



Prepared according to Commission Regulation (EU) No 453/2010.

Section 1	Identification of substance/mixture and of the company/undertaking
------------------	---

1.1 Product Identifier**EMKARATE(TM) RL 220H**

Synonyms None.

1.2 Relevant identified uses of the substance or mixture and (uses advised against)**Relevant identified uses (see section 7.3 for information on REACH registered uses)**

Refrigeration Lubricants.

1.3 Details of the supplier of the safety data sheet

CPI Fluid Engineering
 2300 James Savage Rd.
 Midland, MI 48642
 Phone: 989-496-3780
 Fax: 989-496-0316

E-mail contact EUSDS@lubrizol.com (Lubrizol Safety Data Sheets can be obtained at www.mylubrizol.com)**1.4 Emergency Telephone number**

FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)

Section 2	Hazards Identification
------------------	-------------------------------

2.1 Classification of the substance or mixture**(EC) No 1272/2008**

This product does not meet the classification requirements of the current European legislation.

67/548/EC or 1999/45/EC

This product does not meet the classification requirements of the current European legislation.

For a full text of R- and H- phrases: See section 16**2.2 Label elements****(EC) No 1272/2008**

Not applicable.

Store away from oxidizers.

Supplemental label information

None.

2.3 Other hazards

None identified.

Section 3	Composition/Information on Ingredients
------------------	---

3.2 Mixtures**(EC) No 1272/2008**

This material contains no ingredients requiring disclosure under regulatory hazard criteria for this jurisdiction. See Section 11 for additional details.

67/548/EC or 1999/45/EC

This material has no known hazards under applicable laws.

600, 700, 800 and 900 ECHA List Numbers do not have any legal significance; rather they are purely technical identifiers and are displayed for informational purposes only.

Section 4	First Aid Measures
------------------	---------------------------

4.1 Description of first aid measures

Skin

Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation develops. Launder contaminated clothing before reuse.

Eyes

Flush with water at least 30 minutes. Get medical attention if eye irritation develops or persists.

Inhaled

Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. If experiencing respiratory symptoms call a poison center or doctor.

Swallowed

Do NOT induce vomiting. Never give anything by mouth to a person who is losing consciousness, unconscious or convulsing. Call a poison center or doctor if exposed or you feel unwell.

Advice for first-aid providers

When providing first aid always protect yourself against exposure to chemicals or blood born diseases by wearing gloves, masks and eye protection. If providing CPR use mouthpieces, resuscitation bags, pocket masks or other ventilation devices. After providing first aid wash your exposed skin with soap and water.

4.2 Most important symptoms and effects, both acute and delayed

See section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: Treat symptomatically.

Section 5	Fire Fighting Measures
------------------	-------------------------------

5.1 Extinguishing Media

CO₂, dry chemical, foam, water spray, water fog. Water can be used to cool and protect exposed material

5.2 Special hazards arising from substance or mixture

Burning may produce irritating, toxic and obnoxious fumes. Container may rupture in a fire situation. DO NOT USE a solid stream of water. See section 10 for additional information.

5.3 Advice for firefighters

Recommend wearing self-contained breathing apparatus. Do not direct a solid stream of water on spilled material. Use flooding amounts of water as a fog. Use water to cool containers exposed to fire. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. Do not release chemically contaminated water into drains, soil or surface water.

Section 6	Accidental Release Measures
------------------	------------------------------------

6.1 Personal precautions, protective equipment and emergency procedures

Only trained personnel should be permitted in area. Personal protective equipment must be worn. Ventilate area if spilled in a confined space or other poorly ventilated area. Material on floor may be slippery.

6.2 Environmental precautions

Material will float on water. Do not flush into surface water, sanitary sewer or ground water system.

6.3 Methods and material for containment and cleaning up

Shut off leak if without risk. Pick up free liquid for recycle and/or disposal. Pump any free liquid into an appropriate closed container. Residual liquid can be absorbed on inert material. Place in metal containers for recovery or disposal.

6.4 Reference to other sections

See sections 8 and 13 for additional information.

Section 7	Handling and Storage
------------------	-----------------------------

7.1 Precautions for safe handling

Keep containers closed when not in use. Avoid eye contact. Avoid repeated or prolonged skin contact. When handling, do not eat, drink, or smoke. Product can accumulate static charge when handled. Equipment should be grounded. Use grounding and bonding connection when transferring material to prevent static discharge, fire and explosion. Use spark-resistant tools. Wash thoroughly after handling. Launder contaminated clothing before reuse. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Pumping Temperature

Not determined.

Maximum Handling Temperature

Not determined.

Maximum Loading Temperature

Not determined.

7.2 Conditions for safe storage, including any incompatibilities

Store separately from oxidizers. Store in a cool, dry, well-ventilated area. Store separately from incompatible materials. Keep container tightly closed. Do not store in open, unlabeled or mislabeled containers.

Maximum Storage Temperature

Not determined.

7.3 Specific end use(s)

End uses are listed in an attached exposure scenario when one is required.

Section 8	Exposure Controls/Personal Protection
------------------	--

8.1 Control parameters

None known.

Other Exposure Limits

None known.

8.2 Exposure controls

If use generates a mist or vapor, local exhaust ventilation is recommended. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.

Eye/face protection

Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

Skin protection

Consult clothing/glove manufacturer to determine appropriate type of glove for given situation. Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear.

Long sleeve shirt is recommended. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.

Respiratory Protection

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.

Hygiene Measures

Wash thoroughly after handling this product. Do not eat, drink or smoke when using this product.

Environmental exposure controls

See section 6 for details.

Section 9	Physical and Chemical Properties
------------------	---

9.1 Information on basic physical and chemical properties

Appearance	Clear liquid.
Odour	Mild
Odour Threshold	Not determined.
pH	Not determined.
Melting / Freezing Point	Not determined.
Boiling Point	Not determined.
Boiling Point Range	Not determined.
Flash Point	290 °C, 554 °F COC (Typical)
Evaporation Rate	Not determined.
Flammability (solid,gas)	Not applicable.
Lower flammability or explosive limit	Not determined.
Upper flammability or explosive limit	Not determined.
Vapour Pressure	Not determined.
Vapour Density	Not determined.
Relative density	0.98 (20 °C)
Bulk Density	Not determined.
Water Solubility	Insoluble.
Other solubilities	Not determined.

Partition coefficient: n-octanol/water	Not determined.
Autoignition Point	Not determined.
Decomposition Temperature	Not determined.
Viscosity	221 Centistokes (40 °C) 19.2 Centistokes (100 °C)
Explosive properties	Material does not have explosive properties.
Oxidising properties	Material is a non-oxidising substance.

9.2 Other information

Pour Point Temperature	-15 °C, 5 °F
-----------------------------------	--------------

The above data are typical values and do not constitute a specification.

Section 10	Stability and Reactivity
-------------------	---------------------------------

10.1 Reactivity

Carefully review all information provided in sections 10.2 - 10.6.

10.2 Chemical stability

Material is normally stable at moderately elevated temperatures and pressures.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Do not expose to excessive heat, ignition sources, or oxidizing materials.

10.5 Incompatible materials

None known, avoid contact with reactive chemicals.

10.6 Hazardous decomposition products

Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

Section 11	Toxicological Information
-------------------	----------------------------------

11.1 Information on toxicological effects

Acute toxicity

Oral

The LD50 in rats is > 2000 mg/Kg. Based on data from components or similar materials.

Dermal

The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.

Inhalation

No data available to indicate product or components may be a toxic inhalation hazard.

Skin corrosion / irritation

Not expected to be a primary skin irritant. Based on data from components or similar materials.

Serious eye damage / irritation

Not expected to cause eye irritation. Based on data from components or similar materials.

Respiratory Irritation

No data available to indicate product or components may cause respiratory irritation under normal workplace conditions and good industrial hygiene practices.

Respiratory or skin sensitization

Skin

No data available to indicate product or components may be a skin sensitizer.

Respiratory

No data available to indicate product or components may be respiratory sensitizers.

Germ cell mutagenicity

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

Carcinogenicity

No data available to indicate any components present at greater than 0.1% may present a carcinogenic hazard.

Reproductive Toxicity

No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

STOT repeated exposure

No data available to indicate product or components present at greater than 1% are chronic health hazards.

Other information

No other health hazards known.

Section 12	Ecological Information
-------------------	-------------------------------

12.1 Toxicity

Freshwater fish

Not determined.

Freshwater invertebrates

Not determined.

Algae

Not determined.

Saltwater fish

Not determined.

Saltwater invertebrates

Not determined.

Bacteria

Not determined.

12.2 Persistence and degradability

Not applicable.

12.3 Bioaccumulative potential

Not applicable.

12.4 Mobility in soil

Not applicable.

12.5 Results of PBT and vPvB assessment

Not Available

12.6 Other adverse effects

None known.

Section 13	Disposal Considerations
-------------------	--------------------------------

13.1 Waste treatment methods

All disposal practices must be in accordance with local, regional, national and international regulations.

Empty container retains product residue and can be hazardous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Section 14	Transport Information
-------------------	------------------------------

14.1 UN number

ADR/RID	Not regulated
ICAO	Not regulated
IMDG	Not regulated

14.2 UN proper shipping name

ADR/RID	Not regulated
ICAO	Not regulated
IMDG	Not regulated

14.3 Transport hazard class(es)

ADR/RID	Not regulated
ICAO	Not regulated
IMDG	Not regulated

14.4 Packing group

ADR/RID	Not regulated
ICAO	Not regulated
IMDG	Not regulated

14.5 Environmental hazards

ADR/RID	Not applicable.
ICAO	Not applicable.
IMDG	Not applicable.

14.6 Special precautions for users

Review classification requirements before shipping materials at elevated temperatures.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

Not determined.

Section 15	Regulatory Information
-------------------	-------------------------------

15.1 Safety, health and environment regulations / legislation specific for the substance or mixture**Global Chemical Inventories**

Australia	All components are in compliance with chemical notification requirements in Australia.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.
China	All components of this product are listed on the Inventory of Existing Chemical Substances in China.
EU	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	All components are in compliance with the Chemical Substances Control Law of Japan.
Korea	All components are in compliance in Korea.
New Zealand	All components are in compliance with chemical notification requirements in New Zealand.
Philippines	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Taiwan	All components of this product are listed on the Taiwan inventory.
USA	All components of this material are on the US TSCA Inventory or are exempt.

German water hazard classes

WGK =1 according to the Water Hazardous Directive, VwVwS, dated May 17, 1999.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

Section 16	Other Information
-------------------	--------------------------

Created by

Product Safety and Compliance Department (440-943-1200)

Created Date

12 July 2011

Revision date

23 July 2014

SDS No.

24348902-2622417-703481-102103

HMIS Codes

Health	Fire	Reactivity
1	1	0

Relevant R Phrases

Not applicable.

Relevant hazard phrases

Not determined.

Revision Indicators

Section: 2 Storage procedures.

Changed: 23 July 2014

Section: 4 Advise to first aide provider.

Changed: 23 July 2014

Section: 4 Inhalation first aid.

Changed: 23 July 2014

Section: 4 Oral first aid.	Changed: 23 July 2014
Section: 4 Skin first aid.	Changed: 23 July 2014
Section: 5 Extinguishing media.	Changed: 23 July 2014
Section: 5 Special firefighting procedures.	Changed: 23 July 2014
Section: 5 Unusual fire& explosion hazards.	Changed: 23 July 2014
Section: 6 Environmental precautions	Changed: 23 July 2014
Section: 6 Methods for clean-up, removal	Changed: 23 July 2014
Section: 6 Personal precaution	Changed: 23 July 2014
Section: 7 Handling procedures.	Changed: 23 July 2014
Section: 7 Storage procedures.	Changed: 23 July 2014
Section: 8 Clothing recommendations.	Changed: 23 July 2014
Section: 8 Eye protection.	Changed: 23 July 2014
Section: 8 Hygiene Measures	Changed: 23 July 2014
Section: 8 Glove protection.	Changed: 23 July 2014
Section: 8 Ventilation procedures.	Changed: 23 July 2014
Section: 9 Appearance.	Changed: 23 July 2014
Section: 9 Flash point.	Changed: 23 July 2014
Section: 9 Pour point temperature.	Changed: 23 July 2014
Section: 9 Viscosity.	Changed: 23 July 2014
Section: 10 Conditions to avoid.	Changed: 23 July 2014
Section: 13 Contaminated Containers/Packaging	Changed: 23 July 2014
Section: 15 Canada.	Changed: 24 September 2013

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.