

SECTION 1 Identification**1.1. GHS Product identifier**

Product form : Mixture
Product name : Engine Break-In Oil Additive TB Zinc-Plus
Part Number : 20063

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricating oil

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week
Within USA, Canada, Puerto Rico and US Virgin Islands: 1-800-255-3924
International: 1-813-248-0585
(collect calls accepted)

SECTION 2 Hazard identification**2.1. Classification of the substance or mixture****Classification (GHS CA)**

Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Skin sensitization, Category 1B	H317	May cause an allergic skin reaction.

Full text of H-statements: see section 16

2.2. GHS label elements, including precautionary statements**GHS CA labelling**

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage

Precautionary statements (GHS CA) : P261 - Avoid breathing mist, vapours, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.

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P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER, a doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents and container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Distillates (petroleum), hydrotreated heavy paraffinic	Distillates (petroleum), hydrotreated heavy paraffinic distillates (petroleum), hydrotreated heavy paraffinic	CAS-No.: 64742-54-7	15 - 40*	Asp. Tox. 1, H304
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts	CAS-No.: 68649-42-3	15 - 40*	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	Phosphorodithioic acid O,O-bis(mixed iso-Bu and pentyl) esters zinc salts phosphorodithioic acid, mixed O,O-bis(iso-bu and pentyl) esters, zinc salts	CAS-No.: 68457-79-4	15 - 40*	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Distillates (petroleum), hydrotreated light paraffinic	Distillates (petroleum), hydrotreated light paraffinic distillates (petroleum), hydrotreated light paraffinic	CAS-No.: 64742-55-8	1-5*	Asp. Tox. 1, H304

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Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	CAS-No.: 70024-69-0	1-5*	Skin Sens. 1B, H317
Sulfonic acids, petroleum, calcium salts	Sulfonic acids, petroleum, calcium salt	CAS-No.: 61789-86-4	1-5*	Skin Sens. 1B, H317

*Chemical name, CAS number and/or exact concentration have been withheld as CBI

*Contains fixed concentration

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Contact ophthalmologist immediately. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth out with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.
First-aid measures general	: If you feel unwell, seek medical advice.
Self protection of the first-aiders	: First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction. Rednesses. Skin rash/inflammation. Swelling. Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye damage. Pain, redness, itching, tears. Can cause blindness. Serious damage to eyes.
Symptoms/effects after ingestion	: Abdominal pain, nausea.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: In case of fire and/or explosion do not breathe fumes.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide.

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5.3. Special protective actions for fire-fighters

- Firefighting instructions : Evacuate area. Eliminate all ignition sources if safe to do so. Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment. Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
- Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.
- For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety procedures. Ensure exposure is below occupational exposure limits (where available). Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 340 °F
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.001
Density	: 8.361 lb/gal
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 196.5 mm ² /s @ 40 ° C
Explosive limits	: No data available
Particle characteristics	: No data available

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9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

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

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

LD50 dermal rabbit	> 5000 mg/kg Source: IUCLID
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Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

LD50 oral rat	3195 mg/kg Source: ECHA
LD50 dermal rabbit	> 3160 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 5 mg/l air Animal: rat, Guideline: other:
ATE CA (oral)	3195 mg/kg bodyweight

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

LD50 oral rat	> 16000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rabbit	> 4000 mg/kg bodyweight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 1.9 mg/l Source: ECHA

Sulfonic acids, petroleum, calcium salts (61789-86-4)

LD50 oral rat	> 16000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rat	> 2000 mg/kg Source: International Uniform Chemical Information Database
LD50 dermal rabbit	> 4000 mg/kg bodyweight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)

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

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg Source: IUCLID

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Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LD50 oral rat	3600 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 20000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
ATE CA (oral)	3600 mg/kg bodyweight
Skin corrosion/irritation	: Causes skin irritation.
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem
Sulfonic acids, petroleum, calcium salts (61789-86-4)	
pH	8
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
pH	No data available in the literature
Serious eye damage/irritation	: Causes serious eye damage.
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem
Sulfonic acids, petroleum, calcium salts (61789-86-4)	
pH	8
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
pH	No data available in the literature
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:
NOAEL (animal/female, F1)	1000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (oral, rat, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

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Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Sulfonic acids, petroleum, calcium salts (61789-86-4)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Aspiration hazard : Not classified.

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Viscosity, kinematic	196.5 mm ² /s @ 40 ° C
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	18 mm ² /s
Hydrocarbon	Yes
Aliphatic, alicyclic or aromatic hydrocarbon	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Viscosity, kinematic	9 – 15 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Viscosity, kinematic	264.8 mm ² /s (40 °C, ASTM D445: Capillary viscometer)

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction. Rednesses. Skin rash/inflammation. Swelling. Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Pain. redness, itching, tears. Can cause blindness. Serious damage to eyes.

Symptoms/effects after ingestion : Abdominal pain, nausea.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 5000 mg/l
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID

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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
EC50 96h - Algae [1]	> 1000 mg/l Source: IUCLID
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LC50 - Fish [1]	> 10000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Sulfonic acids, petroleum, calcium salts (61789-86-4)	
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
LC50 - Fish [1]	> 5000 mg/l Source: IUCLID
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
LC50 - Fish [1]	46 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinodon variegatus, Semi-static system, Marine water, Experimental value, GLP)
12.2. Persistence and degradability	
Engine Break-In Oil Additive TB Zinc-Plus	
Persistence and degradability	Biodegradability in water: no data available.
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Persistence and degradability	Not rapidly degradable
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Persistence and degradability	Not rapidly degradable
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Persistence and degradability	Not rapidly degradable
Sulfonic acids, petroleum, calcium salts (61789-86-4)	
Persistence and degradability	Not rapidly degradable
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Persistence and degradability	Not rapidly degradable
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Persistence and degradability	Not readily biodegradable in water.

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12.3. Bioaccumulative potential

Engine Break-In Oil Additive TB Zinc-Plus	
Bioaccumulative potential	No data available concerning bioaccumulation.
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Partition coefficient n-octanol/water (Log Pow)	14.876 Source: ECHA
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Partition coefficient n-octanol/water (Log Pow)	> 5.47 Source: ECHA
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Partition coefficient n-octanol/water (Log Pow)	0.69 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 21.8 °C)

12.4. Mobility in soil

Engine Break-In Oil Additive TB Zinc-Plus	
Ecology - soil	No additional information available.
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)	
Surface tension	61.1 mN/m (21 °C, 1.25 g/l, EU Method A.5: Surface tension)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.





SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

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TDG	DOT	IMDG	IATA
14.1. UN Number			
UN3082	UN3082	UN3082	UN3082
14.2. UN Proper Shipping Name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts)	Environmentally hazardous substances, liquid, n.o.s. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts)	Environmentally hazardous substance, liquid, n.o.s. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts)
Transport document description			
UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts), 9, III	UN3082 Environmentally hazardous substances, liquid, n.o.s. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts), 9, III	UN UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts), 9, III	UN UN3082 Environmentally hazardous substance, liquid, n.o.s. (Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts), 9, III
14.3. Transport hazard class(es)			
9	9	9	9
			
14.4. Packing group, if applicable			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

TDG

UN-No. (TDG)

: UN3082

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TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the danger or dangers posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS, 99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, may be offered for transport, handled or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means of containment and during transport. (2) These Regulations, except for Parts 1 and 2, do not apply to the offering for transport, handling or transport of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no release of the dangerous goods that could endanger public safety.
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Emergency Response Guide (ERG) Number	: 171
DOT UN-No. (DOT)	: UN3082

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DOT Special Provisions (49 CFR 172.102)	: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 173 - An appropriate generic entry may be used for this material. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leakproof when used as bulk packaging. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No Limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No Limit
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Special provisions (IMDG)	: 274, 335, 375, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L

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Special provisions (IATA) : A97, A158, A197, A215
ERG code (IATA) : 9L

14.7. Transport in bulk according to Annex II of MARPOL 73/78⁹ and the IBC Code¹⁰

Not applicable

SECTION 15 Regulatory information

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

Listed on the Canadian DSL (Domestic Substances List)

Sulfonic acids, petroleum, calcium salts (61789-86-4)

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)

Listed on the Canadian DSL (Domestic Substances List)

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts (68457-79-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16 Other Information

Issue date : 06/12/2025
Revision date : 03/03/2026
Supersedes : 06/12/2025

Data sources : Supplier's safety documents.
Training advice : Training staff on good practice.

Full text of hazard classes and 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
H319	Causes serious eye irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), Canada

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