



RADCOLUBE® RHP6083

SAFETY DATA SHEET

MIL-PRF-6083G HYDRAULIC FLUID, PETROLEUM BASE, FOR PRESERVATION AND OPERATION

Issue Date: 1 September 2010

Revision Date: 18 February 2019

Revision Number: 7.0

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name:	RADCOLUBE® RHP6083	
Specifications:	MIL-PRF-6083G	
Qualification Number (Effective Date):	H-6057 (2014 October 31) H-6062 (9 August 2016)	
ISO 9001:2015 Certification Number:	C2018-00035	
Military Symbol:	OHT	
NATO Code:	C-635	
National Stock Numbers (NSN):	9150-00-935-9807	Quarts
	9150-00-935-9808	Gallon
	9150-00-935-9809	5 Gallon Pail
	9150-00-935-9810	55 Gallon Drum

1.2 Relevant identified uses of the substance or mixture and uses advised against

This product meets the requirements for one grade of petroleum base hydraulic fluid for use in the -54°C to +135°C (-65.2°F to 275°F) temperature range. This fluid is rust inhibited and used both as a preservative for hydraulic systems and components as well as being an operational fluid. This hydraulic fluid will not be used for aircraft systems, aircraft ground support equipment, or the preservation of aircraft components.

1.3 Details of the supplier of the safety data sheet

Headquarters	Manufacturing Facility
Radco Industries, Inc.	Radco Industries, Inc.
700 Kingsland Drive	39W930 Midan Drive
Batavia, IL 60510	LaFox, IL 60147
CAGE Code 6ZS16	CAGE Code 1RVC4

Customer information number: 1-630-232-7966

1.4 Emergency Telephone Number

Advisory Office in case of poisoning: Chemtrec
Chemtrec (North America): 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Aquatic toxicity, chronic hazard	Category 2
Aspiration hazard	Category 1
Skin Irritation	Category 2
Specific target organ toxicity (STOT)-single exposure (inhalation)	Category 3 (narcosis)

2.2 Label elements

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Health Hazard



Environmental Hazard

Signal word: DANGER

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 statements

H304:	May be fatal if swallowed and enters airways.
H315:	Causes skin irritation.
H319:	Causes serious eye irritation.
H336:	May cause drowsiness or dizziness.
H411:	Toxic to aquatic life with long-lasting effects.

Precaution statements

P101:	If medical advice is needed, have product container or label at hand.
P202:	Do not handle until all safety precautions have been read and understood.
P261:	Avoid breathing dust/fume/gas/mist/vapours/spray
P270:	Do not eat, drink or smoke when using this product.
P273:	Avoid release to the environment.
P280:	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P331 + P315:	IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. Get immediate medical advice/attention.
P303 + P353:	IF ON SKIN (or hair): Rinse skin with water/shower.
P304 + P340 + P342 + P315:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, get immediate medical advice/attention.
P305 + P351 + P338 + P310:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P306 + P363:	IF ON CLOTHING: Wash contaminated clothing before reuse.
P404:	Store in a closed container.
P501:	Dispose of contents/container to in accordance with local/regional/national/international regulation.

2.3 Other hazards**PBT and vPvB**

This product is not expected to be PBT and vPvB based on components.

NFPA Hazard ID

Health: 2
Flammability: 1
Reactivity: 0

HMIS Hazard ID

Health: 2
Flammability: 1
Reactivity: 0

SECTION 3. Composition/information on ingredients

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3.1 Substances1-Decene, homopolymer, hydrogenated

Index number: Not available
 CAS number: 68037-01-4
 EC number: 500-183-1
 REACH number: 01-2119486452-34-XXXX
 Synonyms: 1-Decene, dimer, hydrogenated; Polyalphaolefin

Acrylic copolymer

Index number: Not available
 CAS number: Trade secret
 EC number: Trade secret
 REACH number: Not available
 Synonyms: --

Distillate (petroleum), hydrotreated middle

Index number: 649-221-00-X
 CAS number: 64742-46-7
 EC number: 265-148-2
 REACH number: 01-2119489867-12
 Synonyms: --

Barium bis(dinonylnaphthalenesulphonate)

Index number: Not available
 CAS number: 25619-56-1
 EC number: 247-132-7
 REACH number: Not available
 Synonyms: Barium sulfonate; barium bis(2,3-dinonylnaphthalene-1-sulfonate)

Proprietary components

Index number: Not available
 CAS number: Trade secret
 EC number: Trade secret
 REACH number: Not available
 Synonyms: Trade secret

3.2 Mixtures**Description of mixture:**

Mixture of petroleum base oils and additives.

Component	CAS Number	EC Number	%Content	Classification of Labeling	M-Factor
Distillate (petroleum), hydrotreated middle	64742-46-7	265-148-2	> 50%	Acute Tox. 4 – H332 Aquatic Chronic 2 – 411 Asp. Tox. 1 – H304 Skin Irrit. 2 – H315	-- 1 -- --
1-Decene, homopolymer, hydrogenated	68037-01-4	500-183-1	< 20%	Asp. Tox. 1 – H304	--
Acrylic copolymer	Trade secret	Trade secret	< 20%	Asp Tox. 2 – H332 Skin Irrit. 2 – H315 STOT-SE 3 – H336	--
Barium bis(dinonylnaphthalenesulphonate)	25619-56-1	247-132-7	< 1.0%	Skin Irrit. 2 – H315 Eye Irrit. 2 – H319	-- --
Proprietary components	Trade secret	Trade secret	Trade secret	Not classified	0

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M-Factor determinations are in accordance with UN GHS, sixth revised edition (2015).

See SECTION 16 for full text of the toxicity categories and H-statements listed in this section.

Indicative occupational exposure limit values

Component	Specific Concentration limits
1-Decene, homopolymer, hydrogenated	None established
Acrylic copolymer	None established
Barium bis(dinonylnaphthalenesulphonate)	See SECTION 8 for exposure limits.
Distillate (petroleum), hydrotreated middle	See SECTION 8 for exposure limits.
Proprietary components	None established

SECTION 4. FIRST AID MEASURES**4.1 Description of first aid measures****Eye contact**

Upon accidental eye exposure, wash the eyes promptly with water for at least 20 minutes. If wearing contact lenses, remove them if safe to do so, and continue washing. Get medical attention immediately.

Ingestion

If swallowed, do not induce vomiting. Rinse mouth out with water. Get medical attention immediately.

Inhalation

If respiratory irritation, dizziness, or nausea occurs, move to fresh air and keep at rest in a comfortable position for breathing. If symptoms persist or unconsciousness occurs, seek immediate medical assistance.

Skin contact

Wash skin thoroughly with mild soap and plenty of water for at least 20 minutes. If irritation develops, seek medical advice.

Note to physicians

Treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed**Acute symptoms****Eye exposure symptoms**

Direct eye exposure may lead to redness and lacrimation (crying tears).

Ingestion symptoms

Small amounts may cause nausea. Large amounts may lead to abdominal obstruction (cramps), constipation or diarrhea.

Inhalation symptoms

May cause irritation of the nose, throat, and lungs. Can cause central nervous system depression, including as dizziness, lethargy, and drowsiness.

Skin exposure symptoms

Short-term exposure is not expected to cause irritation.

Delayed symptoms**Eye exposure symptoms**

Seek medical attention if irritation persists.

Ingestion symptoms

Seek medical attention if abdominal obstruction, constipation or diarrhea

Inhalation symptoms

Seek immediate medical attention if respiratory irritation persists.

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Skin exposure symptoms

Repeated exposure may lead to irritation. If rash develops, immediately seek medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

Suggestions for clinical testing and medical monitoring for delayed effects are not known. Use first aid when applicable and seek guidance from a medical physician for specific treatment.

SECTION 5. FIREFIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media includes alcohol-resistant foam, carbon dioxide, dry chemical or water fog.

5.2 Special hazards arising from the substance or mixture

No data is available.

5.3 Advice for firefighters**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.

SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Wear personal protective equipment (PPE). Eliminate sources of ignition, if safe to do so. Avoid breathing vapors or mist. Evacuate to designated safe areas.

For emergency responders

If possible, move individual to safe area, and treat symptomatically.

6.2 Environmental precautions

Contain spill, if safe to do so. Prevent from entering sewers or drains.

6.3 Methods and material for containment and cleaning up

Use oil absorbent material to soak up product on the ground. Should this product enter sewers or drains, it should be pumped out into an open vessel. The recovered material should be discarded as hazardous waste.

6.4 Reference to other sections

If appropriate, refer to SECTION 8 and SECTION 13 for additional information.

SECTION 7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Use personal protective equipment (PPE) when handling this product. Smoking, eating and drinking should be prohibited in the application area.

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7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Designed for use in low temperature systems ranging from -40C to 205C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Component	Occupational exposure limits
1-Decene, homopolymer, hydrogenated	None established
Acrylic copolymer	None established
Barium bis(dinonylnaphthalenesulphonate)	ACGIH TLV (United States, 3/2012) TWA = 0.5 mg/m ³ , 8 hours OSHA Z-1 (United States, 6/2010) PEL = 0.5 mg/m ³ , 8 hours
Distillate (petroleum), hydrotreated middle	ACGIH TLV: (United States, 4/2014) TWA = 5 mg/m ³ 8 hours (inhalable fraction) AFS 2011:18 (Sweden, 12/2011) TWA = 1 mg/m ³ , 8 hours AFS 2011:18 (Sweden, 12/2011) STEL = 3 mg/m ³ , 15 minutes NIOSH REL: (United States, 10/2013) TWA = 5 mg/m ³ 10 hours (mist) NIOSH REL: (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)
Proprietary components	None established

Biological exposure limits

None established for any of the disclosed components.

8.2 Exposure controls**Appropriate engineering controls**

Practice general industrial hygiene. Do not eat, drink or smoke near product. Wash hands after handling. Remove clothing and wash separate from other laundry.

Personal protective equipment (PPE)**Eye/face protection**

Safety glasses, chemical safety goggles and/or face shields are recommended when handling this product.

Skin protection

For extended handling, wear oil resistant gloves such as neoprene. Nitrile gloves may be appropriate for short handling periods use. Contact a government approved or accredited manufacturer for specific recommendations.

Other protections

Wear protective clothing ensuring minimal skin exposure. Protective clothing should be chemically impervious to oils and other solvents.

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.

Environmental exposure controls

Do not allow product to reach ground water, water course, or sewage systems. Stop leaks, if safe to do so. Contain spills with absorbent or adsorbent materials.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance:	Red, clear liquid
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Odor:	Odorless
Odor threshold:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Evaporation Rate (ASTM D972):	< 55% at 100°C (212°F) after 22 hours
Explosive properties:	Not available
Flammability (solid, gas):	Non-flammable
Lower flammability limit:	Not available
Upper flammability limit:	Not available
Flash point Cleveland Open Cup (ASTM D92):	Not available
Flash point Pensky-Martens Closed Cup (ASTM D93):	93°C (199.4°F)
Initial boiling point and boiling range:	> 200°C
Melting point/freezing point:	< -69°C (-92.2°F)
Oxidizing properties:	Non-oxidizing
Partition coefficient (n-octanol/water), Log P _{ow} :	Not available
pH:	Not applicable
Relative density (ASTM D1298) 15.6°C/15.6°C (60°F/60°F):	0.85
Solubility in water:	Insoluble
Vapor density:	Not available
Vapor pressure:	Not available
Viscosity (ASTM D445):	23 mm ² /s at 25°C (77°F)

9.2 Other information

No further information is available.

SECTION 10. STABILITY AND REACTIVITY**10.1 Reactivity**

Non-reactive in its original state.

10.2 Chemical stability

Stable in its original state.

10.3 Possibility of hazardous reactions

Does not occur.

10.4 Conditions to avoid

Oxidizing materials

10.5 Incompatible materials

Keep away from strong oxidizing or reducing agents, including acids, caustics, chlorites (bleach), halogens and peroxides.

10.6 Hazardous decomposition products

Decomposition of this product under fire conditions may produce carbon oxides, phenols, aminic constituents, and other decomposition products.

SECTION 11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

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Acute toxicity	Method	Species	Result
1-Decene, homopolymer, hydrogenated	Dermal	Rat	LD ₅₀ > 2000 mg/kg
	Inhalation	Rat	LC ₅₀ = 5.0 mg/L after 1 hour
	Oral	Rat	LD ₅₀ > 2000 mg/kg
Acrylic copolymer	Dermal	Rat	LD ₅₀ > 2000 mg/kg
	Inhalation	Rat	No data available
	Oral	Rat	LD ₅₀ > 2000 mg/kg
Barium bis(dinonylnaphthalenesulphonate)	Dermal	Rabbit	LD ₅₀ = 10,000 mg/kg
	Inhalation	Rat	NOEC = 21 mg/L after 1 hour
	Oral	Rat	LD ₅₀ = 1750 mg/kg
Distillate (petroleum), hydrotreated middle	Dermal	Rabbit	LD ₅₀ > 2000 mg/kg body weight
	Inhalation	Rat	LC ₅₀ = 1.78 mg/L
	Oral	Rat	LD ₅₀ > 5000 mg/kg body weight
Proprietary components	--	--	Not classified

Aspiration hazard	Test Method	Species	Result
1-Decene, homopolymer, hydrogenated	OECD 403	Rat	Aspiration hazard, Category 1
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	No data available
Distillate (petroleum), hydrotreated middle	OECD 403	Rat	Aspiration hazard, category 1
Proprietary components	--	--	Not classified

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH, IARC, NTP or OSHA.

Eye damage / irritation	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 405	Rabbit	Not irritating
Acrylic copolymer	--	--	Irritant
Barium bis(dinonylnaphthalenesulphonate)	--	--	Irritating
Distillate (petroleum), hydrotreated middle	OECD 405	Rabbit	Not irritating
Proprietary components	--	--	Not classified

Germ cell mutagenicity	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 471	<i>S. typhimurium</i>	Not mutagenic
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	No data available
Distillate (petroleum), hydrotreated middle	--	--	No data available
Proprietary components	--	--	No data available

Reproductive toxicity	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 415	Rat	No reproductive harm
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	No data available
Distillate (petroleum), hydrotreated middle	--	--	No data available
Proprietary components	--	--	No data available

Respiratory sensitization

No data available

Skin sensitization	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 406	Guinea pig	Not sensitizing
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	Not sensitizing
Distillate (petroleum), hydrotreated middle	OECD 406	Guinea pig	Not sensitizing
Proprietary components	--	--	Not classified

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Skin corrosion/irritation	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 404	Rabbit	Not irritating
Acrylic copolymer	--	--	Irritant
Barium bis(dinonylnaphthalenesulphonate)	--	--	Irritant
Distillate (petroleum), hydrotreated middle	OECD 404	Rabbit	Not irritating
Proprietary components	--	--	Not classified

Specific target organ toxicity (STOT)-repeated exposure	Method	Species	Results
1-Decene, homopolymer, hydrogenated	--	--	No data available
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	No data available
Distillate (petroleum), hydrotreated middle	Oral	Rat	NOAEL ≥ 5 mL/kg body weight per day
Proprietary components	--	--	No data available

Specific target organ toxicity (STOT)-single exposure	Results
1-Decene, homopolymer, hydrogenated	No data available
Acrylic copolymer	STOT single exposure, Category 3
Barium bis(dinonylnaphthalenesulphonate)	No data available
Distillate (petroleum), hydrotreated middle	No data available
Proprietary components	No data available

11.2 Other information

See SECTION 16 for toxicity references.

SECTION 12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Aquatic Toxicity	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 203 OECD 211 DIN 38412-8	<i>D. magna</i> <i>O. mykiss</i> <i>P. putida</i>	NOEL = 125 mg/L after 21 days LL ₅₀ > 1000g/L after 96 hours EC ₅₀ > 10g/L after 16 hours
Acrylic copolymer	Not reported	<i>L. macrochirus</i>	LC ₅₀ = 2.2 mg/L after 96 hours
Barium bis(dinonylnaphthalenesulphonate)	OECD 201 OECD 202 Not reported	Algae <i>Daphnia sp.</i> Fish	EC ₁₀ = 0.16 mg/L after 72 hours NOEC = 0.27 mg/L after 48 hours LC ₅₀ > 0.28 mg/L after 96 hours
Distillate (petroleum), hydrotreated middle	OECD 201 OECD 203 QSAR model	<i>Algae</i> <i>O. mykiss</i> <i>D. magna</i>	NOEL = 10 mg/L after 752 hours LL ₅₀ > 1000 mg/L after 24 hours NOEL = 0.163 mg/L
Proprietary components	--	--	Not classified

Terrestrial Toxicity	Test Method	Species	Results
1-Decene, homopolymer, hydrogenated	OECD 222	<i>Earthworm</i>	LC50 > 1000 mg/kg after 56 days
Acrylic copolymer	--	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	--	--	No data available
Distillate (petroleum), hydrotreated middle	QSAR model	<i>Mallard duck</i>	NOEL > 5000ppm
Proprietary components	--	--	Not classified

12.2 Persistence and degradability

Biodegradation	Test Method	Results
1-Decene, homopolymer, hydrogenated	OECD 301B	Not readily biodegradable
Acrylic copolymer	--	No data available
Barium bis(dinonylnaphthalenesulphonate)	OECD 301B	Not readily biodegradable
Distillate (petroleum), hydrotreated middle	--	No data available

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Proprietary components	--	No data available
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12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)	Results
1-Decene, homopolymer, hydrogenated	No data available
Acrylic copolymer	No data available
Barium bis(dinonylnaphthalenesulphonate)	No data available
Distillate (petroleum), hydrotreated middle	BCF < 500
Proprietary components	No data available

Partition Coefficient n-octanol / water (Log K _{ow})	Results
1-Decene, homopolymer, hydrogenated	Log K _{ow} = 10.09
Acrylic copolymer	No data available
Barium bis(dinonylnaphthalenesulphonate)	Log K _{ow} = 6.7
Distillate (petroleum), hydrotreated middle	Log K _{ow} > 4
Proprietary components	No data available

12.4 Mobility in soil

Soil Mobility	Results
1-Decene, homopolymer, hydrogenated	No data available
Acrylic copolymer	No data available
Barium bis(dinonylnaphthalenesulphonate)	Log K _{ow} = 5.24
Distillate (petroleum), hydrotreated middle	Log K _{ow} > 3.0
Proprietary components	No data available

12.5 Results of PBT and vPvB assessment

Chemical	Results
1-Decene, homopolymer, hydrogenated	The substance is not PBT / vPvB.
Acrylic copolymer	The substance is not PBT / vPvB.
Barium bis(dinonylnaphthalenesulphonate)	The substance is not PBT / vPvB.
Distillate (petroleum), hydrotreated middle	The substance is not PBT / vPvB.
Proprietary components	These substances are not PBT / vPvB.

12.6 Other adverse effects

Chemical	Results
1-Decene, homopolymer, hydrogenated	No data available
Acrylic copolymer	No other adverse effects are known.
Barium bis(dinonylnaphthalenesulphonate)	Hydrolyses half-life in water is 1 year.
Distillate (petroleum), hydrotreated middle	Spills may hinder oxygen transfer in aquatic environments.
Proprietary components	No other adverse effects reported.

SECTION 13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

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.

SECTION 14. TRANSPORTATION INFORMATION

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United States Department of Transportation (DOT)**Not regulated:**

49 CFR 171.4c: (1) Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft. (2) Single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other requirements of this subchapter provided the packagings meet the general requirements in 173.24 and 173.24a.

Canada Transport - Transportation of Dangerous Goods (TDG)

UN Number: 3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III

Not regulated (450-liter or less inner packaging): **Special Provision 99 (2):** These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.

International Air Transport Association (IATA)

UN Number: 3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III

Not regulated (5-liter or less inner packaging): **Special Provision A197:** These substances when transported in single or combination packagings containing net quantity per single or inner packaging of less than 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

International Carriage of Dangerous Goods by Inland Waterways (AND)

UN Number: UN3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III
MARPOL73/78 and IBC Code: P
Emergency schedules (EmS): F-A, S-F
Special provisions: 274; 335; 375; 601

Not regulated (5-liter or less inner packaging): **Special Provision 375:** These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or 5 kg or less for solids, are not subject to any other provision of ADN provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 of ADR.

International Carriage of Dangerous Goods by Rail (RID)

UN Number: UN3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III
Special provisions: 274; 335; 375; 601

**SAFETY DATA SHEET**

RADCOLUBE® RHP6083

MIL-PRF-6083G HYDRAULIC FLUID, PETROLEUM BASE, FOR PRESERVATION AND OPERATION

Issue Date: 1 September 2010

Revision Date: 18 February 2019

Revision: 7.0

Not regulated (5-liter or less inner packaging):

Special Provision 375: These substances when carried in single or combination packagings containing a net quantity per single or inner packaging or 5 l or less for liquids having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of the RID provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

International Carriage of Dangerous Goods by Road (ADR)

UN Number: UN3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III
Special provisions: 274; 335; 375; 601

Not regulated (5-liter or less inner packaging):

Special Provision 375: These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

International Civil Aviation Organization (ICAO)

UN Number: 3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III

Not regulated (5-liter or less inner packaging):

Special Provision A197: These substances when transported in single or combination packagings containing net quantity per single or inner packaging of less than 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

International Maritime Dangerous Goods Code (IMDG Code)

UN Number: UN3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DISTILLATE (PETROLEUM), HYDROTREATED MIDDLE MIXTURE)
Transport hazard class: 9
Packing group: III
MARPOL73/78 and IBC Code: P
Emergency schedules (EmS): F-A, S-F
Special provisions: 274; 335; 969

Not regulated (5-liter or less inner packing):

2.10.2.7: Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this Code relevant to any additional hazards continue to apply.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australia Inventory (AICS)

All the ingredients are listed.

California Proposition 65

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This product does not contain any chemicals known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Canadian Domestic Substances List/Non-Domestic Substances List (DSL/NDSL)

All the ingredients are listed.

China Inventory of Existing Chemical Substances (IECSC)

All the ingredients are listed.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Reportable Quantity

This product is not reportable under 40 CFR Part 302.4.

International Agency for Research on Cancer (IARC)

None of the ingredients are listed.

Japan Existing and New Chemical Substances (ENCS)

All the ingredients are listed.

Korean Existing and Evaluated Chemical Substances (KECL)

All the ingredients are listed.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All the ingredients are listed.

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 Section 313 (40 CFR Part 372)

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

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

United States Toxic Substances Control Act (TSCA)

All the ingredients are listed.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been conducted.

SECTION 16. OTHER INFORMATION

Safety Data Sheet Creation Date: 1 September 2010

Safety Data Sheet Revision Date: 14 February 2019

Revision Number: 7.0

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,

**SAFETY DATA SHEET****RADCOLUBE® RHP6083**

MIL-PRF-6083G HYDRAULIC FLUID, PETROLEUM BASE, FOR PRESERVATION AND OPERATION

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Revision: 7.0

RADCO DOES NOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

RADCOLUBE® is a registered trademark of Radco Industries, Inc.

Toxicological References"Distillate (petroleum), hydrotreated middle." *Registration Dossier - ECHA*. European Chemicals Agency, [no date]. Web. 17 Apr. 2017."Barium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate)." *Registration Dossier - ECHA*. European Chemicals Agency, [no date]. Web. 17 Jan. 2018.*Globally Harmonized System of Classification and Labelling of Chemicals: (GHS)*. 6th ed. New York: United Nations, 2015. Print.**Definitions**

ACGIH	Association Advancing Occupational and Environmental Health
AFS 2011:18	Swedish Work Environment Authority's provisions and general recommendations on occupational exposure limit values
Aquatic Chronic 2	Aquatic toxicity, chronic hazards, category 2
Aquatic Tox. 4	Aquatic toxicity, acute hazards, category 4
Asp. Tox. 1	See <i>Aspiration hazard, category 1 definition</i> .
Aspiration hazard, category 1	Hydrocarbons with kinematic viscosity ≤ 20.5 mm ² /s are classified by OSHA as an aspiration hazard.
DIN 38412-8	German Standards for the Examination of Water, Waste Water and Sludge ...
EC number	European Community number
EC ₅₀	Concentration that effects 50% of the test population.
EU	European Union
Eye Irrit. 2	See <i>Eye irritation, category 2 definition</i> .
Eye irritation, category 2	Potential for reversible eye irritation within 21 days in animal studies.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation
H332	Harmful if inhaled.
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
LC ₅₀	Lethal concentration that causes 50% death in test population.
LD ₅₀	Lethal dose that causes 50% death in test population.
LL ₅₀	Loading rate that causes 50% death in test population.
M-Factor	Multiplying factor for substances that are toxic to aquatic environment.
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NOAEL	No observed adverse effect level
NOEC	No observable effect concentration
OECD	Organisation for Economic Co-operation and Development
OECD 202	OECD Guideline 202: <i>Daphnia sp.</i> Acute Immobilisation Test
OECD 203	OECD Guideline 203: Fish, Acute Toxicity Test
OECD 211	OECD Guideline 211: <i>Daphnia magna</i> Reproduction Test
OECD 222	OECD Guideline 222: Earthworm Reproduction Test (<i>Eisenia fetida</i> / <i>Eisenia andrei</i>)
OECD 301B	OECD Guideline 301 B: (Ready Biodegradability: CO ₂ Evolution Test)
OSHA	United States Department of Labor Occupational Safety and Health Administration
PBT	Persistence Bioaccumulation and Toxicity
PEL	Permissible exposure limit
QSAR model	Quantitative structure–activity relationship model
Skin Irrit. 2	See <i>Skin irritation, Category 2 for definition</i> .
Skin irritation, Category 2	Inflammation, alopecia (limited area), hyperkeratosis, hyperplasia, and scaling that fully reverses after 14 day in animal studies.
TLV	Threshold limit value
TWA	Time-weighted average
vPvB	Very persistent and very bioaccumulative