



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

Section 1	Identification of substance/mixture and of the company/undertaking
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1.1 Product Identifier

EMKARATE(TM) RL 46H

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 Engineering Services
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
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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.

Supplemental label information

None.

2.3 Other hazards

None identified.

Section 3	Composition/Information on Ingredients
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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
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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.

Swallowed

DO NOT INDUCE VOMITING. Get immediate medical attention. Rinse mouth and then drink plenty of water, seek medical attention 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. 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
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5.1 Extinguishing Media

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

5.2 Special hazards arising from substance or mixture

See section 10 for additional information.

5.3 Advice for firefighters

Recommend wearing self-contained breathing apparatus.

Section 6	Accidental Release Measures
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6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment must be worn. Ventilate area if spilled in a confined space or other poorly ventilated area.

6.2 Environmental precautions

Prevent entry into sewers and waterways.

6.3 Methods and material for containment and cleaning up

Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

6.4 Reference to other sections

See sections 8 and 13 for additional information.

Section 7	Handling and Storage
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7.1 Precautions for safe handling

Keep containers closed when not in use. Avoid inhalation of dust, aerosol, mist, spray, fume, or vapor. Use with appropriate and adequate ventilation. Wash thoroughly after handling. Launder contaminated clothing before reuse. Empty container contains product residue which may exhibit hazards of product. 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

Keep only in original container. See section 10 for incompatible materials.

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
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8.1 Control parameters

None known.

Other Exposure Limits

Contains synthetic basestock. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH TWA of 5 mg per cubic meter for mineral oil mists.

8.2 Exposure controls

Use with adequate ventilation.

Eye/face protection

Safety glasses. If oil mist is generated, chemical goggles are recommended.

Skin protection

Neoprene. 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. Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur wear chemically protective gloves.

Long sleeve shirt is recommended. 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.

Environmental exposure controls

See section 6 for details.

Section 9	Physical and Chemical Properties
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9.1 Information on basic physical and chemical properties

Appearance	Clear to yellow 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	260 °C, 500 °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	410 °C, 770 °F
Decomposition Temperature	Not determined.
Viscosity	46 Centistokes (40 °C) 7.1 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	-48 °C, -54 °F
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The above data are typical values and do not constitute a specification.

Section 10	Stability and Reactivity
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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

Strong acids. Strong bases. Strong oxidizing agents.

10.6 Hazardous decomposition products

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

Section 11	Toxicological Information
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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. Ingestion of this material may cause gastrointestinal irritation.

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. Prolonged or repeated contact may cause skin discomfort or mild irritation.

Serious eye damage / irritation

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

Respiratory Irritation

If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials.

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
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12.1 Toxicity**Freshwater fish**

The acute LC50 is > 1000 mg/L based on similar materials.

Freshwater invertebrates

The acute EC50 is > 1000 mg/L based on similar materials.

Algae

The acute EC50 is > 1000 mg/L based on similar materials.

Saltwater fish

Not determined.

Saltwater invertebrates

Not determined.

Bacteria

The acute EC50 is > 1000 ppm based on similar materials.

12.2 Persistence and degradability

Substance	Pct. (weight)	Test type	Duration (days)	Pct. degradation
Mixture.	From 90 to 100 percent	Sturm	28	63.1

12.3 Bioaccumulative potential

Not determined.

12.4 Mobility in soil

Not determined.

12.5 Results of PBT and vPvB assessment

Not Available

12.6 Other adverse effects

None known.

Section 13	Disposal Considerations
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13.1 Waste treatment methods

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

Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Section 14	Transport Information
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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
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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	This material contains a component that has been notified to Environmental Canada and is eligible for addition to the Domestic Substances List (DSL).

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
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Created by

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

Created Date

07 February 2011

Revision date

23 July 2013

SDS No.

83277257-3022227-1037391-102103

HMIS Codes

Health	Fire	Reactivity
1	1	0

Relevant R Phrases

Not applicable.

Relevant hazard phrases

Not determined.

Revision Indicators

Section: 4 Oral first aid.	Changed: 23 July 2013
Section: 4 Skin first aid.	Changed: 23 July 2013
Section: 8 Other Exposure Limits	Changed: 23 July 2013
Section: 8 Eye protection.	Changed: 23 July 2013
Section: 8 Glove protection.	Changed: 23 July 2013
Section: 10 Conditions to avoid.	Changed: 23 July 2013

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