

SAFETY DATA SHEET

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

Product identifier

Product name: EMKARATE™ RL 4MO

Additional identification

Chemical name: mineral oil

Recommended use and restriction on use

Recommended use: Refrigeration Lubricants.

Restrictions on use: None identified.

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

2. Hazard(s) identification

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

Not classified

GHS label elements

Hazard symbol(s): No symbol

Signal Word: Not applicable

Hazard Statement(s): Not applicable

Precautionary statement(s): Not applicable

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

3. Composition/Information on Ingredients

Substances

Chemical name	CAS number	Percent by Weight
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	100%

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First aid measures

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. Get medical attention if symptoms occur. Launder contaminated clothing before reuse.

Ingestion: Treat symptomatically. Get medical attention.

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: CO₂, Dry chemical or Foam. Water can be used to cool and protect exposed material.

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.
Hazchem Code:	None.

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. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. 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:	Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Use grounding and bonding connection when transferring material. In case of spills, beware of slippery floors and surfaces. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment.
Maximum Handling Temperature:	Not determined.
Conditions for safe storage, including any incompatibilities:	Store away from incompatible materials. See section 10 for incompatible materials. Store in tightly closed original container in a dry, cool and well-ventilated place. Do not store in direct sunlight.
Maximum Storage Temperature:	Not determined.

8. Exposure Controls/Personal Protection

Control Parameters: Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Distillates (petroleum), hydrotreated heavy naphthenic	TWA	5 mg/m ³	Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A), as amended (12 2011)
Distillates (petroleum), hydrotreated heavy naphthenic - Mist.	TWA	5 mg/m ³	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) (08 2005)
Distillates (petroleum), hydrotreated heavy naphthenic - Inhalable fraction.	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (03 2014)
Distillates (petroleum), hydrotreated heavy naphthenic - Respirable fraction.	Maximum allowable concentration:	5 mg/m ³	Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as amended (2017)

Exposure controls

Appropriate engineering controls:

No special requirements under ordinary conditions of use and with adequate ventilation. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

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:

Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.

Other:

No data available.

Respiratory Protection:

Use disposable dust/mist mask if the recommended exposure limit is exceeded. 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:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild petroleum
Odor Threshold:	No data available.
pH:	Not applicable
Freezing point:	< -17.78 °C
Boiling Point	> 260 °C
Flash Point:	> 176.7 °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.
Relative vapor density	> 5
Relative density	0.9122 (15.6 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	> 315.56 °C
Decomposition Temperature:	No data available.
Viscosity:	58.8 mm ² /s (40 °C);
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Pour Point Temperature:	-39 °C

Other information

Bulk density:	7.598 lb/gal (15.6 °C)
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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.

Incompatible Materials:	Strong acids. Oxidizing agents. Strong oxidizing agents.
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: Not classified for acute toxicity based on available data.

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

Product: Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

Product: Remarks: 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. 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:

Distillates (petroleum), hydrotreated heavy naphthenic
Classification: Not a skin sensitizer. (Read across)

Specific Target Organ Toxicity - Single Exposure:

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

No data available

Aspiration Hazard:

No data available

Chronic Effects**Carcinogenicity:**

Product:

This product contains mineral oils which are severely refined and not considered carcinogenic. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.

Distillates (petroleum),
hydrotreated heavy naphthenic

All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test. This product contains mineral oils which are severely refined and not considered carcinogenic.

Germ Cell Mutagenicity:

No data available

Reproductive toxicity:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

No data available

12. Ecological Information**Ecotoxicity****Fish**

Distillates (petroleum),
hydrotreated heavy naphthenic

LC 50 (Fathead Minnow, 96 h): > 100.1 mg/l

Aquatic Invertebrates

Distillates (petroleum),
hydrotreated heavy naphthenic

EC 50 (Water flea (Daphnia magna), 48 h): > 10,000 mg/l
EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l
NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Toxicity to Aquatic Plants

Distillates (petroleum),
hydrotreated heavy naphthenic

EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 100.1 mg/l
NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): >= 100.1 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

Distillates (petroleum),
hydrotreated heavy naphthenic

EC 50 (Sludge, 0.1 d): > 10,000 mg/l

Persistence and Degradability

Biodegradation

Distillates (petroleum),
hydrotreated heavy naphthenic

OECD TG 301 F, 31 %, 28 d, Not readily degradable.

Bioaccumulative potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol / water (log Kow)

No data available

Mobility:

No data available

Other adverse effects

No data available

13. Disposal Considerations

Disposal instructions:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging:

Container packaging may exhibit hazards.

14. Transport Information

ADG

Not regulated.

IATA

Not regulated.

IMDG

Not regulated.

Transport in bulk according to Annex II of MARPOL 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 (AIIIC)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDL)

All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

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 e-mail REACH@SDSInquiries.com.

Great Britain (UK REACH)

To obtain information on the UK REACH compliance status of this product, please e-mail REACH@SDSInquiries.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.

Turkey (KKDIK)

To obtain information on the KKDIK compliance status of this product, please e-mail REACH@SDSInquiries.com.

United States (TSCA)

All substances contained in this product are listed on the TSCA inventory or are exempt.

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.

Other information: Contact supplier (see Section 1)

Revision(s) are noted by the double bar in the margin and the light gray box.

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