

Section 1 - Identification of Chemical Product and Company

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Chemical nature: Blend of pyrethrin ingredients in a water/hydrocarbon emulsion. Presented as an aerosol.

Trade Name: **Raid Range of Surface Sprays**

Other names: **This SDS is intended for the following similar products:**

Raid Max Cockroach Killer Surface Spray
Raid Max Ant Killer Surface Spray
Raid Max Spider Killer Surface Spray
Raid Outdoor & Spider Surface Spray
Raid Indoor Home Surface Spray

Product Code: 215460

Product Use: Insect and spider killer in an aerosol can.

Creation Date: **May, 2013**

This version issued: **July, 2014** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature (Australia)

This product is classified as: Not classified as hazardous according to the criteria of SWA.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: Not Hazardous - No criteria found.

Safety Phrases: S23, S25. Do not breathe spray mists. Avoid contact with eyes.

SUSMP Classification: None allocated.

ADG Classification: 2.1 (Flammable gas)

UN Number: 1950, AEROSOLS



GHS Signal word: DANGER.

HAZARD STATEMENT:

H223: Flammable material.

H280: Contains gas under pressure; may explode if heated.

PREVENTION

P211: Do not spray on an open flame or other ignition source.

P251: Pressurized container: Do not pierce or burn, even after use.

RESPONSE

P337: If eye irritation persists: seek medical attention.

P353: Rinse skin or shower with water.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P332+P313: If skin irritation occurs: Get medical advice.

P337+P313: If eye irritation persists: Get medical advice.

P372: Explosion risk in case of fire.

P370+P378: In case of fire, note the following. Water fog or fine spray is the preferred medium for large fires.

Try to contain spills, minimise spillage entering drains or water courses.

STORAGE

P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C.

DISPOSAL

P501: Dispose of contents and containers to landfill.

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Statement of Hazardous Nature (New Zealand)

HSR002515 Aerosols (Flammable,) Group Standard 2006

2.1.2A: Flammable aerosol.

6.3B: Substances that are mildly irritating to the skin.

6.5B: Substances that are contact sensitisers.

9.1A: Substances that are very ecotoxic in the aquatic environment.

9.4A: Substances that are very ecotoxic to terrestrial invertebrates.

DG Classification: Classified as a Dangerous Good for transport in accordance with the Land Transport Rule Dangerous Goods 2005 and NZS 5433:2007.**Emergency Overview****Physical Description & Colour:** White cloudy liquid.**Odour:** Mild solvent odour.**Major Health Hazards:** Symptoms and consequences of Deltamethrin poisoning include: sweating, fever, anxiety and rapid heartbeat. If swallowed, symptoms are likely to include feeling sick, vomiting, diarrhoea, twitching of arms and legs, and convulsions if poisoning is severe. However, no significant risk factors have been found for this product as deltamethrin is present at very low concentration.**Potential Health Effects****Inhalation:****Short Term Exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort. Intentional misuse by deliberately concentrating and inhaling contents of aerosol containers can be harmful or fatal.**Long Term Exposure:** No data for health effects associated with long term inhalation.**Skin Contact:****Short Term Exposure:** Major health effect from this product is misuse of the aerosol function. If sprayed continuously on skin or in eyes, it can cause frostbite.**Long Term Exposure:** No data for health effects associated with long term skin exposure.**Eye Contact:****Short Term Exposure:** If sprayed directly in the eye, this product will irritate. If spraying is prolonged, it may cause damage through frostbite.**Long Term Exposure:** No data for health effects associated with long term eye exposure.**Ingestion:****Short Term Exposure:** Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.**Long Term Exposure:** No data for health effects associated with long term ingestion.**Carcinogen Status:****SWA:** No significant ingredient is classified as carcinogenic by SWA.**NTP:** No significant ingredient is classified as carcinogenic by NTP.**IARC:** Deltamethrin is Class 3 - unclassifiable as to carcinogenicity to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
deltamethrin	52918-63-5	0.5g/kg	not set	not set
Imiprothrin	72963-72-5	1g/kg	not set	not set
Alkanes, C ₃₋₄	68475-59-2	10	not set	not set
Other non hazardous ingredients	various	30 approx	not set	not set
Water	7732-18-5	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions.

Only small quantities of decomposition products are expected from this products at temperatures normally achieved in a fire. This will only occur after heating to dryness.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is a danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

Flash point: Propellant is flammable, liquid component is combustible.

Upper Flammability Limit: Not available

Lower Flammability Limit: Not available

Autoignition temperature: No data.

Flammability Class: C1

Section 6 - Accidental Release Measures

Accidental release: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Store in a cool, well ventilated area, and make sure that surrounding electrical devices and switches are suitable. Check containers and valves periodically for leaks. If you keep more than 25kg of flammable gases, you are probably required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501 set 2008**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits

TWA (mg/m³)

STEL (mg/m³)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

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The ADI for deltamethrin is set at 0.01mg/kg/day. The corresponding NOEL is set at 1mg/kg/day.

The ADI for Imiprothrin is set at 0.05mg/kg/day. The corresponding NOEL is set at 5mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2012.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types: There is no specific recommendation for any particular protective material type.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Section 9 - Physical and Chemical Properties

Physical Description & colour:	White cloudy liquid.
Odour:	Mild solvent odour.
Boiling Point:	Approximately 100°C at 100kPa.
Freezing/Melting Point:	Approximately 0°C.
Volatiles:	Water component.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	Emulsifiable.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data.
Autoignition temp:	No data.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated. Keep away from sources of sparks or ignition.

Incompatibilities: strong acids, strong bases, strong oxidising agents.

Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: An information profile for Deltamethrin is available at <http://extoxnet.orst.edu/pips/ghindex.html>

Acute Toxicity:

The acute oral LD₅₀ in male rats ranged from 128 mg/kg to greater than 5,000 mg/kg depending on the carrier and conditions of the study; the LD₅₀ for female rats was 52 mg/kg and other published values range from 31 to 139 mg/kg. Values ranging from 21 to 34 mg/kg were obtained for mice; while dogs had a reported LD₅₀ of 300 mg/kg. The acute percutaneous LD₅₀ for rats was reported to be greater than 2,000 mg/kg; greater than 10,000 mg/kg for quail; and greater than 4,640 mg/kg for ducks. The acute dermal LD₅₀ for rabbits was greater than 2,000 mg/kg. No skin irritation and slight eye irritation were reported.

Chronic Toxicity: Suspected chronic exposure effects in humans include the following: involuntary movements of the limbs, trunk, and facial muscles, hypotension, prenatal damage and shock. Workers exposed to Deltamethrin during

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its manufacture over 7-8 years experienced transient skin and mucous membrane irritation, which could be prevented by use of gloves and face masks. No other ill effects were seen.

Reproductive Effects: Oral administration of Deltamethrin to mice on days 7 to 16 of gestation produced a dosage-related reduction of weight gain but no effect on the number of implants, foetal mortality, foetal weight or malformations.

Teratogenic Effects: There were no reported teratogenic effects in mice, rats and rabbits. Deltamethrin has no teratogenic activity.

Mutagenic Effects: There were no mutagenic effects in mice, rats and rabbits. Deltamethrin has no mutagenic activity.

Carcinogenic Effects: No information was available.

Organ Toxicity: Deltamethrin is hydrolysed by liver microsomal enzymes to 3-(2,2-dibromovinyl) 2,2-cyclopropane carboxylic acid and 3-phenoxybenzaldehyde.

Section 12 - Ecological Information

Effects on Birds: The reported 8-day LC₅₀ for ducks was greater than 4,640 mg/kg diet; and greater than 10,000 mg/kg diet for quail.

Effects on Aquatic Organisms: As is common with many pyrethroids, Deltamethrin has a high toxicity to fish under laboratory conditions. However, in field conditions under normal conditions of use, fish are not harmed. In laboratory trials, the LC₅₀ for fish was 1-10 micrograms/L. Aquatic fauna, particularly crustacea, may be affected, but fish are not harmed under normal conditions of use.

Effects on Other Animals (Nontarget species): Deltamethrin is considered toxic to bees. Deltamethrin is very toxic over long periods to the predatory mite *Typhlodromum pyri*. The parasitic wasp *Encarsia formosa*, released in greenhouses to combat whitefly, is too sensitive to allow a treatment with Deltamethrin against excessive outbreaks of whiteflies. Deltamethrin had little or no effect on adults or cocoons of *Apanteles plutellae*, a parasite of the diamond back moth in India. Spiders were also indicated to be strongly affected in field investigations.

ENVIRONMENTAL FATE

Breakdown of Chemical in Soil and Groundwater: In soil, degradation occurs within 1-2 weeks.

Breakdown of Chemical in Surface Water: Deltamethrin in pond water was rapidly adsorbed, mostly by sediment, in addition to uptake by plants and evaporation into the air.

Breakdown of Chemical in Vegetation: About 10 days after use, there are no Deltamethrin residues observed on plants. There is no known phytotoxicity to crops.

Section 13 - Disposal Considerations

Disposal: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Section 14 - Transport Information

ADG Code: 1950, AEROSOLS

Hazchem Code: 2YE

Special Provisions: 63, 190, 277

Limited quantities: ADG 7 specifies a Limited Quantity value of 1000g for this class of product.

Dangerous Goods Class: Class 2.1, Flammable gases.

Packaging Group: Not set

Packaging Method: P003

Class 2.1 Flammable gases shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 3 (Flammable Liquids) (where both flammable liquids and flammable gases are in bulk), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), and 7 (Radioactive Substances). They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.2 (Non-flammable Non-Toxic gases), 3 (Flammable liquids except where both flammable liquids and flammable gases are in bulk), 6 (Toxic Substances), 8 (Corrosive Substances) 9 (Miscellaneous dangerous goods), Foodstuffs and foodstuff empties.

New Zealand

Classified as Dangerous Goods for transport in accordance with the Land Transport Rule Dangerous Goods 2005 and NZS 5433:2007.

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Section 15 - Regulatory Information

Australia:

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

New Zealand:

HSR002515 Aerosols (Flammable,) Group Standard 2006

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS Number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

Australia:

This MSDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

New Zealand

HSNO Approved Code of Practice: Preparation of Safety Data Sheets. New Zealand Chemical Industry Council September 2006.

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