

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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Chemical nature: Permethrin in liquid hydrocarbon.
Product Name: Richgro Ant, Spider & Cockroach Killer Concentrate
APVMA Code: 61917
Product Use: Domestic insecticide for use as described on the product label.
Creation Date: April, 2016
This version issued: November 16 and is valid for 5 years from this date.
Emergency telephone number: 1800 455 132 Monday to Friday 9am to 5pm
Poisons Information Centre: Phone 13 1126 from anywhere in Australia

SECTION 2 - HAZARDS IDENTIFICATION

Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

SUSMP Classification: S5

ADG Classification: None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

UN Number: None allocated



GHS Signal word: WARNING

Flammable liquids Category 4
Aspiration Hazard Category 1
Skin Sensitisation Category 1
Hazardous to aquatic environment Short term/Acute Category 2

HAZARD STATEMENT:

H227: Combustible liquid.
H304: May be fatal if swallowed and enters airways.
H317: May cause an allergic skin reaction.
H401: Toxic to aquatic life.

PREVENTION

P102: Keep out of reach of children.
P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P261: Avoid breathing fumes, mists, vapours or spray.
P262: Do not get in eyes, on skin, or on clothing.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE

P363: Wash contaminated clothing before reuse.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

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STORAGE

- P410: Protect from sunlight.
- P402+P404: Store in a dry place. Store in a closed container.
- P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

- P501: 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.

Emergency Overview

Physical Description & Colour: Amber coloured liquid.

Odour: Characteristic aromatic hydrocarbon odour.

Major Health Hazards: Permethrin is harmful to non-harmful via the oral route, with a reported LD₅₀ for technical Permethrin in rats of 430 to 4000 mg/kg. Via the dermal route, it is not harmful, with a reported dermal LD₅₀ in rats of over 4000 mg/kg, and in rabbits of greater 2000 mg/kg. Possible skin sensitiser, if aspirated, may cause lung damage.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc, %	TWA (mg/m ³)	STEL (mg/m ³)
Permethrin	52645-53-1	30g/L	not set	not set
Aromatic hydrocarbons	64742-94-5	842g/L	not set	not set
Other non hazardous ingredients	secret	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.

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 SDS 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: Wash gently and thoroughly with water (use non-abrasive soap if necessary) 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 swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

SECTION 5 - FIRE FIGHTING MEASURES

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: 62°C, Closed cup

Upper Flammability Limit: 6.0%

Lower Flammability Limit: 0.8%

Autoignition temperature: About 500°C

Flammability Class: Flammable Category 4 (GHS), C1 combustible (AS 1940)

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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 SDS 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: Note that this product is GHS Flammable Class 4 and therefore, for Storage, meets the definition of Dangerous Goods. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. 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.

The ADI for Permethrin is set at 0.05mg/kg/day. The corresponding NOEL is set at 5mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2014.

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: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: PVC.

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

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Physical Description & colour:	Amber coloured liquid.
Odour:	Characteristic aromatic hydrocarbon odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Liquid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	0.994 at 20°C
Water Solubility:	Emulsifiable.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.

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Evaporation Rate: No data.
Coeff Oil/water Distribution: No data
Autoignition temp: About 500°C

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: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong bases, oxidising agents.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. 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: Acute toxicity: Permethrin is harmful to non-harmful via the oral route, with a reported LD₅₀ for technical Permethrin in rats of 430 to 4000 mg/kg. Via the dermal route, it is not harmful, with a reported dermal LD₅₀ in rats of over 4000 mg/kg, and in rabbits of greater 2000 mg/kg. Permethrin caused mild irritation of both the intact and abraded skin of rabbits. It also caused conjunctivitis when it was applied to the eyes. The 4-hour inhalation LC₅₀ for rats was greater than 23.5 mg/L, indicating practically no inhalation toxicity. The toxicity of Permethrin is dependent on the ratio of the isomers present; the cis-isomer being more toxic.

Chronic toxicity: No adverse effects were observed in dogs fed Permethrin at doses of 5 mg/kg/day for 90 days. Rats fed 150 mg/kg/day for 6 months showed a slight increase in liver weights. Very low levels of Permethrin in the diet of chickens (0.1 ppm for 3 to 6 weeks after hatching) have been reported to suppress immune system activity.

Reproductive effects: The fertility of female rats was affected when they received very high oral doses of 250 mg/kg/day of Permethrin during the 6th to 15th day of pregnancy. It is not likely that reproductive effects will be seen in humans under normal circumstances.

Teratogenic effects: Permethrin is reported to show no teratogenic activity.

Mutagenic effects: Permethrin is reported to show no mutagenic activity.

Carcinogenic effects: The evidence regarding the carcinogenicity of Permethrin is inconclusive.

Organ toxicity: Permethrin is suspected of causing liver enlargement of the liver and nerve damage. Effects on the immune system have been noted in animal studies.

Fate in humans and animals: Permethrin is efficiently metabolized by mammalian livers. Breakdown products, or "metabolites," of Permethrin are quickly excreted and do not persist significantly in body tissues. When Permethrin is administered orally to rats, it is rapidly metabolized and almost completely eliminated from the body in a few days. Only 3 to 6% of the original dose was excreted unchanged in the faeces of experimental animals. Permethrin may persist in fatty tissues, with half-lives of 4 to 5 days in brain and body fat. Permethrin does not block, or inhibit, cholinesterase enzymes. There is no data to hand indicating any particular target organs.

Permethrin is classed by SWA as a potential sensitiser by skin contact.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Permethrin	>=1%Conc<25%: Xi; R43
Aromatic Hydrocarbons	Conc>=10%: Xn; R65
• Aspiration hazard - category 1	

Potential Health Effects

Persons sensitised to permethrins should avoid contact with this product.

Inhalation:

Short Term Exposure: Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

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Short Term Exposure: Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. In addition product may be irritating, but is unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

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. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. 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: Permethrin 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 12 - ECOLOGICAL INFORMATION

This product is toxic to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on birds: Permethrin is practically non-toxic to birds. The oral LD₅₀ for a Permethrin formulation is greater than 9900 mg/kg in mallard ducks, greater than 13,500 mg/kg in pheasants, and greater than 15,500 mg/kg in Japanese quail.

Effects on aquatic organisms: Aquatic ecosystems are particularly vulnerable to the impact of Permethrin. A fragile balance exists between the quality and quantity of insects and other invertebrates that serve as fish food. The 48-hour LC₅₀ for rainbow trout is 0.0125 mg/L for 24 hours, and 0.0054 mg/L for 48 hours. The 48-hour LC₅₀ in bluegill sunfish and salmon is 0.0018 mg/L. As a group, synthetic pyrethroids were toxic to all estuarine species tested. They had a 96-hour LC₅₀ of less than or equal to 0.0078 mg/L for these species. The bioconcentration factor for Permethrin in bluefish is 715 times the concentrations in water and is 703 in catfish. This indicates that the compound has a low to moderate potential to accumulate in these organisms.

Effects on other organisms: Permethrin is extremely toxic to bees. Severe losses may be expected if bees are present at treatment time, or within a day thereafter. Permethrin is also toxic to wildlife. It should not be applied, or allowed to drift, to crops or weeds in which active foraging takes place.

Environmental Fate:

Breakdown in soil and groundwater: Permethrin is of low to moderate persistence in the soil environment, with reported half-lives of 30 to 38 days. Permethrin is readily broken down, or degraded, in most soils except organic types. Soil microorganisms play a large role in the degradation of Permethrin in the soil. The addition of nutrients to soil may increase the degradation of Permethrin. It has been observed that the availability of sodium and phosphorous decreases when Permethrin is added to the soil. Permethrin is tightly bound by soils, especially by organic matter. Very little leaching of Permethrin has been reported. It is not very mobile in a wide range of soil types. Because Permethrin binds very strongly to soil particles and is nearly insoluble in water, it is not expected to leach or to contaminate groundwater.

Breakdown in water: The results of one study near estuarine areas showed that Permethrin had a half-life of less than 2.5 days. When exposed to sunlight, the half-life was 4.6 days. Permethrin degrades rapidly in water, although it can persist in sediments. There was a gradual loss of toxicity after Permethrin aged for 48 hours in sunlight at 0.05 mg/L in water.

Breakdown in vegetation: Permethrin is not phytotoxic, or poisonous, to most plants when it is used as directed. Some injury has occurred on certain ornamental plants. No incompatibility has been observed with Permethrin on cultivated plants. Treated apples, grapes, and cereal grains contain less than one mg/kg of Permethrin at harvest time.

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.

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SECTION 14 - TRANSPORT INFORMATION

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

SECTION 15 - REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredients: Permethrin, Aromatic hydrocarbons, are mentioned in the SUSMP.

SECTION 16 - OTHER INFORMATION

This SDS 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 (7 th 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 SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD STATEMENT: INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS 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.

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