

## Section 1 - Identification of Chemical Product and Company

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Telephone (02)9431 7800 (24 hours)

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**Substance:** Propyzamide is an amide derivative.  
**Trade Name:** Farmoz Royale 500 SC Selective Herbicide  
**Product Use:** Agricultural herbicide for use as directed on product label.  
**Creation Date:** June, 2002  
**Revision Date:** June, 2008

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of ASCC Australia.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R36. Irritating to eyes.

**Safety Phrases:** S25. Avoid contact with eyes.

**SUSDP Classification:** S5

**ADG Classification:** None allocated. Not a Dangerous Good.

**UN Number:** None allocated

## Emergency Overview

**Physical Description & colour:** Light brown coloured liquid.

**Odour:** Mild odour.

**Major Health Hazards:** Propyzamide is practically nontoxic via ingestion. The reported oral LD<sub>50</sub> values for Propyzamide range from 5620 mg/kg in female rats to 8350 mg/kg in male rats, respectively, and 10,000 mg/kg in dogs. Propyzamide is slightly toxic by skin exposure, with a dermal LD<sub>50</sub> of greater than 3160 mg/kg. When applied to the skin of rabbits, it produced slight local irritation, but no systemic intoxication. The 4-hour inhalation LC<sub>50</sub> for Propyzamide is greater than 5.0 mg/L, indicating slight toxicity by this route.

## Potential Health Effects

See section 11 for Chronic exposure studies.

### Inhalation

**Short term exposure:** This product may be irritating, but is unlikely to cause anything more than mild transient discomfort.

### Skin Contact:

**Short term exposure:** This product is believed to be mildly irritating, but is unlikely to cause anything more than mild transient discomfort.

### Eye Contact:

**Short term exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

### Ingestion:

**Short term exposure:** This product, while believed to be not harmful, is likely to cause headache and gastric disturbance such as nausea and vomiting.

### Carcinogen Status:

**ASCC:** No significant ingredient is classified as carcinogenic by ASCC.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

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## Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Propyzamide	23950-58-5	50	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 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 should not be exceeded for more than 15 minutes and should not be repeated for 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 and is available at all times. Have this MSDS with you when you call.

**Inhalation:** If irritation is experienced, remove victim from area and allow to breath fresh air. If irritation persists, call a doctor or poisons information centre.

**Skin Contact:** Blot or brush away excess chemical. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 10 minutes or until chemical is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts). If irritation persists, repeat flushing and obtain medical advice.

**Eye Contact:** Quickly and gently blot or brush away product. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face.

**Ingestion:** If nausea or gastric upset develops, remove individual to rest area and monitor. If symptoms get worse or if individual becomes distressed, contact the Poisons Information Centre or a doctor.

## Section 5 – Fire Fighting Measures

**Fire and Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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

This product is likely to decompose only after heating to dryness, followed by further strong heating.

**Extinguishing Media:** Not Combustible. Use extinguishing media suited to burning materials.

### Fire Fighting:

**Flash point:** Will not burn until water component is driven off.

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** No data.

**Flammability Class:** No data.

## Section 6 – Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including face mask, face shield and gauntlets. All skin areas should be covered. See above under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## 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.

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confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.

**Polymerisation:** This product is unlikely to undergo polymerisation processes.

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## Section 11 – Toxicological Information

**Toxicity:** Acute toxicity: Propyzamide is practically nontoxic via ingestion. The reported oral LD<sub>50</sub> values for Propyzamide range from 5620 mg/kg in female rats to 8350 mg/kg in male rats, respectively, and 10,000 mg/kg in dogs. Propyzamide is slightly toxic by skin exposure, with a dermal LD<sub>50</sub> of greater than 3160 mg/kg. When applied to the skin of rabbits, it produced slight local irritation, but no systemic intoxication. The 4-hour inhalation LC<sub>50</sub> for Propyzamide is greater than 5.0 mg/L, indicating slight toxicity by this route.

**Chronic toxicity:** When dogs were fed a diet containing Propyzamide for 3 months, decreases in weight gain and food consumption, changes in blood chemistry, and increased liver weights were observed at doses of 15 mg/kg/day. In a study in rats over 3 months, similar effects were seen at doses of over 10 mg/kg/day, and changes in thyroid, adrenal, and pituitary function were observed at 50 mg/kg/day. In a 2-year feeding study in dogs, the addition of Propyzamide to the diet at doses of 0.75, 2.5, or 7.5 mg/kg/day caused no adverse health effects at any of the doses tested.

**Reproductive effects:** When pregnant rabbits were given doses of 5, 20, or 80 mg/kg/day during days 7 to 19 of gestation (18 rabbits per dose), no effects on development or reproduction were observed at or below the 20 mg/kg dose. At 80 mg/kg, there was an increased incidence of liver lesions, one maternal death, five abortions, and a decrease in maternal and offspring weight gain. In a three-generation rat reproduction study, no effects on reproduction were observed at 300 ppm (15 mg/kg/day), the highest dose tested. It is unlikely that Propyzamide will have reproductive effects except at doses high enough to cause maternal toxicity.

**Teratogenic effects:** No teratogenic effects were found when doses as high as 15 mg/kg/day were administered to pregnant rabbits. This evidence suggests Propyzamide is not teratogenic.

**Mutagenic effects:** Mutagenicity tests on bacteria, mammalian cell cultures, and live animals have been negative. It appears Propyzamide is not mutagenic.

**Carcinogenic effects:** Propyzamide caused liver tumors in mice after 2 years at doses of 10 mg/kg/day and above. In rats, doses of 50 mg/kg/day and above produced changes in ovary and liver structure and function, as well as thyroid and testicular effects. These data suggest that Propyzamide may have carcinogenic activity at sufficient doses.

**Organ toxicity:** Target organs identified in animal studies include the liver, thyroid, and adrenal and pituitary glands.

**Fate in humans and animals:** Propyzamide is not readily absorbed into the bloodstream from the gastrointestinal tracts of rats and cows. After oral doses of a formulated product to rats, 54% and 0.6% of the unmetabolized Propyzamide was recovered in faeces and urine, respectively. Unmetabolized Propyzamide did not appear in the urine of a cow treated orally with the formulated product. Traces of Propyzamide were found in the milk of cows given feed that contained 5 ppm doses of a Propyzamide formulation. Propyzamide has a low potential for bioaccumulation in animal tissues.

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## Section 12 – Ecological Information

**Effects on birds:** Propyzamide is practically nontoxic to birds. The oral LD<sub>50</sub> for Propyzamide in Japanese quail is 8700 mg/kg, and greater than 14,000 mg/kg in mallard ducks. The 8-day dietary LC<sub>50</sub> for similar Herbicide in bobwhite quail and mallard ducks is greater than 10,000 ppm.

**Effects on aquatic organisms:** Propyzamide is practically nontoxic to warmwater fish and slightly toxic to coldwater fish. The 96-hour LC<sub>50</sub> for Propyzamide is 100 mg/L in bluegill sunfish, 72 mg/L in rainbow trout, 350 mg/L in goldfish, 204 mg/L in harlequin fish, and 150 mg/L in guppies. The 48-hour LC<sub>50</sub> for *Daphnia magna*, a small freshwater crustacean, is greater than 5.6 mg/L. Propyzamide may be moderately toxic to aquatic invertebrates.

**Effects on other organisms:** Propyzamide is nontoxic to honey bees.

### Environmental Fate:

**Breakdown in soil and groundwater:** Propyzamide is moderately persistent in most soils, with a reported average field half-life of 60 days. It is readily bound, or adsorbed, to most soils. Increasing soil temperature, and to a lesser extent, soil moisture and pH increase the rate of Propyzamide degradation in soil. In most soil types, there is very little movement, or leaching, of Propyzamide into groundwater as it is nearly insoluble in water. Leaching of Propyzamide residues in soil is most likely in soils with low organic matter content, such as loamy sands or silt loams. Propyzamide is inactivated by soil organic matter and will not be effective on muck, peat, or other very high-organic content soils. Depending upon soil type and climatic conditions, persistence of Propyzamide may be higher. Accumulation of the herbicide from repeated annual applications to the same soil does not appear problematic. Chemical degradation may be the main route of disappearance from the soil. Photodecomposition at the soil surface can also occur. A moderate amount of Propyzamide breakdown is carried out by soil microorganisms. The herbicide is not active against common soil microorganisms. Volatilization loss may be high under hot, dry conditions.

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**Breakdown in water:** In water bodies, Propyzamide is stable at a neutral pH. It is slowly degraded chemically, by light, and by aquatic and microorganisms. Loss from volatilization is not significant. Propyzamide is thought to be stable because less than 10% was hydrolyzed, or broken down in water, over a 4-week period. It is stable to hydrolysis between pH 4.7 and 8.8.

**Breakdown in vegetation:** Propyzamide is readily translocated from the roots to other plant parts. Absorption of Propyzamide through plant leaves is minimal. Propyzamide is metabolized slowly by both tolerant and sensitive plants.

## Section 13 – Disposal Considerations

**Disposal:** Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed. Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

## Section 14 – Transport Information

**ADG Code:** This product is not classified as a Dangerous Good. 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 to be found in the public AICS Database.

## Section 16 – Other Information

Much of the Information in this MSDS came from Extoxnet, a Pesticide Information Project of Cooperative Extension Offices of Cornell University, Oregon State University, the University of Idaho, and the University of California at Davis and the Institute for Environmental Toxicology, Michigan State University.

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

### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Number</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>ASCC</b>	Office of the Australian Safety and Compensation Council
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSDP</b>	Standard for the Uniform Scheduling of Drugs & Poisons
<b>UN Number</b>	United Nations Number

### Contact Points:

Call Farmoz on (02)9431 7800

Fax: (02)9431 7700 and ask for the technical manager.

Police and Fire Brigade:

Dial 000

Emergency contact:

1800 024 973 (24 hours)

**If ineffective:**

**Dial Poisons Information Centre  
(13 1126 from anywhere in Australia)**

The information contained in this Material Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it is expected that individuals receiving the information will exercise their independent judgement in determining its appropriateness for a particular purpose. Farmoz Pty Ltd makes no representation as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, for any loss or damage arising from or connection with the supply or use of the information in this Material Safety Data Sheet.

Please read all labels carefully before using product.

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## MATERIAL SAFETY DATA SHEET

Issued by: Farmoz Pty Ltd

Phone: (02)9431 7800

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



Product Name: Farmoz Royale 500 SC Selective Herbicide

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<http://www.kilford.com.au/> Phone (02)9251 4532

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