

1. Identification

Product identifier	Thermacell® Radius VI
Other means of identification	None.
Recommended use	Insecticide.
Recommended restrictions	For outdoor use only.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Thermacell Repellents, Inc.
Address	26 Crosby Drive Bedford, MA 01730 United States
Website	www.thermacell.com
Telephone	(781) 430-5277
Emergency telephone	CHEMTREC: +1-703-527-3887 CCN 19760

2. Hazard identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Specific target organ toxicity following single exposure	Category 1 (nervous system)
	Specific target organ toxicity following repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

Label elements



Signal word	Danger
Hazard statement	Combustible liquid. Causes damage to organs (nervous system). May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe mist/vapours. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF SWALLOWED: Immediately call a POISON CENTRE/doctor. Do NOT induce vomiting. IF exposed: Call a POISON CENTRE or doctor/physician. In case of fire: Use water fog, alcohol resistant foam, dry chemical powder, carbon dioxide to extinguish. Collect spillage.
Storage	Store in a well-ventilated place. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental information	None.
Other hazards	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alkanes, C11-15-iso-		90622-58-5	30 - 60
Distillates (petroleum), hydrotreated light		64742-47-8	30 - 60
Metofluthrin		240494-71-7	5 - 10

Composition comments

The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight unless otherwise indicated.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Swallowing or vomiting of the liquid may result in aspiration into the lungs. Aspiration may cause pulmonary oedema and pneumonitis. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Narcosis. Headache. Nausea, vomiting. Diarrhoea. Behavioural changes. Decrease in motor functions. Direct contact with eyes may cause temporary irritation. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. During fire, hazardous combustion products are released that may include: Carbon oxides. Fluorine compounds.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Retain and dispose of contaminated wash water.

Small Spills: Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Keep away from open flames, hot surfaces and sources of ignition. Provide adequate ventilation. Do not breathe mist/vapours. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Wash hands thoroughly after handling. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat and sources of ignition. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	200 mg/m3	Vapour.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	200 mg/m3	Non-aerosol.

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	15 minute	250 mg/m3	Vapour.
	8 hour	200 mg/m3	Vapour.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines**Canada - Alberta OELs: Skin designation**

Distillates (petroleum), hydrotreated light (CAS 64742-47-8) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Distillates (petroleum), hydrotreated light (CAS 64742-47-8) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Distillates (petroleum), hydrotreated light (CAS 64742-47-8) Can be absorbed through the skin.

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply or an emergency shower.
Individual protection measures, such as personal protective equipment	
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. Use gloves with breakthrough time of 15 minutes. Minimum glove thickness 0.4 mm. Other suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Check with respiratory protective equipment suppliers.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Colour	Clear, colourless.
Odour	Mild scent, characteristic of isoparaffin.
Odour threshold	No data available.
pH	Not applicable (material is insoluble in water).
Melting point/freezing point	-54 °C (-65.2 °F)
Initial boiling point and boiling range	Property has not been measured.
Flash point	72.3 °C (162.14 °F)
Evaporation rate	Property has not been measured.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Property has not been measured.
Explosive limit – upper (%)	Property has not been measured.
Vapour pressure	Property has not been measured.
Vapour density	Property has not been measured.
Relative density	0.7943 (Water=1) (20 °C (68 °F))
Solubility(ies)	
Solubility (water)	< 0.1 % Insoluble in water
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	243 °C (469.4 °F)
Decomposition temperature	Not applicable as the product is not unstable.
Viscosity	Property has not been measured.
Other information	
Density	0.7943 g/ml
Explosive properties	Not explosive.
Kinematic viscosity	Property has not been measured.
Oxidising properties	Not oxidising.
Particle size	Not applicable, product is a liquid.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Decomposition is not expected under normal conditions of use and storage. For hazardous combustion products, see section 5.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Spray mist may irritate the respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics	Swallowing or vomiting of the liquid may result in aspiration into the lungs. Aspiration may cause pulmonary oedema and pneumonitis. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Narcosis. Headache. Nausea, vomiting. Diarrhoea. Behavioural changes. Decrease in motor functions. Direct contact with eyes may cause temporary irritation. Prolonged exposure may cause chronic effects.
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Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Product	Species	Test Results
Thermacell® Radius VI (CAS Mixture)		
<u>Acute</u>		
Dermal		
LD50	Rat (male and female)	> 5050 mg/kg, 14 days
Inhalation		
<i>Aerosol</i>		
LC50	Rat (male and female)	> 2.08 mg/l, 14 days
Oral		
LD50	Rat (male and female)	1750 - 5000 mg/kg, 14 days
Skin corrosion/irritation	No adverse effects due to skin contact are expected.	
Corrosivity		
Thermacell® Radius VI	OCSPP 870.2500 Result: Not irritating. Species: Rabbit	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Eye		
Thermacell® Radius VI	OCSPP 870.2400 Result: Minimally irritating. Species: Rabbit	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	

Specific target organ toxicity - single exposure	Causes damage to organs (nervous system).
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity	Very toxic to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available on bioaccumulation.
Mobility in soil	The product is insoluble in water. Expected to have low mobility in soil.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metofluthrin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Exempt from classification under Special Provision 99(2).

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Metofluthrin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Exempt from classification under Special Provision A158.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metofluthrin)
Transport hazard class(es)	
Class	9

Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
	Exempt from classification under Special Provision 335.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

Issue date 07-June-2022

Revision date -

Version No. 01

Disclaimer Thermacell Repellents, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.