SAFETY DATA SHEET

DSP SINGAPORE HOLDINGS PTE. LTD.

Product name: MOLYKOTE® Longterm 2 Plus Extreme Pressure Bearing Grease

Issue Date: 03.01.2025

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DSP SINGAPORE HOLDINGS PTE. LTD. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MOLYKOTE® Longterm 2 Plus Extreme Pressure Bearing Grease

Recommended use of the chemical and restrictions on use
Identified uses: Lubricants and lubricant additives

COMPANY IDENTIFICATION
DSP SINGAPORE HOLDINGS PTE. LTD.
10 MARINA BOULEVARD, 07-01, MBFC TOWER 2
SINGAPORE 018983
SINGAPORE

Customer Information Number: 65-6322-5288
SDSQuestion-AP@dupont.com

EMERGENCY TELEPHONE NUMBER
: 800 101 2201
Local Emergency Contact: 9801 0034

2. HAZARDS IDENTIFICATION

GHS Classification
NEW ZEALAND HAZARDOUS SUBSTANCE CLASSIFICATION: Classified as hazardous according to criteria in the New Zealand Hazardous Substances (Hazard Classification) Notice 2020. Refer to Section 15 for HSNO Approval Number.
Skin sensitisation : Category 1

GHS label elements
Hazard pictograms



Signal word: **WARNING!**

Hazard statements
May cause an allergic skin reaction.

Precautionary statements

Prevention
Avoid breathing dust.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.

Response
IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Solvent dewaxed residual oil (petroleum)	64742-62-7	>= 50.0 - < 70.0 %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 20.0 - < 30.0 %
Lithium 12-hydroxyoctadecanoate	7620-77-1	>= 1.0 - < 10.0 %
Pentene, 2,4,4-trimethyl-,sulfurized	68515-88-8	>= 1.0 - < 2.5 %
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0	>= 0.1 - < 1.0 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Hazchem Code
None Allocated

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture
Hazardous combustion products: Carbon dioxide. Sulfur oxides. Carbon monoxide Carbon oxides Sulphur oxides Metal oxides Nitrogen oxides (NOx)

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health.

Advice for firefighters
Fire Fighting Procedures: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Do not swallow. Avoid contact with eyes. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.
Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers**:** None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Solvent dewaxed residual oil (petroleum)	ACGIH	TWA Inhalable particulate matter	5 mg/m3
	Further information: A4: Not classifiable as a human carcinogen		
	NZ OEL	WES-TWA Mist	5 mg/m3
	NZ OEL	WES-STEL Mist	10 mg/m3
Distillates (petroleum), hydrotreated heavy naphthenic	ACGIH	TWA Inhalable particulate matter	5 mg/m3
	Further information: A4: Not classifiable as a human carcinogen		
Lithium 12-hydroxyoctadecanoate	ACGIH	TWA Inhalable particulate matter	10 mg/m3

	Further information: A4: Not classifiable as a human carcinogen		
	ACGIH	TWA Respirable particulate matter	3 mg/m3
	Further information: A4: Not classifiable as a human carcinogen		
	NZ OEL	WES-TWA	10 mg/m3

Exposure controls
Engineering measures: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields).
Skin protection
Hand protection: Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected , a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to AS/NZS 2161.10) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Other Information: Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:
AS/NZS 1336: Eye and face protection – Guidelines.
AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.
AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.
AS/NZS 2161: Occupational protective gloves.
AS/NZS 2210: Occupational protective footwear.
AS/NZS 4501: Occupational protective clothing Set

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Grease
Color	black
Odor	slight
Odor Threshold	No data available
pH	Not applicable
Melting point/ range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** 210 °C
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	0.9
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Hydrogen sulfide. Trimethyl-1-pentene.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Product test data not available. Refer to component data.

Acute dermal toxicity
Product test data not available. Refer to component data.

Acute inhalation toxicity
Product test data not available. Refer to component data.

Skin corrosion/irritation
Product test data not available. Refer to component data.

Serious eye damage/eye irritation
Product test data not available. Refer to component data.

Sensitization
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available. Refer to component data.

Carcinogenicity
Product test data not available. Refer to component data.

Teratogenicity
Product test data not available. Refer to component data.

Reproductive toxicity
Product test data not available. Refer to component data.

Mutagenicity
Product test data not available. Refer to component data.

Aspiration Hazard
Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

Solvent dewaxed residual oil (petroleum)

Acute oral toxicity
Information given is based on data obtained from similar substances. LD50, Rat, > 5,000 mg/kg OECD Test Guideline 401

Acute dermal toxicity
Information given is based on data obtained from similar substances. LD50, Rabbit, > 5,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity
Information given is based on data obtained from similar substances. LC50, Rat, 4 Hour, dust/mist, > 5.53 mg/l OECD Test Guideline 403

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.
Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Information given is based on data obtained from similar substances.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
Information given is based on data obtained from similar substances.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals. Information given is based on data obtained from similar substances.

Reproductive toxicity
In animal studies, did not interfere with reproduction. Information given is based on data obtained from similar substances.

Mutagenicity
In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative. Information given is based on data obtained from similar substances.

Aspiration Hazard
No aspiration toxicity classification

Distillates (petroleum), hydrotreated heavy naphthenic

Acute oral toxicity
LD50, Rat, > 5,000 mg/kg

Acute dermal toxicity
LD50, Rabbit, > 2,000 mg/kg

Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

LC50, Rat, 3 Hour, dust/mist, > 3.11 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged contact is essentially nonirritating to skin.
Repeated contact may cause moderate skin irritation with local redness.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
In animals, effects have been reported on the following organs after dermal exposure:
Skin.

Carcinogenicity
Has caused tumors in skin painting tests in animals. Not classifiable as a human carcinogen.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative in some cases and positive in other cases.
Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Lithium 12-hydroxyoctadecanoate

Acute oral toxicity

LD50, Rat, female, > 2,000 mg/kg OECD Test Guideline 420 No deaths occurred at this concentration.

Acute dermal toxicity
LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

Acute inhalation toxicity
The LC50 has not been determined.

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause slight eye irritation.

Sensitization
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
Did not cause birth defects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Pentene, 2,4,4-trimethyl-,sulfurized

Acute oral toxicity
LD50, Rat, 3,641 mg/kg

Acute dermal toxicity
LD50, Rabbit, > 2,000 mg/kg

Acute inhalation toxicity
Respiratory effects. LC50, Rat, 4 Hour, dust/mist, 2.17 mg/l

Skin corrosion/irritation
Brief contact may cause skin irritation with local redness.
Prolonged contact may cause moderate skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
For similar material(s):
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
The LC50 has not been determined.

Skin corrosion/irritation
No skin irritation

Serious eye damage/eye irritation

No eye irritation

Sensitization
Skin contact may cause an allergic skin reaction.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on data from similar materials

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Ecotoxicity

Solvent dewaxed residual oil (petroleum)

Acute toxicity to fish
LC50, Pimephales promelas (fathead minnow), 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates
Information given is based on data obtained from similar substances.
EC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria
Based on data from similar materials
NOEC, 10 min, > 1.93 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 10 mg/l

Distillates (petroleum), hydrotreated heavy naphthenic

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 5,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent
EC50, scud Gammarus sp., 96 Hour, > 10,000 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants
EbC50, alga Scenedesmus sp., static test, 96 Hour, Biomass, > 1,000 mg/l, OECD Test Guideline 201 or Equivalent

Chronic toxicity to fish
NOEC, Pimephales promelas (fathead minnow), 7 d, growth, > 5,000 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, number of offspring, > 1,000 mg/l

Lithium 12-hydroxyoctadecanoate

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, > 160 mg/l, OECD Test Guideline 201

Pentene, 2,4,4-trimethyl-,sulfurized

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Fish, 96 Hour, > 100 mg/l

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts

Acute toxicity to fish
No relevant data found.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
EC50, Daphnia magna (Water flea), 48 Hour, > 1,000 mg/l, Test substance: Water Accommodated Fraction

Acute toxicity to algae/aquatic plants
Based on data from similar materials
EC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, > 1,000 mg/l, Test substance: Water Accommodated Fraction

Persistence and degradability

Solvent dewaxed residual oil (petroleum)

Biodegradability: Not readily biodegradable. Information given is based on data obtained from similar substances.

Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Distillates (petroleum), hydrotreated heavy naphthenic

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).
10-day Window: Fail
Biodegradation: 6 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
10-day Window: Fail
Biodegradation: 22 - 51 %
Exposure time: 21 - 28 d

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals

Lithium 12-hydroxyoctadecanoate
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Pentene, 2,4,4-trimethyl-,sulfurized
Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
10-day Window: Not applicable
Biodegradation: 24.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts
Biodegradability: No relevant data found.

Bioaccumulative potential

Solvent dewaxed residual oil (petroleum)
Bioaccumulation: No relevant data found.
Partition coefficient: n-octanol/water(log Pow): 2 - 6

Distillates (petroleum), hydrotreated heavy naphthenic
Partition coefficient: n-octanol/water(log Pow): 1.99 - 18.02

Lithium 12-hydroxyoctadecanoate
Bioaccumulation: No relevant data found.

Pentene, 2,4,4-trimethyl-,sulfurized
Partition coefficient: n-octanol/water(log Pow): Pow: 12.56

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts
Bioaccumulation: No relevant data found.

Mobility in Soil

Solvent dewaxed residual oil (petroleum)
No relevant data found.

Lithium 12-hydroxyoctadecanoate
No relevant data found.

Pentene, 2,4,4-trimethyl-,sulfurized
Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient (Koc): > 5000 Estimated.

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts
No relevant data found.

Results of PBT and vPvB assessment

Solvent dewaxed residual oil (petroleum)
This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Distillates (petroleum), hydrotreated heavy naphthenic
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Lithium 12-hydroxyoctadecanoate
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Pentene, 2,4,4-trimethyl-,sulfurized
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects

Solvent dewaxed residual oil (petroleum)
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Distillates (petroleum), hydrotreated heavy naphthenic
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Lithium 12-hydroxyoctadecanoate
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Pentene, 2,4,4-trimethyl-,sulfurized
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

Waste handling, treatment and disposal practices must be in compliance with the New Zealand Hazardous Substances (Disposal) Notice 2017. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Regulations concerning waste management may vary in different locations.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:
Not regulated for transport

Classification for SEA transport (IMO-IMDG):
Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):
Not regulated for transport

Hazchem Code
None Allocated

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service

representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

New Zealand. Inventory of Chemical Substances
The hazardous components of this product are listed in the New Zealand Inventory of Chemicals (NZIoC) or the product otherwise complies with the requirements of the Hazardous Substances and New Organisms (HSNO) Act 1996.

HSNO Approval
Lubricants Lubricant Additives Coolants and Anti freeze Agents Subsidiary Hazard Group Standard

HSNO Approval Number: HSR002606

HSNO Controls
Certified handler certificate not required.
Tracking hazardous substance not required.
Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

16. OTHER INFORMATION

Revision
Identification Number: 1642774 / A761 / Issue Date: 03.01.2025 / Version: 1.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
NZ OEL	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
TWA	8-hour, time-weighted average
WES-STEL	Workplace Exposure Standard - Short-Term Exposure Limit
WES-TWA	Workplace Exposure Standard - Time Weighted average

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization;

IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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