

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 upper respiratory tract.
- Skin contact:** Prolonged or repeated skin contact may cause drying, cracking or irritation of the skin.
- Eye contact:** May cause slight irritation that can result in stinging, tearing, redness or blurred vision.
- Ingestion:** Swallowing may cause irritation of gastrointestinal lining, nausea, and vomiting

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, carbon oxides. 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. Avoid contact with eyes and clothing. Avoid repeated or prolonged skin contact. Wear appropriate personal protective equipment (see Section 8). Avoid breathing 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) Petroleum hydrocarbons as: Oil Mist, if generated	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, adequate 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 protection: Not usually necessary under conditions of normal use. If product is heated or misted, use respirator with a combination organic vapor and high efficiency filter cartridge if recommended exposure limit is exceeded. 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

Typical Property	Value	Remarks • Method
Appearance, physical state:	Light amber liquid.	
Odor:	Slight petroleum.	
Odor threshold:	Not determined.	
pH:	Not determined.	
Melting / freezing point:	- 18.6°C (- 1.4°F)	ASTM D-2386
Initial boiling point / range:	> 148.9°C (> 300°F)	ASTM D-86
Flash point:	128.6°C (263.4°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:	< 0.010 PSI	ASTM D-5191
Vapor density:	Not determined.	
Specific gravity:	1.086	@ 60°F ASTM D-4052
Density:	1.0856	g/ml @ 15°C ASTM D-4052

Solubility(ies):	Insoluble (water).	
Partition coefficient: n-octanol/ water	Not determined.	
Auto-ignition temperature:	Not determined.	
Decomposition temperature:	Not determined.	
Viscosity, kinematic:	165.26	cSt @ 40°C ASTM D-445
	12.61	cSt @100°C

10. STABILITY AND REACTIVITY

Reactivity:	Not reactive under normal conditions.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	None under normal processing. Can react with alkali metals, alkali earthen metals, iron, zinc and aluminum at high temperatures leading to product decomposition.
Conditions to avoid:	Direct sunlight, heat, flames and sparks. Strong oxidizing conditions. Incompatible materials. Petroleum products tend to soften or swell most natural rubbers.
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 hydrogen chloride, phosphorus oxides, zinc oxides and other zinc containing compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation:	Unlikely to be hazardous by 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. May cause gastrointestinal discomfort if swallowed.
Skin contact:	Unlikely to be hazardous by skin absorption. Frequent or prolonged contact may defat and dry the skin leading to discomfort and dermatitis.
Eye contact:	May cause minor irritation.

Acute toxicity and potential immediate effects

Oral:	Product: ATEmix LD50 > 5000 mg/kg, rat.
Petroleum hydrocarbons:	LD50 > 11,700 mg/kg, rat.
Distillates (petroleum):	LD50 > 5000 mg/kg, rat.
Dermal:	Product: ATEmix LD50 > 5,000 mg/kg, rabbit.
Petroleum hydrocarbons:	LD50 > 13,900 mg/kg, rabbit.
Distillates (petroleum):	LD50 > 5000 mg/kg, rabbit.
Inhalation:	Not classified for acute toxicity based on available data.
Skin corrosion / irritation:	Product does not meet classification criteria.
Serious eye damage / irritation:	Product does not meet classification criteria.
Sensitization, respiratory:	Not classified based on available data.
Sensitization, skin:	Product does not meet classification criteria.

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.
Petroleum hydrocarbons:	Not mutagenic to bacteria or in in-vivo mouse bone marrow micronucleus assays.
Reproductive toxicity:	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Petroleum hydrocarbons:	Studies in animals have shown that doses produce no teratogenic effects. No effects in conventional development toxicity studies with doses up to 5000 mg/kg/day (rat) and 2000 mg/kg/day (rabbit). NOAEL (rat): 5000 mg/kg bw/day.

Carcinogenicity:	NOAEL (rabbit): 2000 mg/kg bw/day. No data available to indicate product or any components contained at greater than 0.1% are carcinogenic.
Petroleum hydrocarbons:	Studies in animals have shown that repeated doses do not produce carcinogenic effects: NOAEL (mouse). 2 Year(s): > 5000 mg/kg bw/day. NOAEL (rat) 2 Year(s): > 3750 mg/kg bw/day.
Distillates (petroleum):	Not classified. Meets 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.
Distillates (petroleum):	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and upper respiratory tract.
Repeated exposure (RE):	Product does not meet classification criteria.
Petroleum hydrocarbons:	Repeated exposure to high levels may produce adverse effects on the liver and kidneys. NOEL (rat) (13 weeks): > 3,750 mg/kg bw/day. Slight effects on the liver were seen at higher doses.
Distillates (petroleum):	Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Aspiration hazard

Product does not meet classification criteria.

12. ECOLOGICAL INFORMATION

<u>Ecotoxicity</u>	No data on product available.
Freshwater fish:	
Petroleum hydrocarbons:	96 Hr LC50 Oncorhynchus mykiss (rainbow trout): > 770 mg/L 60 d LC50 Oncorhynchus mykiss (rainbow trout): > 4 mg/L 96 Hr LC50 L. macrochirus (bluegill sunfish): > 300 mg/L 96 Hr LC50 Alburnus alburnus (bleak): > 5000 mg/L
Distillates (petroleum):	96 Hr LC50 Oncorhynchus mykiss (rainbow trout): > 5000 mg/L
Aquatic invertebrates:	
Petroleum hydrocarbons:	48 Hr LC50 Daphnia magna (water flea): > 5.1 mg/L NOEC (21 days): 55 µg/L
Distillates (petroleum):	48 Hr EC50 Daphnia magna (water flea): > 1000 mg/L
Aquatic plants:	No data available.
Microorganisms:	No data available.
<u>Persistence and degradability</u>	Not readily biodegradable based on available data.
<u>Bioaccumulative potential</u>	Limited potential for bioaccumulation based on available data.
<u>Mobility</u>	Not determined.
<u>Other adverse effects</u>	None known.

13. DISPOSAL CONSIDERATIONS

Method of disposal:	Disposal should be in accordance with applicable regional, national and local laws and regulations and material characteristics at the time of disposal.
Contaminated packaging:	Disposal should be in accordance with applicable regional, national and local laws and regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

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. Please see current shipping papers for most up to date shipping information.

U.S. DOT

UN number:	Not regulated.
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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. If shipping material at elevated temperatures, review classification requirements before shipment.		

15. REGULATORY INFORMATION

International Inventories

Ingredient	TSCA	AICS	DSL	EINECS	ENCS	IECSC	KECL	NZioC	PICCS	SWISS	TCSI
Distillates (petroleum)	X	X	X	X	X	X	X	X	X		
Petroleum hydrocarbons	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 present or not present in regulated quantities.

CERCLA Hazardous Substance List, RQ (40 CFR 302.4): Zinc compounds, no CASRN, < 0.5% w/w concentration. 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:	No
	Fire hazard:	Yes
	Sudden release of pressure hazard:	No
	Reactive hazard:	No

SARA 313 (TRI reporting):

None found equal to or more than De Minimis concentrations.

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	Flammability	Physical Hazards	Personal Protection
	1 *	1	0	Not determined. ‡

* 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	Flammability	Instability	Special Hazards
	1	1	0	-

Revision history

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Legend

ACGIH	American Conference of Governmental Industrial Hygienists	LOAEL	Lowest Observed Adverse Effect Level
AICS	Australian Inventory of Chemical Substances	NZioC	New Zealand Inventory of Chemicals
BCF	Bioconcentration Factor	NFPA	National Fire Protection Association
BEI	Biological Exposure Indices	NIOSH	National Institute for Occupational Safety & Health
CAS	Chemical Abstracts Service	NOAEL	No Observed Adverse Effect Level
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	NTP	National Toxicology Program
DSL	Canada Domestic Substances List	OSHA	Occupational Health and Safety Administration
EC₅₀	Effective concentration to 50% of test organisms	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Commercial Chemical Substances	PICCS	Philippines Inventory of Chemicals and Chemical Substances
ENCS	Inventory of Existing and New Chemical Substances (Japan)	RQ	Reportable Quantity
HMIS	Hazardous Material Information System	SARA	U.S. EPA Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	STEL	Short-Term Exposure Limit
IATA	International Air Transport Association	SWISS	Switzerland Inventory of Notified New Substances
IECSC	Inventory of Existing Chemical Substances in China	TLV	Threshold Limit Value
IMDG	International Maritime Dangerous Goods Code	TPQ	Threshold Planning Quantity
KECL/ECL	Korean Existing and Evaluated Chemical Substances	TSCA	U.S. Toxic Substances Control Act
LC₅₀	Lethal concentration to 50% of test organisms	TSCI	Taiwan Chemical Substance Inventory
LD₅₀	Lethal dose to 50% of test organisms	TWA	Time-Weighted Average
		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 -