



# RADCOLUBE® LTGO

## Safety Data Sheet

### MIL-PRF-14107D Lubricating Oil, Weapons, Low Temperature

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Version: 2.0

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## SECTION 1: Identification

### 1.1. Identification

Trade name RADCOLUBE® LTGO  
Specification: MIL-PRF-14107D Lubricating Oil, Weapons, Low Temperature  
Qualification Number (Date): AR 22-01 (1 February 2022)

Military Symbol: LAW  
NATO Code: 0-157

National Stock Number(s) (NSN): 9150-00-292-9689 (Quart)  
9150-00-292-9687 (5 Gallon Pail)

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture: The lubricating oil covered by this specification is intended primarily for the lubrication of aircraft and ground weapons to ensure efficient firing at low temperatures. The oil covered by this specification is considered military unique because it must perform at temperatures between 0°F to -70°F (-17.8°C to -56.6°C).

### 1.3. Supplier

#### Manufacturer

Radco Industries Inc.  
CAGE Code 6ZS16  
700 Kingsland Drive  
Batavia, Illinois 60510  
United States  
T (630) 232-7966  
[www.radcoind.com](http://www.radcoind.com)

### 1.4. Emergency telephone number

Emergency number: For Chemical Emergency Call CHEMTREC 24hr/day 7days/week  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1 703-741-5970  
(collect calls accepted)

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Full text of H statements : see section 16		

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US):



Signal word (GHS US):

Danger

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Hazard statements (GHS US):	H304 - May be fatal if swallowed and enters airways H332 - Harmful if inhaled
Precautionary statements (GHS US):	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P271 - Use only outdoors or in a well-ventilated area. P301+P310 - If swallowed: Immediately call a poison center or doctor. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P312 - Call a poison center or doctor if you feel unwell. P331 - Do NOT induce vomiting. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification: None under normal conditions.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Synthetic hydrocarbon* (Base Stock)	CAS-No.: Trade Secret	Trade Secret	Acute Tox. 4 (Inhalation:dust,mist), H332 Asp. Tox. 1, H304
Proprietary Additive 1* (Additive)	CAS-No.: Trade Secret	Trade Secret	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Hydrocarbon solvent* (Solvent)	CAS-No.: Trade Secret	Trade Secret	Flam. Liq. 3, H226 Asp. Tox. 1, H304

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general:	Call a physician immediately.
First-aid measures after inhalation:	Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact:	Wash skin with plenty of water.
First-aid measures after eye contact:	Rinse eyes with water as a precaution.
First-aid measures after ingestion:	Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after ingestion: Risk of lung edema.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.

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### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire: Toxic fumes may be released.

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

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.  
Complete protective clothing.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray.

#### 6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.

Other information: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling: Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

<b>Hand protection:</b>
Protective gloves
<b>Eye protection:</b>
Safety glasses

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<b>Skin and body protection:</b>
Wear suitable protective clothing
<b>Respiratory protection:</b>
Wear respiratory protection.

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Liquid.
Color:	Light yellow
Odor:	Characteristic odour
Odor threshold:	No data available
pH:	No data available
Melting point:	Not applicable
Freezing point:	≤ -69 °C (Pour Point)
Boiling point:	No data available
Flash point:	164.4 °C
Relative evaporation rate (butyl acetate=1):	No data available
Flammability (solid, gas):	Not applicable.
Vapor pressure:	No data available
Relative vapor density at 20 °C:	No data available
Relative density:	0.824 at 15.6°C (60°F) (water = 1)
Density:	6.9 lb/gal at 15.6°C (60°F)
Solubility:	Insoluble in water.
Partition coefficient n-octanol/water (Log Pow):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	6.1 mm <sup>2</sup> /s at 40°C
Viscosity, dynamic:	No data available
Explosion limits:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

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### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral):	Not classified
Acute toxicity (dermal):	Not classified
Acute toxicity (inhalation):	Harmful if inhaled.

RADCOLUBE® LTGO	
ATE US (dust, mist):	1.671 mg/l/4h
Synthetic hydrocarbon	
LD50 oral rat:	> 5000 mg/kg
LD50 dermal rabbit:	> 3000 mg/kg
LC50 Inhalation - Rat:	1.17 mg/l
Proprietary Additive 1	
LD50 oral rat:	> 2500 mg/kg
LD50 dermal rabbit:	10000 mg/kg
LC50 Inhalation - Rat:	9000 mg/l , 1 hour
Hydrocarbon solvent	
LD50 oral rat:	> 5000 mg/kg body weight Animal: rat, Guideline: EPA OTS 798.1175 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rabbit:	> 2000 mg/kg body weight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat:	> 5.28 mg/l/4h Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 0,42 -

Skin corrosion/irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified

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Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified

Hydrocarbon solvent	
NOAEL (animal/male, F0/P):	≥ 3000 mg/kg body weight Animal: rat, Animal sex: male
STOT-single exposure:	Not classified
STOT-repeated exposure:	Not classified

Hydrocarbon solvent	
NOAEL (oral, rat, 90 days):	750 mg/kg body weight Animal: rat, Animal sex: female
NOAEC (inhalation, rat, vapor, 90 days):	≥ 0.024 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
Aspiration hazard:	May be fatal if swallowed and enters airways.
Viscosity, kinematic:	6.1 mm <sup>2</sup> /s at 40°C
Symptoms/effects after ingestion:	Risk of lung edema.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA / ICAO / ADN / RID / ADG

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (DOT):	Not applicable
Proper Shipping Name (TDG):	Not applicable
Proper Shipping Name (IMDG):	Not applicable
Proper Shipping Name (IATA):	Not applicable

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT): Not applicable

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#### **TDG**

Transport hazard class(es) (TDG): Not applicable

#### **IMDG**

Transport hazard class(es) (IMDG): Not applicable

#### **IATA**

Transport hazard class(es) (IATA): Not applicable

#### **14.4. Packing group**

Packing group (DOT): Not applicable

Packing group (TDG): Not applicable

Packing group (IMDG): Not applicable

Packing group (IATA): Not applicable

#### **14.5. Environmental hazards**

Other information: No supplementary information available.

#### **14.6. Special precautions for user**

##### **DOT**

No data available

##### **TDG**

No data available

##### **IMDG**

No data available

##### **IATA**

No data available

#### **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## **SECTION 15: Regulatory information**

### **15.1. US Federal regulations**

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Synthetic hydrocarbon		Present	Active	PMN
Proprietary Additive 1		Not present	-	
Hydrocarbon solvent		Present	Active	

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### **15.2. International regulations**

#### **CANADA**

##### **Synthetic hydrocarbon**

Listed on the Canadian NDSL (Non-Domestic Substances List)

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<b>Hydrocarbon solvent</b>
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

<b>Hydrocarbon solvent</b>
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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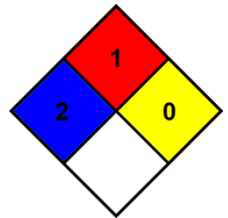
### SECTION 16: Other information

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Full text of H-phrases	
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled

NFPA health hazard 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.  
NFPA fire hazard 1 - Materials that must be preheated before ignition can occur.  
NFPA reactivity 0 - Material that in themselves are normally stable, even under fire conditions.



#### Hazard Rating

Health 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)  
Physical 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any particular process or for any particular purpose. Such information stated is to the best of Radco's knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made to its accuracy, reliability, or completeness, purchasers, users and distributors are not relying on any promise, representation, or recommendation made by Radco, and Radco does not accept liability for any loss or damage that may occur from the use of this information. Final determination of suitability of any material is the sole responsibility of the user. All material should be used with caution to guard against unknown hazards. Although certain hazards are described herein, Radco does not guarantee that these are the only hazards that exist.