Fresh water sediment - Equilibrium Partitioning 1.06 mg/kg dwt Marine water sediment - Equilibrium Partitioning 0.106 mg/kg dwt Soil - Equilibrium Partitioning 0.211 mg/kg dwt Sewage Treatment Plant 45 mg/l
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	Fresh water 0.004 mg/l Marine water 0.0046 mg/l Fresh water sediment 0.04508 mg/kg dwt Marine water sediment 0.005 mg/kg dwt Soil 0.007 mg/kg dwt Sewage Treatment Plant 100 mg/l Secondary Poisoning 10.67 mg/kg
Naphthenic acids, zinc salts	Fresh water sediment - Equilibrium Partitioning 15.1 µg/kg dwt Marine water sediment - Equilibrium Partitioning 0.002 mg/kg dwt Sewage Treatment Plant - Assessment Factors 689.7 µg/l Fresh water - Assessment Factors

SECTION 8: Exposure controls/personal protection

4 µg/l

Marine water - Assessment Factors

400 ng/l

Soil - Equilibrium Partitioning

0.001 mg/kg dwt

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

- : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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

- :  Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/P1. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

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	: Solid. [grease]
Colour	: Brown.
Odour	: Characteristic.
Melting point/freezing point	: >180°C [EN ISO 3016]
Initial boiling point and boiling range	: Not applicable.
Flammability (solid, gas)	: Yes.
Upper/lower flammability or explosive limits	: Not applicable.
Flash point	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: >180°C
pH	: Not applicable. Product is non-soluble (in water).
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not applicable.
Solubility(ies)	:

Media	Result
water	Not soluble

Miscible with water	: No.
Partition coefficient: n-octanol/ water	: >3.5
Vapour pressure	: Not applicable.
Relative density	: 0.9 [ISO 3675]
Density	: 0.9 g/cm³ [20°C (68°F)] [ISO 3675]
Vapour density	: Not applicable.
Particle characteristics	
Median particle size	: Not available.

9.2 Other information

No other relevant physical and chemical parameters for the safe use of the product

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.

SECTION 10: Stability and reactivity

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
Polysulfides, di-tert-Bu	Rat - Oral - LD50 >2000 mg/kg
	Rat - Dermal - LD50 >2000 mg/kg
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	Rat - Oral - LD50 >2000 mg/kg EPA
	Rabbit - Dermal - LD50 >2000 mg/kg OECD [Acute Dermal Toxicity]
Naphthenic acids, zinc salts	Rat - Oral - LD50 4920 mg/kg
	Rabbit - Dermal - LD50 2500 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)
Naphthenic acids, zinc salts	4920	2500	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. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required.

Respiratory corrosion/irritation

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

Respiratory or skin sensitization

Skin

SECTION 11: Toxicological information

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)

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 | : 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

SECTION 11: Toxicological information

Product/substance	Result
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	Sub-acute - Rat - Oral - NOAEL OECD [Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test] 160 mg/kg

General	: No known significant effects or critical hazards.
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

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.

☒ Harmful to aquatic life with long lasting effects.

12.1 Toxicity

Product/substance	Result
☒ Polysulfides, di-tert-Bu	Acute - LC50 Fish - <i>Danio rerio</i> >0.088 mg/l [96 hours] Acute - EC50 Daphnia 0.24 mg/l [48 hours] Acute - EC50 Algae - <i>Pseudokirchneriella subcapitata</i> 0.838 mg/l [72 hours]
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	Acute - EC50 OECD [201] Algae - <i>Scenedesmus subspicatus</i> 24 mg/l [72 hours] Acute - LC50 Fish 4.5 mg/l [96 hours] Acute - EC50 OECD [202] Daphnia - <i>Daphnia Magna</i> 23 mg/l [48 hours] Acute - NOEC Daphnia - <i>Daphnia Magna</i> 0.4 mg/l [21 days]
Naphthenic acids, zinc salts	Acute - EL50 - Fresh water

OECD [202]
Daphnia
35 mg/l [48 hours]
Effect: Mobility

Acute - EL50 - Fresh water
OECD [201]
Algae - *Pseudokirchneriella subcapitata*
4 mg/l [72 hours]
Effect: (growth rate)

Acute - LL50 - Fresh water
OECD [203]
Fish - *Cyprinus carpio*
>100 mg/l [96 hours]
Effect: Mortality

12.2 Persistence and degradability

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Polysulfides, di-tert-Bu	-	-	Not readily
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	-	-	Not readily
Naphthenic acids, zinc salts	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
MULTIS EP 2	>3.5	-	Low
Polysulfides, di-tert-Bu	5.6	-	High
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	1.67	-	Low
Naphthenic acids, zinc salts	0.8	-	Low

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
Polysulfides, di-tert-Bu	No	No	No	No	No	No	No
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	No	No	No	No	No	No	No
Naphthenic acids, zinc salts	No	No	No	No	No	No	No

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product has no 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
Polysulfides, di-tert-Bu	No	No	No	No	No	No	No
Phosphorodithioic acid,	No	No	No	No	No	No	No
mixed O,O-bis(2-ethylhexyl							
and iso-Bu) esters, zinc salts							
Naphthenic acids, zinc salts	No	No	No	No	No	No	No

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: 12 01 12*

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	9005	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN (Polysulfides, di-tert-Bu, Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts)	-	-
14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADN

: The product is only regulated as a dangerous good when transported in tank vessels.

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.

SECTION 15: Regulatory information

Persistent Organic Pollutants

Not listed.

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** : ☒ 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) : All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: At least one component is not listed.
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.

SECTION 15: Regulatory information

- 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** : 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
 - ATE = Acute Toxicity Estimate
 - 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
 - IC50 = Half maximal inhibitory concentration
 - IDHL = Immediately dangerous to life or health
 - LC50 = Median lethal concentration
 - LD50 = Median lethal dose
 - LL50 = median Lethal Loading
 - LogKow = logarithm of the octanol/water partition coefficient
 - 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
 - PBT = Persistent, Bioaccumulative and Toxic
 - PNEC = Predicted No Effect Concentration
 - QSAR = Quantitative Structure–Activity Relationship
 - REL = Recommended Exposure Limit
 - STEL = Short Term Exposure Limit
 - TLV = Threshold Limit Value
 - TWA = Time Weight Average
 - VOC = Volatile Organic Compound
 - vPvB = Very Persistent and Very Bioaccumulative
 - Unique Formula Identifier (UFI)
 - UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

Procedure used to derive the classification

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

SECTION 16: Other information

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications

Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B

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