Section 1 - Identification of Chemical Product and Company

Statement of Hazardous Nature
This product is classified as: Not classified as hazardous according to the criteria of NOHSC Australia.
Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Farmoz Pty Ltd, Suite 2, Edgecliff Court
2 New McLean St, Edgecliff, NSW 2027
ACN 050 328 973
Telephone (02)9363 3611 (24 hours)
Fax (02)9363 5977

Substance:	Iprodione is a dicarboximide derivative.
Trade Name:	Farmoz Civet Aquaflo Fungicide
Product Use:	Agricultural fungicide for use as described on the product label.
Creation Date:	**September, 2002**
Revision Date:	**September, 2002**

Section 2 – Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m^3)	STEL (mg/m^3)
Iprodione	36734-19-7	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 3 - Hazards Identification

Risk Phrases: Not Hazardous - No criteria found.
Safety Phrases: Not Hazardous - No criteria found.
SUSDP Classification: None allocated.
ADG Classification: None allocated. Not a Dangerous Good.
UN Number: None allocated

Emergency Overview

Physical Description & colour: White liquid.
Odour: Mild odour.
Major Health Hazards: Iprodione is not harmful by ingestion, with reported oral LD_{50} values of 3500 mg/kg in rats, 4000 mg/kg in mice, and greater than 4400 mg/kg in rabbits. No dermal toxic effects were noted at doses of over 2500 mg/kg in the rat and at 1000 mg/kg in the rabbit, indicating slight toxicity by this route. Inhalation toxicity is also low for this compound. The 4-hour inhalation LC_{50} for Iprodione is greater than 3.3 mg/L in the rat. No major health hazards are known.

Potential Health Effects

See section 11 for Chronic exposure studies.

Inhalation
Short term exposure: Available data indicates that this product is not harmful. Product is unlikely to cause any discomfort or irritation.

Skin Contact:
Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

Eye Contact:

Short term exposure: Available data shows that this product is not harmful. However product may be mildly irritating to eyes, but is unlikely to cause anything more than mild discomfort which should disappear once product is removed.

Ingestion:

Short term exposure: Available data shows that this product is not harmful. 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.

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: 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.
Ingestion: First aid is not generally required. If in doubt, contact a 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: Preferred extinguishing media are 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:	Will not burn until water component is driven off.
Upper Flammability Limit:	Does not burn.
Lower Flammability Limit:	Does not burn.
Autoignition temperature:	Does not burn.
Flammability Class:	Does not burn.

Section 6 – Accidental Release Measures

Accidental release: Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. No special recommendations for clothing materials. 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. 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: Make sure that containers of this product are kept tightly closed. Make sure that the product does not come into contact with substances listed under "Materials to avoid" 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**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure Limits **TWA (mg/m^3)** **STEL (mg/m^3)**

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

The ADI for Iprodione is set at 0.04mg/kg/day. The corresponding NOEL is set at 4mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2002.

Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts 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 handling this product.
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 liquid.
Odour:	Mild odour.
Boiling Point:	Approximately 100°C at 100kPa.
Freezing/Melting Point:	Approximately 0°C.
Volatiles:	Water component.
Vapour Pressure:	2.37 kPa at 20°C (water vapour pressure).
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	Completely soluble in water.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water distribution:	No data
Autoignition temp:	Does not burn.

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.
Incompatibilities: strong acids, strong bases, strong oxidising agents.
Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, 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.

Section 11 – Toxicological Information

Toxicity: **Acute toxicity:** Iprodione is slightly toxic by ingestion, with reported oral LD_{50} values of 3500 mg/kg in rats, 4000 mg/kg in mice, and greater than 4400 mg/kg in rabbits. No dermal toxic effects were noted at doses of over

2500 mg/kg in the rat and at 1000 mg/kg in the rabbit, indicating slight toxicity by this route. Inhalation toxicity is also low for this compound. The 4-hour inhalation LC_{50} for Iprodione is greater than 3.3 mg/L in the rat.

Chronic toxicity: Rats given dietary doses of approximately 60 mg/kg/day over 1 1/2 years suffered no ill effects. Dogs fed approximately 60 mg/kg/day over 18 months also showed no adverse effects. In another study, beagle dogs fed dietary doses of about 2.3 mg/kg/day for 1 year showed liver and kidney weight increases. At doses starting at about 1.5 mg/kg/day, the dogs had decreased prostrate weights and changes within red blood cells (damage to the hemoglobin molecules). Females also had slight decreases in uterus weights. No effects were noted below 0.5 mg/kg/day dose.

Reproductive effects: Female rats were fed Iprodione over three successive generations showed no effects on reproduction at doses at and below 1.25 mg/kg/day. Reductions in fertility and fecundity were not observed at doses of 5 mg/kg/day. Based on these data, Iprodione is not likely to cause reproductive effects.

Teratogenic effects: There were no developmental effects noted in the offspring of pregnant rats receiving dietary doses of about 5.4 mg/kg/day. However, the dose rate of about 120 mg/kg/day elicited unspecified developmental toxicity in the rats. Rabbits did not develop any dose-related toxicity at or below 2.7 mg/kg/day of Iprodione, but did develop toxicity at 6 mg/kg/day. It appears that Iprodione is not likely to cause teratogenic effects at expected exposure levels.

Mutagenic effects: No data are currently available.

Carcinogenic effects: A 2-year feeding experiment with rats showed no increases in tumor formation or tumor precursors (neoplastic foci) at dietary doses of about 2.5 mg/kg/day. An 18-month study in mice showed cancer related effects at doses up to approximately 22 mg/kg/day. Current evidence on the carcinogenicity of Iprodione is inconclusive.

Organ toxicity: Target organs identified in animal studies include the reproductive system (prostate gland and uterus), liver, and kidneys.

Fate in humans and animals: No data are currently available.

Section 12 – Ecological Information

Effects on birds: Iprodione is slightly toxic to wildfowl. The reported acute oral LD_{50} in bobwhite quail is 930 mg/kg.

Effects on aquatic organisms: Iprodione is moderately toxic to fish species, with LC_{50} values ranging from 2.25 mg/L in the sunfish to 6.7 mg/L in the rainbow trout. Reported bioconcentration factors of 50 to 360 in carp and other fish species indicate low bioconcentration potential.

Effects on other organisms: Iprodione is nontoxic to bees.

Environmental Fate:

Breakdown in soil and groundwater: The half-life of Iprodione in soil ranges from less than 7 to greater than 60 days. A representative half-life in most soils is estimated to be 14 days. Degradation rates vary with soil acidity, soil clay content, and history of the soil fungicide treatment. In soils that had been treated consistently with Iprodione for 10 or more years, slow or little breakdown of the compound vinclozolin occurred, while in soil that had been treated with vinclozolin rapid degradation of vinclozolin and Iprodione occurred. Iprodione is slightly soluble and moderately to well sorbed by most soils. These properties, combined with its short field half-life indicate a low potential to contaminate groundwater.

Breakdown in water: The compound breaks down very rapidly in water under aerobic conditions; the rate is lesser, but still rapid under near-anaerobic conditions. The compound is readily degraded by UV light.

Breakdown in vegetation: The compound is rapidly broken down in the plant after is taken up by the roots and translocated. The main metabolite in plants is 3,5-dichloroaniline. Iprodione alone or in combinations with several other fungicides was not toxic to plants (phytotoxic).

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.

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:

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

Contact Points:

Call Farmoz on (02)9363 3611 **Fax: (02)9363 5977 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)

Please read all labels carefully before using product.

http://www.kilford.com.au/ Phone (02)9516 2079