

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS number	% by weight
Distillates (petroleum), severely hydrotreated heavy naphthenic	64742-52-5	65 – 75 %
Petroleum hydrocarbons	Confidential mixture	30 - 40 %
Zinc alkyldithiophosphate	Confidential mixture	0.5 – 1 %
Calcium sulfonate	61789-86-4	0.5 – 1 %

If CAS number is "confidential" and/or % by weight is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

- Inhalation:** Remove person to fresh air and keep comfortable for breathing. Get medical attention if you feel unwell.
- Skin contact:** Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. Launder contaminated clothing before reuse. Discard leather articles saturated with material.
- Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Ingestion:** Do NOT induce vomiting. If person is conscious, rinse mouth thoroughly with water. If spontaneous vomiting occurs, keep head below hips to avoid breathing product into lungs. Get medical attention if you feel unwell.

Most important symptoms / effects, acute and delayed

- Inhalation:** If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.
- Skin contact:** May cause an allergic skin reaction. Frequent or prolonged skin contact may defat and dry the skin leading to discomfort and dermatitis. Symptoms may include redness, edema, drying and cracking of the skin.
- Eye contact:** Causes serious eye irritation that can result in pain, stinging, tearing, redness, a sensation of something in the eye and/or blurred vision.
- Ingestion:** Ingestion may cause abdominal irritation, nausea, vomiting, diarrhea, and central nervous system effects, such as headache, dizziness, drowsiness and generalized weakness.

Indication of immediate medical attention and special treatment, if necessary

- Notes to physicians:** Treat symptomatically.

See Section 11 for toxicological information.

5. FIRE-FIGHTING MEASURES**Extinguishing media**

- Suitable media:** Halon. Carbon dioxide (CO₂). Dry chemicals. Foam.
- Unsuitable media:** Do not use water as a direct jet or high-pressure stream.

Specific hazards arising from the chemical

May decompose if heated above 392°F (200°C) with liberation of hydrogen chloride.

- Hazardous combustion products:** When heated, hazardous gases may be released including: sulfur dioxide. See section 10 for additional information.

Special protective equipment and precautions for fire-fighters

- Protective equipment for fire-fighters:** As in any fire, wear self-contained breathing apparatus, pressure-demand, MSHA/NIOSH-approved (or equivalent) and full protective gear.
- Precautions for fire-fighters:** Take no action involving personal risk or without suitable training. Do not direct a solid stream of water on spilled material as this may scatter or spread fire. Water or foam may cause frothing. Do not release chemically contaminated water into drains, soil or surface water. Water can be used to cool containers exposed to fire.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment, and emergency procedures**

- Personal precautions:** Take no action involving personal risk or without suitable training. Evacuate personnel to safe area. Keep unnecessary and unprotected personnel away. Eliminate all ignition sources if without risk (no smoking, flares, sparks or flames). Avoid contact with skin, eyes and clothing. Do not touch or walk through spilled material. Floors may be slippery. Wear protective clothing / equipment recommended in Section 8. Prevent entry into basements or confined areas. Ensure adequate ventilation, especially in confined spaces.
- Environmental precautions:** Prevent from entering soil, ditches, sewers, waterways and groundwater. Do not flush into surface water, sanitary sewer or ground water systems. See Section 12 for additional ecological information.

Methods and materials for containment and clean-up

- Small spill:** Stop leak if without risk. Absorb spill with inert material (i.e. dry sand or earth). Sweep, scoop up or vacuum the discharged material. Seal spent absorbent material in a suitable labeled container for disposal.
- Large spill:** Stop material flow if without risk. Approach release from upwind. Dike area to prevent spreading. Pump liquid to salvage tank. Remaining liquid may be taken up on dry sand, clay, earth, or other absorbent material and shoveled into containers. Do not use combustible materials, such as saw dust. Seal and label containers for disposal.

See Section 13 for disposal considerations.

7. HANDLING AND STORAGE**Precautions for safe handling**

- Advice on safe handling:** Handle in accordance with good industrial hygiene and safety practices. Do not get in eyes. Avoid contact with skin and clothing. Avoid repeated or prolonged skin contact. Wear appropriate personal protective equipment (see Section 8). Avoid breathing fume, mist, vapors or spray. Keep away from ignition sources. Do not eat, drink or smoke when using this product. Wash face, hands and other exposed skin thoroughly with soap and water after handling. Launder contaminated clothing before reuse.
- Empty container contains product residue which may exhibit hazards of the product. Do NOT cut, weld, braze, solder, drill or grind on or near empty containers.

Conditions for safe storage, including incompatibilities

- Storage conditions:** Keep container tightly closed until ready for use. Store in a well ventilated place, protected from sunlight. Store away from heat, sparks and flame. Do not reuse containers without proper cleaning or reconditioning. Empty container contains product residue which may exhibit hazards of the product. Store away from incompatible materials. Do not store in unlabeled or mislabeled containers. Maximum storage temperature for product preservation: 40°C (104°F).
- Incompatible materials:** Strong oxidizing agents. Strong acids. See Section 10 for more information.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure guidelines**

Chemical name	OSHA PEL	ACGIH TLV	NIOSH REL
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	TWA: 5 mg/m ³ (mist)	TWA: 5 mg/m ³ (inhalable fraction)	TWA: 5 mg/m ³ (mist) STEL: 10 mg/m ³ (mist)

- Appropriate engineering controls:** If use generates mist or vapor, local exhaust ventilation is recommended. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. Eyewash stations. Safety showers.

Individual protection measures, such as personal protective equipment

- Eye / face protection:** Safety glasses. If potential for splash or mist exists, wear chemical goggles or face shield.
- Skin / body protection:** Nitrile or neoprene gloves. Wear coveralls, apron and / or boots as necessary if there is a risk of exposure to splashes. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction.
- Respiratory** Not usually necessary under conditions of normal use. If airborne concentrations are above

protection:	exposure limits, use an approved respirator. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.
Work area and hygiene measures:	Observe good industrial hygiene practices. Launder contaminated clothing before reuse. Discard leather articles saturated with product. Wash face, hands and any other exposed skin thoroughly after handling. Do not eat, drink or smoke when using product.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Typical Property</u>	<u>Value</u>	<u>Remarks • Method</u>
Appearance, physical state:	Light amber liquid.	
Odor:	Mild petroleum.	
Odor threshold:	Not determined.	
pH:	Not determined.	
Melting / freezing point:	Not determined.	
Initial boiling point / range:	104.4°C (220°F)	ASTM D-86
Flash point:	162.5°C (324.5°F)	ASTM D-93
Evaporation rate:	Not determined.	
Flammability (solid, gas):	Not applicable (liquid).	
Upper / lower flammability or explosive limits:	Upper: Not determined. Lower: Not determined.	
Vapor pressure:	Not determined.	
Vapor density:	Not determined.	
Specific gravity:	0.9956	@ 60°F ASTM D-1298
Density:	0.9946	g/cm ³ @ 15°C ASTM D-1298
Solubility(ies):	Insoluble (water).	
Partition coefficient: n-octanol/ water	Not determined.	
Auto-ignition temperature:	Not determined.	
Decomposition temperature:	Not determined.	
Viscosity, kinematic:	114.33 9.46	cSt @ 40°C ASTM D-445 cSt @ 100°C

10. STABILITY AND REACTIVITY

Reactivity:	Not reactive under normal conditions of use, storage and transport.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	None under normal processing. Can react with iron, zinc and aluminum at high temperatures leading to product decomposition.
Conditions to avoid:	Direct sunlight, high temperatures, excessive heat and sources of ignition. Strong oxidizing conditions. Incompatible materials.
Incompatible materials:	Strong oxidizing agents. Strong acids.
Hazardous decomposition products:	Smoke, irritating vapors, carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, aldehydes, calcium oxides, sulfur oxides, mercaptans, sulfides, including hydrogen sulfide and other products of incomplete combustion. Thermal decomposition may generate phosphorus oxides, zinc oxides and other zinc containing compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation:	If material is misted, or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Ingestion:	Not a likely route of exposure in the workplace. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.
Skin contact:	May cause an allergic skin reaction. Frequent or prolonged skin contact may defat and dry the skin leading to discomfort and dermatitis. Unlikely to be hazardous by skin

absorption.

Eye contact: Causes serious eye irritation.

Acute toxicity and potential immediate effects

Oral: Product: ATEmix LD50 > 5000 mg/kg, rat.

Distillates (petroleum): LD50 > 5000 mg/kg, rat.

Petroleum hydrocarbons: LD50 > 11,700 mg/kg, rat.

Zinc alkyldithiophosphate: ATEmix LD50 > 2000 mg/kg.

Calcium sulfonate: LD50 > 5000 mg/kg, rat.

Dermal: Product: ATEmix LD50 > 5,000 mg/kg, rabbit.

Distillates (petroleum): LD50 > 5000 mg/kg, rabbit.

Petroleum hydrocarbons: LD50 > 13,900 mg/kg, rabbit.

Zinc alkyldithiophosphate: Component not classified for acute toxicity.

Calcium sulfonate: LD50 > 2000 mg/kg, rabbit.

Inhalation: No data available to indicate product may be a toxic inhalation hazard. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.

Skin corrosion / irritation: Product does not meet classification criteria. Prolonged or repeated contact can defat and dry the skin leading to discomfort and dermatitis.

Serious eye damage / irritation: Causes serious eye irritation.

Sensitization, respiratory: No data available.

Sensitization, skin: May cause an allergic skin reaction.

Potential chronic effects

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive toxicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Carcinogenicity: No data available to indicate product or any components contained at greater than 0.1% are carcinogenic. This product contains mineral oils which are severely refined and meet EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using IP 346.

NTP: No components listed.

IARC Monographs: No components listed.

OSHA: No components listed.

Specific target organ toxicity (STOT)

Single exposure (SE): Product does not meet classification criteria.

Zinc alkyldithiophosphate: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Calcium sulfonate: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Repeated exposure (RE): Product does not meet classification criteria.

Distillates (petroleum): Prolonged or repeated contact may cause drying, cracking or irritation of the skin.

Petroleum hydrocarbons: Repeated exposure to high levels may produce adverse effects on the liver and kidneys. NOEL (rat) (13 week(s)): > 3,750 mg/kg bw/day. Slight effects on the liver were seen at higher doses.

Zinc alkyldithiophosphate: Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis.

Calcium sulfonate: Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis.

Aspiration hazard Product does not meet classification criteria.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data on product available.

Freshwater fish:

Distillates (petroleum):	96 Hr LC50 Oncorhynchus mykiss: > 5000 mg/L
Petroleum hydrocarbons:	96 Hr LC50 Oncorhynchus mykiss: > 770 mg/L
	60 d LC50 Oncorhynchus mykiss: > 4 mg/L
	48 Hr LC50 Leuciscus idus: > 500 mg/L
	96 Hr LC50 Bluegill Sunfish (L. macrochirus): > 300 mg/L
	96 Hr LC50 Alburnus alburnus (bleak): > 5000 mg/L
Zinc alkyldithiophosphate:	4 d LC50 Rainbow trout: 4.4mg/L
Calcium sulfonate:	LC50 > 1000 mg/L

Aquatic invertebrates:

Distillates (petroleum):	48 Hr EC50 Daphnia magna (water flea): > 1000 mg/L
Petroleum hydrocarbons:	48 Hr LC50 Daphnia magna: > 5.1 mg/L
	NOEC (21 days): 55 µg/L
Zinc alkyldithiophosphate:	48 Hr EC50 Water flea (Daphnia magna): 75 mg/L
	48 Hr NOEC Water flea (Daphnia magna): 32 mg/L
	21 d EC50 Water flea (Daphnia magna): > 0.8 mg/L
	21 d NOEC Water flea (Daphnia magna): 0.4 mg/L
Calcium sulfonate:	EC50 > 1000 mg/L

Aquatic plants:

Zinc alkyldithiophosphate:	3 d EC50 Green algae (Scenedesmus quadricauda): 410 mg/L
	3 d,NOEC Green algae (Scenedesmus quadricauda): 220 mg/L
Calcium sulfonate:	EC50 > 1000 mg/L

Microorganisms:

Zinc alkyldithiophosphate:	0.1 d EC50 Pseudomonas putida: 380 mg/L
Calcium sulfonate:	EC50 > 1000 ppm

Persistence and degradability

Not readily biodegradable based on component data.

Bioaccumulative potential

Not determined.

Mobility

Not determined.

Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS**Method of disposal:**

Dispose of in accordance with applicable regional, national and local laws and regulations and material characteristics at the time of disposal.

Contaminated packaging:

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION**U.S. DOT**

UN number:	Not regulated.		
Proper shipping name:	Lubricant oil.		
Transport hazard class(es):	Not applicable.		
Packing group:	Not applicable.	Label code(s):	Not applicable.
Quantity limitations:	Passenger aircraft / rail:	Not applicable.	
	Cargo aircraft only:	Not applicable.	
	Limited Quantity:	Not applicable.	

Environmental hazards:

None.

Marine Pollutant:

No.

IMDG

Not regulated.

IATA

Not regulated.

Transport in bulk (Annex II of MARPOL73/78 and IBC Code) Not determined.

NOTE: Transport information may vary depending on mode, size of packaging and destination and is the responsibility of the shipper to follow applicable laws and regulations. Review classification requirements before shipping material at elevated temperatures.

15. REGULATORY INFORMATION**International Inventories**

Ingredient	TSCA	AICS	DSL	EINECS	ENCS	IECSC	KECL	NZioC	PICCS	SWISS	TCSI
Distillates (petroleum), severely hydrotreated heavy naphthenic	X	X	X	X	X	X	X	X	X		
Petroleum hydrocarbons	X	X	X	X	X	X	X	X	X		X
Zinc alkylidithiophosphate	X	X	X	X	X	X	X	X	X	X	X
Calcium sulfonate	X	X	X	X	X	X	X	X	X	X	X

U.S. Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): None found.

CERCLA Hazardous Substance List , RQ (40 CFR 302.4): Zinc compounds. No RQ has been assigned to this generic or broad class.

Superfund Amendments and Reauthorization Act of 1986 (SARA):**SARA 302 Extremely Hazardous Substance:**

None found.

SARA 311/312 Hazard Categories:

Immediate (acute) health hazard:	Yes
Delayed (chronic) health hazard:	Yes
Fire hazard:	Yes
Sudden release of pressure hazard:	No
Reactive hazard:	No

SARA 313 (TRI reporting):

None found.

U.S. State Regulations

California Proposition 65: This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Massachusetts Right-to-Know List: None found.

New Jersey Right-to-Know Hazardous Substance List: Zinc compounds. No CASRN.

Pennsylvania RTK List: None found.

16. OTHER INFORMATION

HMIS:	Health 2 *	Flammability 1	Physical Hazards 0	Personal Protection Not determined. ‡
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* Chronic health hazard.

‡ PPE codes should be determined by the employer, who is familiar with the actual conditions under which the material is used. See Section 8 for more information.

NFPA:	Health 2	Flammability 1	Instability 0	Special Hazards -
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Revision history

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Legend

ACGIH American Conference of Governmental Industrial Hygienists
AICS Australian Inventory of Chemical Substances
BCF Bioconcentration Factor
BEI Biological Exposure Indices
CAS Chemical Abstracts Service
CERCLA Comprehensive Environmental Response, Compensation and Liability Act
DSL Canada Domestic Substances List

EC₅₀ Effective concentration to 50% of test organisms
EINECS European Inventory of Existing Commercial Chemical Substances
ENCS Inventory of Existing and New Chemical Substances (Japan)
HMIS Hazardous Material Information System
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IECSC Inventory of Existing Chemical Substances in China
IMDG International Maritime Dangerous Goods Code

KECL/ECL	Korean Existing and Evaluated Chemical Substances	PICCS	Philippines Inventory of Chemicals and Chemical Substances
LC₅₀	Lethal concentration to 50% of test organisms	RQ	Reportable Quantity
LD₅₀	Lethal dose to 50% of test organisms	SARA	U.S. EPA Superfund Amendments and Reauthorization Act
LOAEL	Lowest Observed Adverse Effect Level	STEL	Short-Term Exposure Limit
NZioC	New Zealand Inventory of Chemicals	SWISS	Switzerland Inventory of Notified New Substances
NFPA	National Fire Protection Association	TLV	Threshold Limit Value
NIOSH	National Institute for Occupational Safety & Health	TPQ	Threshold Planning Quantity
NOAEL	No Observed Adverse Effect Level	TSCA	U.S. Toxic Substances Control Act
NTP	National Toxicology Program	TSCI	Taiwan Chemical Substance Inventory
OSHA	Occupational Health and Safety Administration	TWA	Time-Weighted Average
PEL	Permissible Exposure Limit	VOC	Volatile Organic Compound

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material(s) or in any process, unless specified in the text.

- END SAFETY DATA SHEET -