



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name Nu-Calgon Wholesaler, Inc.	Phone Number (314) 469-7000 / (800) 554-5499	CHEMTREC (800) 424-9300		
Street Address 2008 Altom Court	City St. Louis	State MO	Postal Code 63146-4151	Last Update 12/2/13
Product Name Emkarate RL 220H Plus	Product Number 4318-65	Product Use Refrigerant Lubricant		EPA Registration # N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Polyol ester	>99		No TLV established	No PEL established
antioxidant	<1		No TLV established	No PEL established

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Color pale yellow / Form Liquid / Odor mild odor INHALATION OR INGESTION MAY CAUSE MUCOUS MEMBRANE IRRITATION. MAY BE HARMFUL IF SWALLOWED. EXCESSIVE INHALATION EXPOSURE MAY CAUSE IRRITATION OF RESPIRATORY PASSAGES. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SLIGHT SKIN IRRITATION. MAY CAUSE EYE IRRITATION
Potential Health Effects
Eyes: May cause eye irritation in man.
Skin: May cause skin irritation. This material may be harmful if absorbed through the skin.
Ingestion: In humans, irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion of this product. May be harmful if swallowed.
Inhalation: This material may cause irritation following inhalation. No toxic effects are known to be associated with inhalation of this material.
Chronic Exposure: Chronic ingestion studies in animals have shown that repeated doses produce no significant effects.
Carcinogenicity: Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.
Skin: Wash material off of the skin with soap and plenty of water. Get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.
Ingestion: DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.
Inhalation: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 250(open cup)°C/482(open cup)°F
Autoignition Temp: Estimated > 400°C/Estimated > 752°F
Hazardous Products of Combustion: No Data.
Flammable Limits in Air: No data.
Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical.
Fire and Explosion Hazards: None known.
Special Firefighting Procedures: A self contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Contain spill. Soak up material with absorbent and shovel into a chemical waste container. Wash residue from spill area with water containing detergent and flush to a sewer serviced by a permitted wastewater treatment facility.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Prevent eye contact. Prevent skin contact. Avoid breathing this material. Do not swallow.

Storage Requirements: Store in original containers.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Respiratory protection is not normally needed if controls are adequate.

Eye Protection: Chemical tight goggles.

Protective Clothing: Impervious gloves.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): Provide adequate ventilation. Eyewash and safety shower easily accessible to the work area.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data. °C/No Data. °F	% Volatile by Weight: No Data. %
Color: pale yellow	Vapor Density [air =1]: No Data.	Evaporation Rate: No Data.
Odor: mild odor	Vapor Pressure: No Data.	Specific Gravity: No Data.
Boiling Point: Estimated > 300°C/Estimated > 572°F	Solubility in Water: Insoluble	pH (concentrate): No data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizing agents.

Reactive Conditions to avoid: None known.

Decomposition Products: None known.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient</u> (Specify Species)	<u>LC50 of Ingredient</u> (Specify Species)
			Eye contact: A 100% suspension of this material was tested. Rabbit Kay & Calandra Minimally irritating.	
			Skin contact: A 100% suspension of this material was tested. Rabbit Draize Slightly irritating.	
			Dermal toxicity: A 100% suspension of this material was tested. LD50 rat >2000mg/kg Slightly toxic.	
			Ingestion: LD50 rat >2000mg/kg Slightly toxic.	

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	The product is essentially insoluble in water. Biodegradability (OECD 301B) 14% The substance showed no toxicity to fish or invertebrates at the solubility limit. Unlikely to inhibit the aerobic and anaerobic treatment of sewage sludge by waste water bacteria.
	LC50 (96 hour) rainbow trout >_ 100mg/l No observed effect concentration (96 hour) rainbow trout 100mg/l
	EC50 (48 hour) Daphnia magna >_ 100mg/l No observed effect concentration(48 hour) Daphnia magna 100mg/l
	EC50 (72 hours) Scenedesmus subspicatus >_ 100mg/l NOEC Scenedesmus subspicatus 100mg/l IC50 (3hr) bacteria >_ 1000mg/l NOEC bacteria 1000mg/l

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Disposal should be in accordance with local, state or national legislation.

Container disposal: Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not regulated.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Not regulated.			
IMO (Water)	Not regulated.			
ICAO (Air)	Not regulated.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Noncontrolled (Nonhazardous).
SARA Title III: (Superfund Amendments & Reauthorization Act)	SARA 311/312 Hazard Categories: Immediate Y / Delayed N / Fire N / Pressure N / Reactivity N
OSHA: (Occupational Safety & Health Administration)	OSHA Hazard Communication Standard, 29 CFR 1910.1200, Hazard Summary: Health Hazards: Irritant (eye) / Physical Hazards: None
TSCA: (Toxic Substance Control Act)	Compliant.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	Compliant. Notified but import conditions apply. Refer to supplier.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health 1 Flammability 1 Physical Hazards 0 Instability 0

SECTION 16 – OTHER INFORMATION

Partition Coefficient Estimated > 6.2Log POW
Kinematic viscosity(40°C) (mm²/S) 220
Kinematic viscosity (mm²/s) 19 @ 100°C
Density (g/ml) >_ 1.0@ 20 °C
Pour Point (°F) -16.6
Pour Point (°C) -27°C
Japan (ENCS) Compliant.
China (IECSC) Compliant.

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