SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

Product identifier

Product name: **EMKARATE(TM) RL 68HB**

Additional identification

Chemical name: Mixture
CAS-No.: Not applicable.

Recommended use and restriction on use

Recommended use: Not determined.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Supplier

Company Name: LUBRIZOL INTERNATIONAL, INC.
Address: 28 RIVER STREET
SILVERWATER NSW, 2128
AU
Telephone: TEL: (02) 9741-5200

Emergency telephone number:
FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1) 703 527 3887 OR WITHIN AUSTRALIA (02) 9037 2994 (LUBRIZOL)

2. Hazard(s) identification

GHS classification of substance or mixture, and national or regional information:

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

GHS label elements

Hazard symbol(s): No symbol

Signal Word: not applicable

Hazard Statement(s): Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: Avoid release to the environment.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/Information on Ingredients

Mixtures

Chemical name	CAS number	Percent by Weight
Tricresylphosphate	1330-78-5	1 - 10%

4. First aid measures

General: IF exposed or concerned: Get medical advice/attention.

Description of first aid measures

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Skin Contact: Wash with soap and water. If skin irritation occurs, get medical attention.

Ingestion: Treat symptomatically. Get medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed: See section 11.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Not relevant.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Extinguishing media

Suitable extinguishing media: CO_2, dry chemical, foam, water spray, water fog.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazard arising from the chemical: A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

Advice for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Recommend wearing self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up: Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

Reference to other sections: See sections 8 and 13 for additional information.

7. Handling and Storage:

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Launder contaminated clothing before reuse. Avoid environmental contamination.

Maximum Handling Temperature: Not determined.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. See section 10 for incompatible materials.

Maximum Storage Temperature: Not determined.

8. Exposure Controls/Personal Protection

Control Parameters:

Occupational Exposure Limits

None of the components have assigned exposure limits.

Exposure controls

Appropriate engineering controls: No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand Protection: Suitable gloves can be recommended by the glove supplier.

Other: Gloves, coveralls, apron, boots as necessary to minimize contact.

Respiratory Protection: Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.

Hygiene measures: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless to yellow
Odor:	Mild
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	> 270 °C (Cleveland Open Cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	0.982 (20 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	67 mm2/s (40 °C); 9.2 mm2/s (100 °C)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Pour Point Temperature	No data available.

10. Stability and Reactivity

Reactivity: No data available.

Chemical Stability: Material is stable under normal conditions.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Do not expose to excessive heat, ignition sources, or oxidizing materials. Strong oxidizing agents.

Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

11. Toxicological Information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity

Oral

Product: Ingestion of this material may cause gastric disturbances. Ingestion of this material can result in neurotoxicity. Signs and symptoms include increased sweating of hands and feet, numbness, tingling and weakness in extremities, unsteady gait and decreased reflexes.
Not classified for acute toxicity based on available data.

Dermal

Product: Skin absorption of components of this material will cause systemic effects; note toxicity in other sections.
ATEmix > 5000 mg/kg

Inhalation

Product: High concentrations may cause headaches, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, other central nervous system effects leading to visual impairment, respiratory failure, unconsciousness and death.
Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

Product: 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.
Remarks: Not classified as a primary skin irritant.

Serious Eye Damage/Eye Irritation:

Product: Remarks: Not classified as a primary eye irritant.

Respiratory sensitization:

No data available

Skin sensitization:

No data available

Specific Target Organ Toxicity - Single Exposure:

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

Aspiration Hazard:
No data available

Chronic Effects

Carcinogenicity:
No data available

Notifiable Carcinogenic Substances
No carcinogenic components identified

Prohibited Carcinogenic Substances
No carcinogenic components identified

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

ACGIH Carcinogen List:
No carcinogenic components identified

Germ Cell Mutagenicity:
No data available

Reproductive toxicity:

Tricresylphosphate	Suspected of damaging fertility. This material has been shown to impair fertility and cause adverse reproductive effects in rats and mice.

Specific Target Organ Toxicity - Repeated Exposure:

Tricresylphosphate	Repeated occupational exposure to tricresyl phosphate over a prolonged period of time may cause delayed neurotoxicity characterized by ataxia and tremors.

12. Ecological Information

Ecotoxicity

Fish

Tricresylphosphate	LC 50 (Rainbow Trout, 4 Days): 0.6 mg/l NOEC (Rainbow Trout, 4 Days): 0.56 mg/l

Aquatic Invertebrates

Tricresylphosphate	EC 50 (Water flea (Daphnia magna), 2 d): 0.146 mg/l

Toxicity to Aquatic Plants

Tricresylphosphate	EC 50 (Alga, 3 Days): 0.4042 mg/l

Toxicity to soil dwelling organisms
No data available

Sediment Toxicity
No data available

Toxicity to Terrestrial Plants
No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

Tricresylphosphate	LC 50 (Sludge, 0.1 Days): > 1,000 mg/l

Persistence and Degradability

Biodegradation

Tricresylphosphate	OECD TG 301 D, 24.2 %, 28 d, Not readily degradable.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol / water (log Kow)

Tricresylphosphate	Log Kow: 5.93 (Measured)

Mobility:

No data available

Other Adverse Effects: No data available.

13. Disposal Considerations

Disposal methods: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

14. Transport Information

IATA

Not regulated.

International standards

IMDG

Not regulated.

Code of Emergency Measure:

Domestic Standard: In compliance with domestic law.

Environmental hazards: Not regulated.

Special precautions for user: No special precautions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

None known.

Shipping descriptions may vary based on mode of transport, quantities ,temperature of the material, package size, and/or origin and destination It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. For transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

15. Regulatory Information

Inventory Status

Australia (AICS)
All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)
All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

China (IECSC)
All components of this product are listed on the Inventory of Existing Chemical Substances in China.

European Union (REACh)
To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH, or e-mail us at REACH_MSDS_INQUIRIES@Lubrizol.com

Japan (ENCS)
All components are in compliance with the Chemical Substances Control Law of Japan.

Korea (ECL)
All components are in compliance in Korea.

New Zealand (NZIoC)
All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)
All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)
All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Taiwan (TCSCA)
All components of this product are listed on the Taiwan inventory.

United States (TSCA)
All components of this material are on the US TSCA Inventory.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

Safety, health and environmental regulations/legislation specific for the substance or mixture.:

Poison Schedule Number: Poisons schedule number not allocated

16. Other Information

Key literature references and sources for data:	No data available.
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