



## RADCOLUBE® NLT

### SAFETY DATA SHEET

#### HYDRAULIC FLUID, PETROLEUM BASED, LOW TEMPERATURE

#### 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name:** RADCOLUBE® NLT

ISO 9001:2008 Certification Number: C2015-00068

**Recommended Use**

A low viscosity mineral based fluid used in a variety of operating systems requiring a temperature range of -65°C to 135°C (-85°F and 275°F). This fluid is operational for use in aircraft, missile systems, and UAVs.

**National Stock Numbers (NSN):**

9150-01-538-9109 Quart

**Company Identification**

Headquarters (CAGE Code 6ZS16)  
Radco Industries, Inc.  
700 Kingsland Drive  
Batavia, IL 60510

Manufacturing Facility (CAGE Code 1RVC4)  
Radco Industries, Inc.  
39W930 Midan Drive  
LaFox, IL 60147

Customer information number: 1-630-232-7966

**EMERGENCY TELEPHONE NUMBER**

**Advisory Office in case of poisoning: Chemtrec**

Chemtrec (North America): 1-800-424-9300

#### 2. HAZARDS IDENTIFICATION

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**Classification of mixture:**

Aspiration Hazard, Category 1

**Hazard Pictograms:**



**Signal Word:**

DANGER

**Hazard Statements:**

H304: May be fatal if swallowed and enters airways.

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**Precautionary Statements:**

P273:	Avoid release to the environment.
P301 + P315 + P331:	IF SWALLOWED: Do NOT induce vomiting. Get immediate medical advice/attention.
P305 + P351:	IF IN EYES: Rinse cautiously with water for several minutes.
P350:	Gently wash with soap and water.
P362:	Take off contaminated clothing and wash before reuse.



P405:	Store locked up.
P501:	Dispose of contents/container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	%Content	CAS Number
Distillates (Petroleum) Hydrotreated Light Naphthenic	Proprietary	64742-53-6
Distillates (Petroleum) Hydrotreated Light	Proprietary	64742-47-8
Additive Package	Proprietary	Proprietary

### 4. FIRST-AID MEASURES

#### Eyes

Immediately flush eyes with plenty of water for at least 15 minutes.

#### Ingestion

If swallowed, drink plenty of water, DO NOT induce vomiting. Immediately call a doctor.

#### Inhalation

Move to fresh air. If unconscious place in recovery position and seek medical advice. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. Remove from further exposure. Immediately call a doctor.

#### Skin

Wash exposed skin with soap and water.

### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

For small fires use carbon dioxide, dry chemical or foam.

For large fires use alcohol-type foam, universal type foam or water fog.

#### Fire-Fighting Equipment

Firefighter should wear normal protective equipment (full bunker gear) and positive-pressure contained breathing apparatus. Water can be used to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Water runoff can cause environmental damage. Dike and collect water used to fight fires.

#### Special Fire-Fighting Procedures

Use water spray to cool fire-exposed containers and structures. If a rail or tank truck is involved in a fire, isolate for 800 meters (0.5 mile) in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from the area and let the fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.

### 6. ACCIDENTAL RELEASE MEASURES

Wear protective clothing when taking up spill. Eliminate sources of ignition. This product is insoluble in water and will float on the surface. Prevent from entering sewers or drains. Should this product enter sewers or drains, it should be pumped out into an open vessel.

### 7. HANDLING AND STORAGE

#### Handling

Do not breathe vapors/dust. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.



### Storage

Do not store in open or unlabeled containers. Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Occupational exposure limits
Distillates (petroleum), hydrotreated light naphthenic	ACGIH TLV: (United States, 4/2014) TWA = 5 mg/m <sup>3</sup> 8 hours (Inhalable fraction) NIOSH PEL: (United States, 10/2013) TWA = 5 mg/m <sup>3</sup> 10 hours (Mist) NIOSH PEL: (United States, 10/2013) STEL = 10 mg/m <sup>3</sup> 15 minutes (Mist) OSHA PEL: (United States, 2/2013) TWA = 5 mg/m <sup>3</sup> 8 hours (Mist)
Distillates (Petroleum) Hydrotreated Light	ACGIH TLV: (United States, 4/2014) TWA = 5 mg/m <sup>3</sup> 8 hours (Inhalable fraction) NIOSH PEL: (United States, 10/2013) TWA = 5 mg/m <sup>3</sup> 10 hours (Mist) NIOSH PEL: (United States, 10/2013) STEL = 10 mg/m <sup>3</sup> 15 minutes (Mist) OSHA PEL: (United States, 2/2013) TWA = 5 mg/m <sup>3</sup> 8 hours (Mist)
Additive package	None established

### Respiratory Protection

Use with adequate ventilation. Avoid breathing vapor. If heated and ventilation is inadequate, use NIOSH certified respirator, which will protect against organic vapor.

### Hand Protection

Wear clothing and gloves that are chemical or oil resistant.

### Eye Protection

Safety glasses, chemical goggles, or face shields recommended to prevent contact.

### Other Protection

Do not eat, drink, or smoke when handling this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Transparent, red liquid
Odor:	Slight petroleum odor
Odor threshold:	Not Determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not Determined
Evaporation Rate:	Not determined
Flash point Cleveland Open Cup (ASTM D92):	115°C (239F)
Flash point Pensky-Martens (ASTM D93):	Not Determined
Flammability (solid, gas):	Non-flammable
Lower flammability limit:	Not Determined
Upper flammability limit:	Not Determined
Initial boiling point and boiling range:	> 200°C (392°F)
Melting point/freezing point:	Not Determined
Partition coefficient (n-octanol/water), Log P <sub>ow</sub> :	Not Determined
pH:	Not applicable
Solubility:	Water insoluble
Relative density (ASTM D1298) 15.6°C/15.6°C:	0.87
Vapor density:	Not Determined
Vapor pressure:	0.00 mmHg at 20°C (68°F)
Viscosity (ASTM D445):	1.8 mm <sup>2</sup> /s (cSt) at 100°C (212°F) 4.4 mm <sup>2</sup> /s (cSt) at 40°C(104°F) 100 mm <sup>2</sup> /s (cSt) at -40°C (-40°F) 380 mm <sup>2</sup> /s at (cSt) -54°C (65.2°F)

## 10. STABILITY AND REACTIVITY INFORMATION



**Materials to avoid**

Avoid exposure to materials that are highly oxidizing.

**Hazardous polymerization**

Does not occur.

**Hazardous decomposition products**

Incomplete combustion may give various cracked and oxidized hydrocarbons.

**Stability**

Stable

**11. TOXICOLOGICAL INFORMATION**

Acute toxicity	Method	Species	Result
Distillates (petroleum), hydrotreated light naphthenic	Dermal	Rabbit	LD <sub>50</sub> > 5000 mg/kg
	Inhalation	Rat	LC <sub>50</sub> > 5.53 mg/L after 4 hours
	Oral	Rat	LD <sub>50</sub> > 5000 mg/kg (body weight)
Distillates (Petroleum) Hydrotreated Light	Dermal	Rabbit	LD <sub>50</sub> > 5000 mg/kg
	Inhalation	Rat	LC <sub>50</sub> > 5.53 mg/L after 4 hours
	Oral	Rat	LD <sub>50</sub> > 5000 mg/kg (body weight)
Additive Package	--	--	Not expected to be hazardous.

Aspiration hazard	Test Method	Species	Result
Distillates (petroleum), hydrotreated light naphthenic	OECD 403	Rat	LC <sub>50</sub> > 5.53 mg/L after 4 hours
Distillates (Petroleum) Hydrotreated Light	OECD 403	Rat	LC <sub>50</sub> > 5.53 mg/L after 4 hours
Additive Package	--	--	No data available

Carcinogenicity	Test Method	Species	Result
Distillates (petroleum), hydrotreated light naphthenic	OECD 451	Mouse	Non-carcinogenic
Distillates (Petroleum) Hydrotreated Light	OECD 451	Mouse	Non-carcinogenic
Additive Package	--	--	Not expected to be carcinogenic.

Eye damage / irritation	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 405	Rabbit	Not irritating
Distillates (Petroleum) Hydrotreated Light	OECD 405	Rabbit	Not irritating
Additive Package	--	--	Not expected to be hazardous.

Germ cell mutagenicity	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 471	<i>S. typhimurium</i>	Not mutagenic
	OECD 474	Mouse	Not mutagenic
Distillates (Petroleum) Hydrotreated Light	OECD 471	<i>S. typhimurium</i>	Not mutagenic
	OECD 474	Mouse	Not mutagenic
Additive Package	--	--	Not mutagenic

Reproductive toxicity	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 421	Rat	NOAEL ≥ 1000 mg/kg/day
Distillates (Petroleum) Hydrotreated Light	OECD 421	Rat	NOAEL ≥ 1000 mg/kg/day
Additive Package	--	--	Not expected to be toxic to reproduction.

**Respiratory sensitization**

No data available



Skin sensitization	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 406	Guinea pig	Not sensitizing
Distillates (Petroleum) Hydrotreated Light	OECD 406	Guinea pig	Not sensitizing
Additive Package	--	--	Not sensitizing

Skin corrosion/irritation	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 404	Rabbit	Not irritating
Distillates (Petroleum) Hydrotreated Light	OECD 404	Rabbit	Not irritating
Additive Package	--	--	Not expected to be hazardous.

Specific target organ toxicity – repeated exposure (STOT-RE)	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	Literature	Rat	Inhalation NOAEL > 980 mg/m <sup>3</sup> air Oral NOAEL = 125 mg/kg bw/day Dermal NOAEL < 30 mg/kg bw/day
	OECD 408	Rat	
	OECD 411	Rat	
Distillates (Petroleum) Hydrotreated Light	Literature	Rat	Inhalation NOAEL > 980 mg/m <sup>3</sup> air Oral NOAEL = 125 mg/kg bw/day Dermal NOAEL < 30 mg/kg bw/day
	OECD 408	Rat	
	OECD 411	Rat	
Additive Package			No data available

**Specific target organ toxicity – single exposure (STOT-SE)**  
 No data available

## 12. ECOLOGICAL CONSIDERATIONS

Aquatic Toxicity	Test Method	Species	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 201	<i>Alga</i>	NOEL ≥ 100 mg/L after 72 hours NOEL > 10,000 mg/L after 48 hours LL <sub>50</sub> > 100 mg/L after 96 hours NOEL = 10 mg/L after 21 days NOELR ≥ 1000 mg/L after 14 days
	OECD 202	<i>Daphnia sp.</i>	
	OECD 203	<i>P. promelas</i>	
	OECD 211	<i>D. magna</i>	
	QSAR	<i>O. mykiss</i>	
Distillates (Petroleum) Hydrotreated Light	OECD 201	<i>Alga</i>	NOEL ≥ 100 mg/L after 72 hours NOEL > 10,000 mg/L after 48 hours LL <sub>50</sub> > 100 mg/L after 96 hours NOEL = 10 mg/L after 21 days NOELR ≥ 1000 mg/L after 14 days
	OECD 202	<i>Daphnia sp.</i>	
	OECD 203	<i>P. promelas</i>	
	OECD 211	<i>D. magna</i>	
	QSAR	<i>O. mykiss</i>	
Additive Package	--	--	Not expected to be hazardous.

Biodegradation	Test Method	Results
Distillates (petroleum), hydrotreated light naphthenic	OECD 301F	Inherently biodegradable: 77% after 28 days
Distillates (Petroleum) Hydrotreated Light	OECD 301F	Inherently biodegradable: 31% after 28 days
Additive Package	--	No data available

Partition Coefficient n-octanol / water (Log K <sub>ow</sub> )	Results
Distillates (petroleum), hydrotreated light naphthenic	10.09
Distillates (Petroleum) Hydrotreated Light	No data available
Additive Package	No data available

## 13. DISPOSAL INFORMATION

Disposal must be in accordance with applicable federal, state, or local regulations.

Do not allow product to reach ground water, water course, or sewage systems.

This unused material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable, or reactive according to U.S. EPA definitions (40 CFR Subpart C). This material could also become hazardous waste if it is mixed with or comes into contact with a listed hazardous waste. If it is a hazardous waste, regulations in 40 CFR 262-266, 268, 270, and 279 may apply.



“Empty” containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove and even a trace of remaining material constitutes as explosive hazard. “Empty” drums should be completely drained, properly bunged, and promptly returned to a drum recycler. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

#### 14. TRANSPORT INFORMATION

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**United States Department of Transportation (DOT)**

Not regulated

**Canada Transport - Transportation of Dangerous Goods (TDG)**

Not regulated

**International Air Transport Association (IATA)**

Not regulated

**International Carriage of Dangerous Goods by Inland Waterways (AND)**

Not regulated

**International Carriage of Dangerous Goods by Rail (RID)**

Not regulated

**International Carriage of Dangerous Goods by Road (ADR)**

Not regulated

**International Civil Aviation Organization (ICAO)**

Not regulated

**International Maritime Dangerous Goods Code (IMDG Code)**

Not regulated

#### 15. REGULATORY INFORMATION

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**California (Proposition 65)**

This product does not contain any of the substances known to the State of California to cause cancer, birth defects, or reproductive harm.

**CERCLA Reportable Quantity**

This product is not reportable under 40 CFR Part 302.4.

**Environmental Protection Agency**

None of the ingredients are listed

**National Toxicology Program (NTP)**

None of the ingredients are listed.

**OSHA Hazard Communication Standard**

Not hazardous per 29 CFR 1910.1200(d).

**SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355)**

This product is not regulated under Section 302 of SARA and 40 CFR Part 355.



**SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370)**

Hazardous categories for this product are: Acute=no; Chronic=no; Fire=no; Pressure=no; Reactive=no.

**SARA Title III Section 313 (40 CFR Part 372)**

This product is not regulated under Section 313 of SARA and 40 CFR Part 372.

**U.S. Inventory (TSCA)**

Listed on inventory.

**Australia Inventory (AICS)**

Listed on inventory.

**Canada Inventory (DSL)**

All of the ingredients are listed.

**China (CICS)**

None of the ingredients are listed.

**EC Inventory (EINECS/ELINCS)**

In Compliance

**International Agency for Research on Cancer (IARC)**

None of the ingredients are listed.

**Japan Inventory (MITI)**

Listed on inventory.

**Korea Inventory (ECL)**

Listed on inventory.

**16. OTHER INFORMATION**

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Safety Data Sheet Creation Date: 2 February 2010  
Safety Data Sheet Revision Date: 23 February 2018

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