



RADCOLUBE® 2110

SAFETY DATA SHEET

**MIL-PRF-17672E HYDRAULIC FLUID PETROLEUM, INHIBITED
ISO VISCOSITY GRADE 46, MILITARY SYMBOL 2110-T-H, NATO SYMBOL H-573, GRADE CODE B**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: RADCOLUBE® 2110

This product meets Military Specification MIL-PRF-17672E Hydraulic Fluid, Petroleum Inhibited, ISO Viscosity Grade 46, Military Symbol 2110-T-H, NATO Symbol H-573, Grade Code B.

Qualification Number: Ser 05S/2015-250

Qualification Date: 22 July 2015

ISO 9001:2015 Certification Number: C2018-00035

Recommended Use

Petroleum base hydraulic fluid for use in hydraulic systems and in other applications where a high grade hydraulic fluid having anti-corrosion and anti-oxidation properties are required. This hydraulic fluid is not an extreme pressure (EP) or anti-wear (AW) fluid. This hydraulic fluid should not be used in systems where a fire-resistant fluid is required.

National Stock Numbers (NSN):

9150-00-753-4799	1 Gallon Can
9150-00-985-7234	5 Gallon Pail
9150-00-582-5480	55 Gallon Drum

Company Identification

Headquarters and Manufacturing Facility
Radco Industries, Inc. (CAGE Code 6ZS16)
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

Classification of mixture

This mixture is not classified as hazardous according to Globally Harmonized System of Classification and Labelling of Chemicals. Classification of mixture is in accordance with United Nations (UN) Globally Harmonized System of Classification and Labelling of Chemicals (GHS), sixth revised edition (2015), and United States Standard 29 CFR 1910 Occupational Safety and Health Standards.

Hazard Pictograms: None



Signal Word: None

Hazard Statements: None

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: 0

Flammability: 1

Reactivity: 0

HMIS Hazard ID

Health: 0

Flammability: 1

Reactivity: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	%Content	CAS Number
Distillates (petroleum), hydrotreated heavy paraffinic	≥ 45%	64742-54-7
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≥ 45%	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

Exposure limits

<u>Component</u>	<u>Occupational exposure limits</u>
Distillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV: (United States, 4/2014) TWA = 5 mg/m ³ 8 hours (Inhalable fraction) NIOSH PEL: (United States, 10/2013) TWA = 5 mg/m ³ 10 hours (Mist) NIOSH PEL: (United States, 10/2013) STEL = 10 mg/m ³ 15 minutes (Mist) OSHA PEL: (United States, 2/2013) TWA = 5 mg/m ³ 8 hours (Mist)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ACGIH TLV: (United States, 4/2014) TWA = 5 mg/m ³ 8 hours (Inhalable fraction) NIOSH PEL: (United States, 10/2013) TWA = 5 mg/m ³ 10 hours (Mist) NIOSH PEL: (United States, 10/2013) STEL = 10 mg/m ³ 15 minutes (Mist) OSHA PEL: (United States, 2/2013) TWA = 5 mg/m ³ 8 hours (Mist)

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 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:	Straw yellow, transparent liquid
Odor:	Faint, petroleum
Odor threshold:	Not determined
Auto-ignition temperature:	Not determined



Decomposition temperature:	Not determined
Evaporation Rate (ASTM D972):	Not determined
Flash point Cleveland Open Cup (ASTM D92):	230°C (446°F)
Flash point Pensky-Martens (ASTM D93):	Not determined
Flammability (solid, gas):	Not flammable
Lower flammability limit:	Not determined
Upper flammability limit:	Not determined
Initial boiling point and boiling range:	Not determined
Melting point/freezing point:	Not determined
Partition coefficient (n-octanol/water), Log P _{ow} :	Not determined
pH:	Not applicable
Solubility in water:	Insoluble
Relative density (ASTM D1298) 15.6°C/15.6°C:	0.87
Vapor density:	Not determined
Vapor pressure:	< 0.01 mmHg at 20°C (68°F)
Viscosity (ASTM D445):	41.4 – 50.6 cSt at 40°C (104°F)

10. STABILITY AND REACTIVITY INFORMATION

Materials to avoid

Avoid exposure to highly oxidizing substances.

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 heavy paraffinic	Dermal	Rabbit	LD50 > 5000 mg/kg
	Inhalation	Rat	LC50 > 5.53 mg/L after 4 hours
	Oral	Rat	LD50 > 5000 mg/kg body-weight
Distillates (petroleum), hydrotreated heavy paraffinic	Dermal	Rabbit	LD ₅₀ > 5000 mg/kg
	Inhalation	Rat	LC ₅₀ > 5.53 mg/L after 4 hours
	Oral	Rat	LD ₅₀ > 5000 mg/kg body-weight
Additive package	--	--	Not classified

Aspiration hazard	Test Method	Species	Result
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 403	Rat	LC50 > 5.53 mg/L after 4 hours
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 403	Rat	LC ₅₀ > 5.53 mg/L after 4 hours
Additive package	--	--	Not classified

Carcinogenicity	Results
Distillates (petroleum), hydrotreated heavy paraffinic	Not classified as carcinogen by IARC, NTP and OSHA.
Distillates (petroleum), hydrotreated heavy paraffinic	Not classified as carcinogen by IARC, NTP and OSHA.
Additive package	Not classified as carcinogen by IARC, NTP and OSHA.

Eye damage / irritation	Test Method	Species	Results
Distillates (petroleum), hydrotreated heavy paraffinic			



Distillates (petroleum), hydrotreated heavy paraffinic	OECD 405	Rabbit	Not irritating
Additive package	--	--	Not classified

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

Reproductive toxicity	Test Method	Species	Results
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 421	Rat	NOAEL ≥ 1000 mg/kg body-weight/day
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 421	Rat	NOAEL ≥ 1000 mg/kg body-weight/day
Additive package	--	--	No data available

Respiratory sensitization

No data available

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

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

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

12. ECOLOGICAL CONSIDERATIONS

Aquatic Toxicity	Test Method	Species	Results
Distillates (petroleum), hydrotreated 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
Distillates (petroleum), hydrotreated 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
Additive package	--	--	Not classified

Biodegradation	Results
Distillates (petroleum), hydrotreated heavy paraffinic	Not readily biodegradable
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 U.S. EPA (40 CFR Subpart C) criteria for being toxic, corrosive, ignitable, or reactive. This material could also become hazardous waste if it is mixed with or meets 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

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

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

Safety Data Sheet Creation Date: 25 August 2014

Safety Data Sheet Revision Date: 8 October 2018

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