

Unialphacyper 100

Issued: July, 2010

Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

Trade Name: UNITED FARMERS UNIALPHACYPER 100 INSECTICIDE
Substance: Active ingredient is a pyrethroid insecticide.
Product Use: Agricultural insecticide for use as described on the product label.
Company Identification: Ravensdown Fertiliser Co-operative Limited - Incorporated in New Zealand
Address: 2 Birksgate Rd
Rous Head
North Fremantle, WA 6160
Customer Centre: 1800 624 122
Poisons Information Centre: 13 1126 in Australia, 0800 764 766 in New Zealand
Emergency Telephone Number: For specialist advice call 1800 705 766 (24hr) (Emergencies Only)
Transport Emergency: IN AN EMERGENCY, DIAL 000 - FIRE or POLICE

Section 2: HAZARD IDENTIFICATION

Statement of Hazardous Nature: This product is classified as: Hazardous according to the criteria of NOHSC Australia. Dangerous according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases:
R22 Harmful if swallowed.
R65 Harmful: May cause lung damage if swallowed.
R36/38 Irritating to eyes and skin.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

Safety Phrases:
S2 Keep out of reach of children.
S20 When using, do not eat or drink.
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label.
S60 This material and its container must be disposed of as hazardous waste.
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.

Section 3: COMPOSITION INFORMATION

INGREDIENTS	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
Alpha-Cypermethrin	52315-07-8	100g/L	not set	not set
Liquid hydrocarbon	64742-48-9	755 g/L	not set	not set
Other non hazardous ingredients		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

Emergency Overview

Physical Description & Colour: Clear, amber coloured liquid.

Odour: Hydrocarbon odour

Major Health Hazards:	Symptoms of high dermal exposure include numbness, tingling, itching, burning sensation, loss of bladder control, incoordination, seizures, and possible death. Pyrethroids like cypermethrin may adversely affect the central nervous system. Symptoms of high-dose ingestion include nausea, prolonged vomiting, stomach pains, and diarrhoea which progresses to convulsions, unconsciousness, and coma. Cypermethrin is a slight skin or eye irritant, and may cause allergic skin reactions and facial skin numbness. Product is irritating to eyes and skin, harmful if swallowed, if aspirated, may cause lung damage.
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:	No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.
Skin Contact:	Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.
Eye Contact:	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. Obtain medical attention immediately.
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:	This product is classified as a C1 combustible product. There is little risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
Extinguishing Media:	Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog. Water fog or fine spray is the preferred medium for large fires. Ensure that no spillage enters drains or water courses.
Fire Fighting:	If a significant quantity of this product is involved in a fire, call the fire brigade.
Flash point:	>61°C
Upper Flammability Limit:	No data.
Lower Flammability Limit:	No data.
Autoignition temperature:	No data.
Flammability Class:	C1

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal:	Wear appropriate protective clothing. Exclude non-essential people from the area. Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Dispose of waste safely in an approved landfill.
Protective Clothing:	For appropriate personal protective equipment see section 8.
Environmental Precaution:	Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.

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:	This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Check packaging - there may be further storage instructions on the label.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

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

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure Limits:	Exposure limits have not been established by NOHSC for any of the significant ingredients in this product. The ADI for Alpha-Cypermethrin 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 2004. 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.
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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:	Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.
Skin Protection:	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: rubber, PVC.
Respirator:	Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary. Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour:	Clear, amber coloured liquid.
Odour:	Hydrocarbon odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Liquid at normal temperatures.
Volatiles:	Slowly volatile at 100°C, but approx 90% volatile at higher temperatures.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	0.902
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:	Keep containers tightly closed. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.
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

Potential Health Effects

Inhalation

Short Term Exposure: Significant inhalation exposure is considered to be unlikely. 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.

Skin Contact:

Short Term Exposure: This product causes skin numbness (see symptoms above). In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Eye Contact:

Short Term Exposure: Exposure via eyes is considered to be unlikely. 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: 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. This product is unlikely to cause any irritation problems in the short or long term.

Carcinogen Status:

NOHSC: No significant ingredient is classified as carcinogenic by NOHSC.
NTP: No significant ingredient is classified as carcinogenic by NTP.
IARC: No significant ingredient is classified as carcinogenic by IARC.

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

Acute toxicity:	Cypermethrin is a harmful material by dermal absorption or ingestion. The oral LD ₅₀ for cypermethrin in rats is 250 mg/kg (in corn oil) or 4123 mg/kg (in water). The oral LD ₅₀ varies from 367 to 2000 mg/kg in female rats, and from 82 to 779 mg/kg in mice, depending on the ratio of cis/trans- isomers present. This wide variation in toxicity may reflect different mixtures of isomers in the materials tested. The dermal LD ₅₀ in rats is 1600 mg/kg and in rabbits is greater than 2000 mg/kg.	
Chronic toxicity:	Not Available	
Reproductive effects:	No adverse effects on reproduction were observed in a three-generation study with rats given doses of 37.5 mg/kg/day, the highest dose tested.	
Teratogenic effects:	Cypermethrin is not teratogenic. No birth defects were observed in the offspring of rats given doses as high as 70 mg/kg/day nor in the offspring of rabbits given doses as high as 30 mg/kg/day.	
Mutagenic effects:	Cypermethrin is not mutagenic, but tests with very high doses on mice caused a temporary increase in the number of bone marrow cells with micronuclei. Other tests for mutagenic effects in human, bacterial, and hamster cell cultures and in live mice have been negative.	
Carcinogenic effects:	EPA has classified cypermethrin as a possible human carcinogen because available information is inconclusive. It caused benign lung tumours in female mice at the highest dose tested (229 mg/kg/day); however, no tumours occurred in rats given high doses of up to 75 mg/kg/day.	
Organ toxicity:	Pyrethroids like cypermethrin may cause adverse effects on the central nervous system. Rats fed high doses (37.5 mg/kg) of the cis-isomer of cypermethrin for five weeks exhibited severe motor incoordination; while 20 to 30% of rats fed 85 mg/kg died 4 to 17 days after treatment began. Long-term feeding studies have shown increased liver and kidney weights and adverse changes in liver tissues in test animals. Pathological changes in the cortex of the thymus, liver, adrenal glands, lungs, and skin were observed in rabbits repeatedly fed high doses of cypermethrin.	
Fate in humans and animals:	In humans, urinary excretion of cypermethrin metabolites was complete 48 hours after the last of five doses of 1.5 mg/kg/day. Studies in rats have shown that cypermethrin is rapidly metabolized by hydroxylation and cleavage, with over 99% being eliminated within hours. The remaining 1 % becomes stored in body fat. This portion is eliminated slowly, with a half-life of 18 days for the cis-isomer and 3.4 days for the trans-isomer.	
Classification of Hazardous Ingredients:	Ingredient AlphaCypermethrin	Risk Phrases >=10% Conc<20%: Xn; R22; R48/22

Section 12: ECOLOGICAL INFORMATION

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

Effects on birds: Cypermethrin is practically non-toxic to birds. No adverse reproductive effects occurred in mallards or bobwhite quail given 50 ppm, the highest dose tested.

Effects on aquatic organisms: Cypermethrin is very highly toxic to fish and aquatic invertebrates. Cypermethrin is metabolized and eliminated significantly more slowly by fish than by mammals or birds, which may explain this compound's higher toxicity in fish compared to other organisms. The half-lives for elimination of several pyrethroids by trout are all greater than 48 hours, while elimination half-lives in birds and mammals range from 6 to 12 hours. The bioconcentration factor for cypermethrin in rainbow trout was 1200 times the ambient water concentration, indicating that there is a moderate potential to accumulate in aquatic organisms. Elimination of half of the accumulated amount of the compound took nearly eight days.

Effects on other organisms: Cypermethrin is highly toxic to bees.

Environmental Fate

Breakdown in soil and groundwater: Cypermethrin has a moderate persistence in soils. Under laboratory conditions, cypermethrin degrades more rapidly on sandy clay and sandy loam soils than on clay soils, and more rapidly in soils low in organic material. In aerobic conditions, its soil half-life is 4 days to 8 weeks. Cypermethrin is not soluble in water and has a strong tendency to adsorb to soil particles. It is therefore unlikely to cause groundwater contamination.

Breakdown in water: In neutral or acid aqueous solution, cypermethrin hydrolyses slowly, with hydrolysis being more rapid at pH 9 (basic solution). Under normal environmental temperatures and pH, cypermethrin is stable to hydrolysis with a half-life of greater than 50 days and to photodegradation with a half-life of greater than 100 days. In pond waters and in laboratory degradation studies, pyrethroid concentrations decrease rapidly due to sorption to sediment, suspended particles and plants. Microbial degradation and photodegradation also occur.

Breakdown in vegetation: When applied to strawberry plants, 40% of the applied cypermethrin remained after one day, 12% remained after three days, and 0.5% remained after seven days, with a light rain occurring on day 3. When cypermethrin was applied to wheat, residues on the wheat were 4 ppm immediately after spraying and declined to 0.2 ppm 27 days later. No cypermethrin was detected in the grain.

Section 13: DISPOSAL INFORMATION

Follow label advice for the disposal of empty containers, packaging and for the return of refillable containers.

Product Disposal: For the disposal of unwanted / unusable chemicals, seek advice from suppliers, local government, your local Waste Management Authority and consult ChemClear, 1800 008 182
<http://www.chemclear.com.au/>

Container Disposal: Where possible, used containers should be recycled after triple rinsing. Check with local suppliers and or DrumMUSTER <http://www.drummuster.com.au/>. Otherwise, bury at an authorised landfill. Before disposing of unwanted containers or used packaging on a property, ensure that all appropriate regulations, both Local and State Government, are observed. Significant penalties may apply.

Section 14: TRANSPORT INFORMATION

ADG Code: 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
UN Number: 3082
SUSDP Classification: S6
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ALPHA-CYPERMETHRIN)
ADG Classification: Class 9 (ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.)
Hazchem Code: 2X
Special Provisions: SP179, SP274
Dangerous Goods Class: Class 9, Miscellaneous Dangerous Goods.
Packaging Group: III
Packaging Method: 3.8.9

Section 15: REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are to be found in the public AICS Database. The following ingredients: Alpha-Cypermethrin, liquid hydrocarbon are mentioned in the SUSDP.

Section 16: OTHER INFORMATION

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

This MSDS supersedes all others and was reviewed: February, 2010

Please read all labels carefully before using product.

This MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]