

# Radius Protect Your Family Insect Repellent Tropical Strength 150g\*\*\*OBSOLETE\*\*\*

Woolworths Ltd

Chemwatch Hazard Alert Code: 3

Chemwatch: 5270-92

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Safety Data Sheet according to WHS and ADG requirements

S.GHS.AUS.EN

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

### Product Identifier

Product name	Radius Protect Your Family Insect Repellent Tropical Strength 150g***OBSOLETE***
Synonyms	EAN: 9300633634315; Key / Product Code by packsize: 573140; Specification number: 25640
Proper shipping name	AEROSOLS
Other means of identification	Not Available

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

Relevant identified uses	<p>Personal / domestic insecticide.</p> <p>SDS are intended for use in the workplace. For domestic-use products, refer to consumer labels.</p> <p>Use according to manufacturer's directions.</p> <p>Application is by spray atomisation from a hand held aerosol pack</p>
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### Details of the supplier of the safety data sheet

Registered company name	Woolworths Ltd
Address	1 Woolworths Way Bella Vista NSW 2153 Australia
Telephone	+61 2 8885 0000
Fax	+61 2 8885 0001
Website	<a href="http://www.woolworths.com.au/">http://www.woolworths.com.au/</a>
Email	Not Available

### Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+61 2 9186 1132
Other emergency telephone numbers	+61 1800 951 288





Once connected and if the message is not in your preferred language then please dial 01

## SECTION 2 Hazards identification

### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

#### ChemWatch Hazard Ratings

	Min	Max	
Flammability	3		
Toxicity	1		
Body Contact	1		
Reactivity	1		
Chronic	0		

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

Poisons Schedule	Not Applicable
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<b>Classification</b> [1]	Flammable Aerosols Category 1, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Reproductive Toxicity Category 2, Chronic Aquatic Hazard Category 3
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

### Label elements

<b>Hazard pictogram(s)</b>	
<b>Signal word</b>	<b>Danger</b>

### Hazard statement(s)

<b>H222</b>	Extremely flammable aerosol.
<b>H315</b>	Causes skin irritation.
<b>H319</b>	Causes serious eye irritation.
<b>H361fd</b>	Suspected of damaging fertility. Suspected of damaging the unborn child.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>AUH044</b>	Risk of explosion if heated under confinement.

### Precautionary statement(s) Prevention

<b>P201</b>	Obtain special instructions before use.
<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
<b>P211</b>	Do not spray on an open flame or other ignition source.
<b>P251</b>	Pressurized container: Do not pierce or burn, even after use.

### Precautionary statement(s) Response

<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention.
<b>P321</b>	Specific treatment (see advice on this label).
<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Precautionary statement(s) Storage

<b>P405</b>	Store locked up.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

### Precautionary statement(s) Disposal

<b>P501</b>	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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## SECTION 3 Composition / information on ingredients

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
68475-59-2.	<30	<u>alkanes C3-4.</u>
134-62-3	10-30	<u>N,N-diethyl-m-toluamide</u>
Not Available		[191 g/L]
113-48-4	<5	<u>2-ethylhexyl bicycloheptene dicarboximide</u>
Not Available		[40g/L]
Not Available	balance	Ingredients determined not to be hazardous

## SECTION 4 First aid measures

### Description of first aid measures

<b>Eye Contact</b>	<p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▸ Immediately hold the eyelids apart and flush the eye with fresh running water.</li> <li>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> <li>▸ Flush skin and hair with running water (and soap if available).</li> <li>▸ Remove any adhering solids with industrial skin cleansing cream.</li> <li>▸ <b>DO NOT use solvents.</b></li> <li>▸ Seek medical attention in the event of irritation.</li> </ul>
<b>Inhalation</b>	<p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> <li>▸ Remove to fresh air.</li> <li>▸ Lay patient down. Keep warm and rested.</li> <li>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▸ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▸ Transport to hospital, or doctor.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▸ Avoid giving milk or oils.</li> <li>▸ Avoid giving alcohol.</li> </ul> <p>Not considered a normal route of entry.</p>

### Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Treat symptomatically.

## SECTION 5 Firefighting measures

### Extinguishing media

#### SMALL FIRE:

- Water spray, dry chemical or CO<sub>2</sub>

#### LARGE FIRE:

- Water spray or fog.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ May be violently or explosively reactive.</li> <li>▸ Wear breathing apparatus plus protective gloves.</li> <li>▸ Prevent, by any means available, spillage from entering drains or water course.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▸ Liquid and vapour are highly flammable.</li> <li>▸ Severe fire hazard when exposed to heat or flame.</li> <li>▸ Vapour forms an explosive mixture with air.</li> <li>▸ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li> </ul> <p>Combustion products include: carbon dioxide (CO<sub>2</sub>)</p>

	nitrogen oxides (NOx) other pyrolysis products typical of burning organic material. <b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	Not Applicable

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Wear protective clothing, impervious gloves and safety glasses.</li> <li>▶ Shut off all possible sources of ignition and increase ventilation.</li> </ul>
Major Spills	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

### Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can</li> <li>▶ Store in original containers in approved flammable liquid storage area.</li> <li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ Keep containers securely sealed.</li> </ul>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> <li>▶ Aerosol dispenser.</li> <li>▶ Check that containers are clearly labelled.</li> </ul>
Storage incompatibility	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>

## SECTION 8 Exposure controls / personal protection

### Control parameters

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	alkanes C3-4.	LPG (liquefied petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	alkanes C3-4.	Butane	800 ppm / 1900 mg/m3	Not Available	Not Available	Not Available

#### Emergency Limits

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
alkanes C3-4.	Butane	Not Available	Not Available	Not Available
alkanes C3-4.	Liquefied petroleum gas; (L.P.G.)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

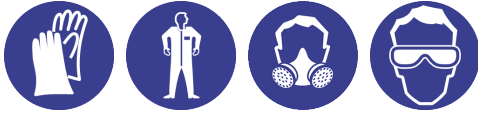
Ingredient	Original IDLH	Revised IDLH
alkanes C3-4.	2,000 ppm	1,600 ppm
N,N-diethyl-m-toluamide	Not Available	Not Available
2-ethylhexyl bicycloheptene dicarboximide	Not Available	Not Available

### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
N,N-diethyl-m-toluamide	E	≤ 0.1 ppm
2-ethylhexyl bicycloheptene dicarboximide	E	≤ 0.1 ppm

**Notes:** Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

### Exposure controls

<b>Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<p>No special equipment for minor exposure i.e. when handling small quantities.</p> <p><b>OTHERWISE:</b> For potentially moderate or heavy exposures:</p> <ul style="list-style-type: none"> <li>▸ Safety glasses with side shields.</li> <li>▸ <b>NOTE:</b> Contact lenses pose a special hazard; soft lenses may absorb irritants and <b>ALL</b> lenses concentrate them.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> <li>▸ No special equipment needed when handling small quantities.</li> <li>▸ <b>OTHERWISE:</b></li> <li>▸ For potentially moderate exposures:</li> <li>▸ Wear general protective gloves, eg. light weight rubber gloves.</li> <li>▸ For potentially heavy exposures:</li> <li>▸ Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>▸ Overalls.</li> <li>▸ Skin cleansing cream.</li> <li>▸ Eyewash unit.</li> <li>▸ The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.</li> <li>▸ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.</li> </ul> <p>BREThERICK: Handbook of Reactive Chemical Hazards.</p>

### Respiratory protection

Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	Air-line*	AX-2 P2	AX-PAPR-2 P2 ^
up to 10 x ES	-	AX-3 P2	-
10+ x ES	-	Air-line**	-

\* - Continuous Flow; \*\* - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear colourless liquid with a pleasant fragrance; partially miscible with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.87
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	392
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	-114 approx.	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	~78	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	13 approx.	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	HIGHLY FLAMMABLE.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	<5.80 @ 20 degC	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Partly miscible	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	1.59 approx.	<b>VOC g/L</b>	Not Available

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▸ Elevated temperatures.</li> <li>▸ Presence of open flame.</li> <li>▸ Product is considered stable.</li> <li>▸ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 Toxicological information

### Information on toxicological effects

<b>Inhaled</b>	<p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with</p>
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	<p>headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.</p> <p><b>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</b></p>
<b>Ingestion</b>	<p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p>
<b>Skin Contact</b>	<p>The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives.</p> <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Spray mist may produce discomfort</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
<b>Eye</b>	<p>Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).</p> <p>Not considered to be a risk because of the extreme volatility of the gas.</p>
<b>Chronic</b>	<p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Based on experience with similar materials, there is a possibility that exposure to the material may reduce fertility in humans at levels which do not cause other toxic effects.</p> <p>Exposure to DEET is usually by inhaling mists or vapours, or through skin contact/absorption.</p> <p>Repeated exposure to DEET can cause slight irritation and dryness of the face, sloughing around the nose and a tingling sensation. Some individuals have shown nervous system symptoms (muscle cramp, urinary hesitation, difficulty sleeping, abnormal sweating, irritability, depression, paranoia, confusion and aggressive behaviour) and brain disease. Allergy and scarring skin inflammation have been reported; in one case, a 5-year-old girl died, likely as a result of sensitisation to DEET.</p> <p>Main route of exposure to the gas in the workplace is by inhalation.</p> <p>Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.</p>

<b>Radius Protect Your Family Insect Repellent Tropical Strength 150g***OBSOLETE***</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>alkanes C3-4.</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation (rat) LC50: 658 mg/l/4H <sup>[2]</sup>	Not Available
<b>N,N-diethyl-m-toluamide</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	35 mg/kg <sup>[2]</sup>	Eye (rabbit) : 10 mg - moderate
	4750 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg
	950 mg/kg <sup>[2]</sup>	Skin (rabbit): 500 mg - moderate
	Dermal (rabbit) LD50: 3180 mg/kg <sup>[2]</sup>	
	dermal (rat) LD50: 5000 mg/kg <sup>[2]</sup>	
	Inhalation (rat) LC50: 5.95 mg/l <sup>[2]</sup>	
<b>2-ethylhexyl bicycloheptene dicarboximide</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 470 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	dermal (rat) LD50: 470 mg/kg <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	Oral (rat) LD50: 2800 mg/kg <sup>[2]</sup>	
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

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<b>ALKANES C3-4.</b>	No significant acute toxicological data identified in literature search. inhalation of the gas
<b>N,N-DIETHYL-M-TOLUAMIDE</b>	For N,N-diethyl-m-toluamide (Deet) <b>Acute toxicity:</b> Different preparations of Deet with different proportions of the m-isomer produced different oral LD50s. Rats killed by dosages in the LD50 range showed lacrimation, chromodacryorrhea, depression, prostration, tremors, and asphyxial convulsions. Respiratory failure usually preceded cardiac failure. In rabbits, an intravenous dosage of 75 mg/kg was rapidly fatal, but 50 mg/kg was not. Five doses at the rate of 25 mg/kg/day produced no cumulative effect, except for injury of the intima of some veins used for injection. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Reproductive effector in rats
<b>2-ETHYLHEXYL BICYCLOHEPTENE DICARBOXIMIDE</b>	For 2-ethylhexyl (or N-octyl) bicycloheptene dicarboximide (MGK-264): The dermal absorption factor of MGK-264 is approximately 10%. Animal testing showed that it can cause changes to cells of the airway. It is not toxic to the immune system or nervous system. MGK-264 affects the liver cells and causes benign tumours of the liver and thyroid, and has been identified as possibly causing cancer in humans.
<b>N,N-DIETHYL-M-TOLUAMIDE &amp; 2-ETHYLHEXYL BICYCLOHEPTENE DICARBOXIMIDE</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✓
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✗
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
✓ – Data available to make classification

**SECTION 12 Ecological information**

**Toxicity**

Radius Protect Your Family Insect Repellent Tropical Strength 150g***OBSOLETE***	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
alkanes C3-4.	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	24.11mg/L	2
	EC50	96	Algae or other aquatic plants	7.71mg/L	2
	LC50	96	Fish	24.11mg/L	2
	EC50	96	Algae or other aquatic plants	7.71mg/L	2
N,N-diethyl-m-toluamide	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
2-ethylhexyl bicycloheptene dicarboximide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72	Algae or other aquatic plants	>4.38mg/L	2
	NOEC	96	Crustacea	<0.077mg/L	2
<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Petroleum Hydrocarbon Gases:

Environmental Fate: Petroleum hydrocarbon gases are primarily produced in petroleum refineries, or in gas plants that separate natural gas and natural gas



liquids. This category contains 99 petroleum hydrocarbon gas substances, the majority of which never reach the consumer. Petroleum hydrocarbon gases do not contain inorganic compounds, (e.g. hydrogen sulfide, ammonia, and carbon monoxide), other than asphyxiant gases; the low molecular weight hydrocarbon molecules are primarily responsible for the hazard associated with these gases.

Atmospheric Fate: All components of these gases will evaporate to the air where interaction with hydroxyl radicals is an important fate process.

**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
alkanes C3-4.	LOW	LOW
N,N-diethyl-m-toluamide	HIGH	HIGH
2-ethylhexyl bicycloheptene dicarboximide	HIGH	HIGH

### Bioaccumulative potential

Ingredient	Bioaccumulation
alkanes C3-4.	LOW (LogKOW = 2.89)
N,N-diethyl-m-toluamide	LOW (BCF = 2.4)
2-ethylhexyl bicycloheptene dicarboximide	LOW (LogKOW = 3.7)

### Mobility in soil

Ingredient	Mobility
alkanes C3-4.	LOW (KOC = 43.79)
N,N-diethyl-m-toluamide	LOW (KOC = 536.6)
2-ethylhexyl bicycloheptene dicarboximide	LOW (KOC = 10410)


## SECTION 13 Disposal considerations

### Waste treatment methods

<b>Product / Packaging disposal</b>	<p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▸ Reduction</li> <li>▸ Reuse</li> <li>▸ Recycling</li> <li>▸ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"> <li>▸ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▸ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▸ Where in doubt contact the responsible authority.</li> <li>▸ Consult State Land Waste Management Authority for disposal.</li> <li>▸ Discharge contents of damaged aerosol cans at an approved site.</li> <li>▸ Allow small quantities to evaporate.</li> <li>▸ <b>DO NOT incinerate or puncture aerosol cans.</b></li> </ul>
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## SECTION 14 Transport information

### Labels Required

	
<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	Not Applicable

### Land transport (ADG)

<b>UN number</b>	1950	
<b>UN proper shipping name</b>	AEROSOLS	
<b>Transport hazard class(es)</b>	Class	2.1
	Subrisk	Not Applicable
<b>Packing group</b>	Not Applicable	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	Special provisions	63 190 277 327 344 381
	Limited quantity	1000ml

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	1950	
<b>UN proper shipping name</b>	Aerosols, flammable	
<b>Transport hazard class(es)</b>	ICAO/IATA Class	2.1
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	10L
<b>Packing group</b>	Not Applicable	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	Special provisions	A145 A167 A802
	Cargo Only Packing Instructions	203
	Cargo Only Maximum Qty / Pack	150 kg
	Passenger and Cargo Packing Instructions	203
	Passenger and Cargo Maximum Qty / Pack	75 kg
	Passenger and Cargo Limited Quantity Packing Instructions	Y203
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	1950	
<b>UN proper shipping name</b>	AEROSOLS	
<b>Transport hazard class(es)</b>	IMDG Class	2.1
	IMDG Subrisk	Not Applicable
<b>Packing group</b>	Not Applicable	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	EMS Number	F-D , S-U
	Special provisions	63 190 277 327 344 381 959
	Limited Quantities	1000 ml

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**SECTION 15 Regulatory information****Safety, health and environmental regulations / legislation specific for the substance or mixture****alkanes C3-4. is found on the following regulatory lists**

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

**N,N-diethyl-m-toluamide is found on the following regulatory lists**

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

#### 2-ethylhexyl bicycloheptene dicarboximide is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

### National Inventory Status

National Inventory	Status
Australia - AIIC	Yes
Australia - Non-Industrial Use	No (alkanes C3-4.; N,N-diethyl-m-toluamide; 2-ethylhexyl bicycloheptene dicarboximide)
Canada - DSL	Yes
Canada - NDSL	No (alkanes C3-4.; N,N-diethyl-m-toluamide; 2-ethylhexyl bicycloheptene dicarboximide)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	No (2-ethylhexyl bicycloheptene dicarboximide)
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (2-ethylhexyl bicycloheptene dicarboximide)
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	No (2-ethylhexyl bicycloheptene dicarboximide)
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

### SECTION 16 Other information

<b>Revision Date</b>	16/04/2020
<b>Initial Date</b>	25/09/2017

### SDS Version Summary

Version	Issue Date	Sections Updated
3.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1.1.1	16/04/2020	Name

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
 PC—STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit.  
 IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

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