



**RADCOLUBE® 17331**

**SAFETY DATA SHEET**

**MIL-PRF-17331L LUBRICATING OIL, STEAM TURBINE AND GEAR, MODERATE SERVICE  
MILITARY SYMBOL 2190 TEP, NATO CODE O-250**

**1. PRODUCT AND COMPANY IDENTIFICATION**

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**Product Name:** RADCOLUBE® 17331

This product meets Military Specification MIL-PRF-17331L, Military Symbol 2190TEP, NATO Code O-250.

Qualification Number: Ser 05S/2019-028

Qualification Date: 22 February 2019

ISO 9001:2015 Certification Number: C2018-00035

**Recommended Use**

This product covers a single classification of steam turbine and gear lubricating oil, moderate service, for use in main and auxiliary turbines and gears, air compressors, and certain hydraulic equipment, as well as for general mechanical lubrication.

**National Stock Numbers (NSN):**

9150-01-372-6915	Bulk Transport
9150-01-370-2583	5-Gallon Pails
9150-01-368-7075	55-Gallon Drums

**Company Identification**

Headquarters and Manufacturing Facility (Cage Code 6ZS16)  
Radco Industries, Inc.  
700 Kingsland Drive  
Batavia, IL 60510

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:**

Eye irritation, Category 2A

Skin irritation, Category 2B

**Hazard Pictograms:**



**Signal Word:**

WARNING

**Hazard Statements:**

H302:	Harmful if swallowed.
H312 + H315	Causes skin and eye irritation.

**Precautionary Statements:**

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.

**NFPA Hazard ID**

Health: 1

Flammability: 1

Reactivity: 0

**HMIS Hazard ID**

Health: 1

Flammability: 1

Reactivity: 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	%Content	CAS Number
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Proprietary	64742-65-0
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), solvent-dewaxed heavy paraffinic	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 cannot be penetrated by chemicals or oil.

### 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:	Brown liquid
Odor:	Faint petroleum odor
Odor threshold:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Evaporation Rate (ASTM D972):	<0.04 (butyl acetate = 1)
Flash point Cleveland Open Cup (ASTM D92):	> 204°C (400°F)
Flash point Pensky-Martens (ASTM D93):	Not Available
Flammability (solid, gas):	Not applicable
Lower flammability limit:	Not available
Upper flammability limit:	Not available
Initial boiling point and boiling range:	> 300°C (572°F)
Melting point/freezing point:	Not applicable
Partition coefficient (n-octanol/water), Log P <sub>ow</sub> :	Not available
pH:	Not applicable
Solubility:	Water insoluble
Relative density (ASTM D1298) 15.6°C/15.6°C:	0.87
Vapor density:	Not available
Vapor pressure:	< 0.01 mmHg at 20°C (68°F)
Viscosity (ASTM D445):	< 870 mm <sup>2</sup> /s (cSt) at 4.4°C 77 - 97 mm <sup>2</sup> /s (cSt) at 40°C > 8.0 mm <sup>2</sup> /s (cSt) at 100°C

## 10. STABILITY AND REACTIVITY INFORMATION

### Materials to avoid

Exposure to materials which are highly oxidizing should be avoided.

### 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), solvent-dewaxed heavy paraffinic	Dermal	Rabbit	LD50 > 5000 mg/kg
	Inhalation	Rat	LC50 > 5.53 mg/L after 4 hours
	Oral	Rat	LD <sub>50</sub> > 5000 mg/kg body-weight
Additive package	--	--	Not classified



Aspiration hazard	Test Method	Species	Result
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 403	Rat	LC <sub>50</sub> > 5.53 mg/L after 4 hours
Additive package	--	--	No data available

Carcinogenicity	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Non-carcinogenic
Additive package	No data available

Eye damage / irritation	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 405	Rabbit	Not irritating
Additive package	--	--	Not classified

Germ cell mutagenicity	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 471	<i>S. typhimurium</i>	Not mutagenic
Additive package	--	--	Not classified

Reproductive toxicity	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 421	Rat	NOAEL ≥ 1000 mg/kg body-weight/day
Additive package	--	--	Not classified

Respiratory sensitization	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	No data available
Additive package	Not expected to be hazardous.

Skin sensitization	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 406	Guinea pig	Not sensitizing
Additive package	--	--	Not classified

Skin corrosion/irritation	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	--	Rabbit	Not irritating
Additive package	--	--	Not classified

Specific target organ toxicity (STOT)-repeated exposure	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Dermal	Rat	NOAEL < 30 mg/kg/day
	Inhalation	Rat	NOAEL > 980 mg/m <sup>3</sup>
	Oral	Rat	NOAEL < 125 mg/kg/day
Additive package	--	--	Not classified

**Specific target organ toxicity (STOT)-single exposure**

No data available

**12. ECOLOGICAL CONSIDERATIONS**

Aquatic Toxicity	Test Method	Species	Results
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 202	<i>Daphnia sp.</i>	NOEL > 10,000 mg/L
	OECD 203	<i>P. promelas</i>	NOEL ≥ 100 mg/L
	(Q)SAR	<i>O. mykiss</i>	NOEL ≥ 1000 mg/L
Non-hazardous components	--	--	Not classified

Biodegradation	Results
Distillates (petroleum), hydrotreated heavy paraffinic	Not readily biodegradable
Non-hazardous components	No data available

**13. DISPOSAL INFORMATION**



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.

## 14. TRANSPORT INFORMATION

### U.S. Dept. of Transportation Shipping Name

Not regulated.

### Canadian Transportation of Dangerous Goods Shipping Name

Not regulated.

### European Rail/Road (ADR/RID) Shipping Name

Not regulated.

### Air (ICAO/IATA) Shipping Name

Not regulated.

### Sea (IMO/IMDG)

Not regulated.

## 15. REGULATORY INFORMATION

### 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)

This material is not listed.

### 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.

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**16. OTHER INFORMATION**

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Safety Data Sheet Creation Date: 1 April 2015

Safety Data Sheet Revision Date: 6 March 2019

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