

# SAFETY DATA SHEET

## 1. Identification

### Identification

**Product name:** EMKARATE™ RL 46HB (4315-62)

### Additional identification

**Chemical name:** Mixture

### 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:** Nu-Calgon  
**Address:** 2611 Schuetz Rd  
St. Louis, MO 63043  
US  
**Telephone:** (800) 554-5499 / (314) 469-7000

### Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1)703 527 3887, OR WITHIN USA 800 424 9300

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Toxic to reproduction Category 2

#### Unknown toxicity

Acute toxicity, inhalation, vapor 50.9 %

Acute toxicity, inhalation, dust  
or mist 2.0 %

### Label Elements:

#### Hazard Symbol:



**Signal Word:** Warning

**Hazard Statement:** Suspected of damaging fertility.

### Precautionary Statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**Response:** IF exposed or concerned: Get medical advice/attention.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

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

### 3. Composition/information on ingredients

Chemical name	CAS number	Percent by Weight
Tricresyl phosphate	1330-78-5	1 – 5%

### 4. First-aid measures

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

**Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

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

**Skin Contact:** Take off contaminated clothing and wash before re-use. Wash with soap and water. If skin irritation occurs, get medical attention.

**Eye contact:** Flush thoroughly with water. If irritation occurs, get medical assistance. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** See section 11.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Treat symptomatically.

### 5. Fire-fighting measures

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

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** CO<sub>2</sub>, 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 hazards 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.

#### Special protective equipment and precautions for fire-fighters

**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:** No data available.

**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.

## 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.

**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:** Rubber (natural, latex). Polyvinyl chloride (PVC). Nitrile.

<b>Other:</b>	Gloves, coveralls, apron, boots as necessary to minimize contact.
<b>Respiratory Protection:</b>	A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
<b>Hygiene measures:</b>	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Colorless to yellow
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	Not applicable
<b>Freezing point:</b>	No data available.
<b>Boiling Point:</b>	No data available.
<b>Flash Point:</b>	500 °F (260 °C) (Cleveland Open Cup)
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper:</b>	No data available.
<b>Explosive limit - lower:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	0.98 68 °F (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	46 mm <sup>2</sup> /s ( 104 °F (40 °C) ) 7.1 mm <sup>2</sup> /s (100 °C (212 °F) )
<b>Other information</b>	
<b>Bulk density:</b>	8.22 lb/gal

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
--------------------	--------------------

<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Will not occur.
<b>Conditions to avoid:</b>	Not determined.
<b>Incompatible Materials:</b>	Strong acids. Oxidizing agents. Strong bases.
<b>Hazardous Decomposition Products:</b>	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

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	No data available.
<b>Skin Contact:</b>	Causes mild skin irritation.
<b>Eye contact:</b>	No data available.

### Information on toxicological effects

#### Acute toxicity

##### Oral

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

##### Dermal

Product: ATEmix > 5,000 mg/kg Skin absorption of components of this material will cause systemic effects; note toxicity in other sections.

##### 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.

##### Skin Corrosion/Irritation:

Product: Remarks: Causes mild skin irritation. Prolonged or repeated contact may cause irritation.

##### 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:

Tricresyl phosphate                      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

**Other effects:**  
**Chronic Effects**  
**Carcinogenicity:**  
No data available

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

**US. National Toxicology Program (NTP) Report on Carcinogens:**  
No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:**  
No carcinogenic components identified

**Germ Cell Mutagenicity:**  
No data available

**Reproductive toxicity:**  
Tricresyl phosphate                      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:**  
Tricresyl phosphate                      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**

Tricresyl phosphate                      LC 50 (Rainbow Trout, 4 Days): 0.6 mg/l

**Aquatic Invertebrates**

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

**Toxicity to Aquatic Plants**

Tricresyl phosphate                      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**

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

**Persistence and Degradability**

**Biodegradation**

Tricresyl phosphate 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)**

Tricresyl phosphate Log Kow: 5.93 (Measured)

**Mobility:**

No data available

**Other adverse effects**

Product: Harmful to aquatic life with long lasting effects.

**13. Disposal considerations**

**Disposal instructions:**

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**

**DOT**

Not regulated.

**IMDG**

Not regulated.

**IATA**

Not regulated.

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

None known.

The DOT shipping information in this section is based on a bulk container. Please review the accompanying shipping papers for the correct shipping descriptions based the size of the package. 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. During 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

### US Federal Regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

#### TSCA Section 5(a)2 Significant New Use Rule (SNURs) (40CFR 721, Subpt E)

None present or none present in regulated quantities.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

None present or none present in regulated quantities.

#### Superfund amendments and reauthorization act of 1986 (SARA)

##### SARA 311 Classifications

Reproductive toxicity

##### SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

##### SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

##### SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

### US State Regulations

#### US. California Proposition 65



This product can expose you to chemicals including: Methanol (1.00PPM) which is [are] known to the State of California to cause birth defects or other reproductive harm.

### Inventory Status

#### Australia (AIC)

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

#### Canada (DSL/NDSL)

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.*

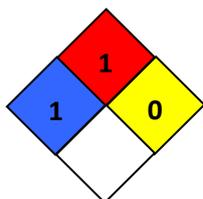
**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	*	1
<b>Flammability</b>		1
<b>Physical Hazards</b>		0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**NFPA Hazard ID**



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 09/08/2022

**Version #:** 5.0

**Source of information:** Internal company data and other publically available resources.

**Further Information:** Contact supplier (see Section 1)

**Disclaimer:** As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.