

**Section 1 - Identification of The Material and Supplier**

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**Chemical nature:** Fipronil is a phenylpyrazole derived insecticide.

**Trade Name:** **Turf Culture Monarch Insecticide**

**APVMA Approval No:** 66187

**Product Use:** Insecticide for the control of various pests of turf as per the Directions for Use on the product label.

**Creation Date:** **July, 2011**

**This version issued:** **May, 2016** and is valid for 5 years from this date.

**Section 2 - Hazards Identification**

**Statement of Hazardous Nature**

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

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

**Risk Phrases:** R43, R50, R20/21/22, R48/25. May cause sensitisation by skin contact. Very toxic to aquatic organisms. Harmful by inhalation, in contact with skin, and if swallowed. Toxic: danger of serious damage to health by prolonged exposure if swallowed.

**Safety Phrases:** S20, S23, S28, S38, S60, S61, S24/25, S36/37/39. When using, do not eat or drink. Do not breathe vapours or mists. After contact with skin, wash immediately with plenty of soap and water. In case of insufficient ventilation, wear suitable respiratory equipment. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

**SUSMP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated



**GHS Signal word: WARNING.**

**HAZARD STATEMENT:**

- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H317: May cause an allergic skin reaction.
- H332: Harmful if inhaled.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.

**PREVENTION**

- P102: Keep out of reach of children.
- P261: Avoid breathing fumes, mists, vapours or spray.
- P262: Do not get in eyes, on skin, or on clothing.
- P264: Wash contacted areas thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well ventilated area.
- 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**

- P337: If eye irritation persists: seek medical attention.
- P363: Wash contaminated clothing before reuse.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+P313: If skin irritation or rash occurs: Get medical advice.

P370+P378: Not combustible. Use extinguishing media suited to burning materials.

**STORAGE**

P410: Protect from sunlight.

P403+P235: Store in a well-ventilated place. Keep cool.

**DISPOSAL**

P501: If product can not be recycled, consider controlled incineration, or contact a specialist waste disposal company (see Section 13 of this SDS).

### Emergency Overview

**Physical Description & Colour:** Off-white to light brown suspension.

**Odour:** No data.

**Major Health Hazards:** harmful by inhalation, in contact with skin, and if swallowed, possible skin sensitiser.

### Potential Health Effects

**Persons sensitised to Fipronil should avoid contact with this product.**

**Inhalation:**

**Short Term Exposure:** Available data shows that this product is harmful, but symptoms are not available. In addition product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

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

**Skin Contact:**

**Short Term Exposure:** Available data shows that this product is harmful, but symptoms are not available. However product is unlikely to cause any discomfort in normal use.

**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. Available data shows that this product is harmful, but symptoms are not available. 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:** No significant ingredient is classified as carcinogenic by IARC.

### Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Fipronil	120068-37-3	125g/L	not set	not set
Other non hazardous ingredients	various	10-30	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.

### 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.

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**Inhalation:** If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

**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.

**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 no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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

Fire decomposition products from this product are likely to be harmful if inhaled. Take suitable protective measures.

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

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. Cool closed, undamaged containers exposed to fire with water spray.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

## 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 eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

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. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. 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 SDS 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 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:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. 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.

## SAFETY DATA SHEET

## 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/m<sup>3</sup>)**                      **STEL (mg/m<sup>3</sup>)**

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

The ADI for Fipronil is set at 0.0002mg/kg/day. The corresponding NOEL is set at 0.02mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2013.

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: 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.

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

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Off-white to light brown suspension.
<b>Odour:</b>	No data.
<b>Boiling Point:</b>	Approximately 100°C at 100kPa.
<b>Freezing/Melting Point:</b>	Below 0°C.
<b>Volatiles:</b>	Water component.
<b>Vapour Pressure:</b>	2.37 kPa at 20°C (water vapour pressure).
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.06
<b>Water Solubility:</b>	Completely soluble in water.
<b>pH:</b>	7.3 (1% in water)
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Viscosity:</b>	779 cP (After 1 min at 20°C, spindle 2, 20 RPM)
<b>Autoignition temp:</b>	Not applicable - 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:** 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:** Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Combustion forms carbon dioxide, and if incomplete, carbon monoxide. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. May form hydrogen chloride gas, other compounds of chlorine. May form hydrogen fluoride gas and other compounds of fluorine. 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.

## SAFETY DATA SHEET

## Section 11 - Toxicological Information

**Toxicity:** When Fipronil was administered as a single dose to mice or rats orally or by inhalation, deaths and signs of toxicity occurred at all or most doses in animals of each sex. Most or all of the deaths occurred within several days of treatment.

There is no data to hand indicating any particular target organs.

Fipronil is Classed by SWA as a potential sensitiser by skin contact.

## Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Fipronil	>=10%Conc<25%: T; R48/25; R20/21/22
In a toxicity study involving rats, the clinical signs of toxicity of Fipronil did not reach their peak until two days after treatment in some animals, and deaths did not occur until four days after treatment. Some signs of toxicity and body-weight loss were still evident when the observation period ended at day 7 after treatment.	
In rabbits, skin contact Fipronil induced deaths and one or more clinical signs of toxicity including convulsions, sluggishness, salivation, spasms, tremors, hyperactivity, diarrhoea, emaciation, and perioral and perinasal red discolouration in all groups except that at the lowest dose (100 mg/kg).	
Clinical signs of oral toxicity included tremors and convulsions of various types, effects on activity or gait, hunched posture, wetness in various body areas, and seizures.	
LD <sub>50</sub> (Oral), Rat 92mg/kg	LD <sub>50</sub> (Oral), Mouse 91mg/kg
LD <sub>50</sub> (Dermal), Rat >2000mg/kg	LD <sub>50</sub> (Dermal), Rabbit 445mg/kg
LC <sub>50</sub> (Inhal, 4hr), Mouse 0.36-0.42mg/kg	

## Section 12 - Ecological Information

This product is very toxic to aquatic organisms. This product is not readily biodegradable. However, likely to degrade slowly in the soil or water and not cause long term problems.

Fish: LC<sub>50</sub> bluegill sunfish (*Lepomis macrochirus*): 0.085mg/L

LC<sub>50</sub> rainbow trout: 0.248mg/L

LC<sub>50</sub> carp: 0.430mg/L

LC<sub>50</sub> Daphnia: 0.19mg/L

In laboratory studies, Fipronil has a half-life of 122-128 days in oxygenated sandy loam. In field studies, dissipation half-life on soil surfaces ranged from 0.7 to 1.7 months. Half-life of Fipronil applied by soil incorporation ranged from 3 to 7.3 months. Residues remain mainly in the upper 30cm of soil. Fipronil has low soil mobility - it binds to the soil and has little potential for groundwater contamination.

Fipronil degrades slowly in water and sediment that lack oxygen, with a half-life ranging from 116 to 130 days.

Fipronil is stable to breakdown by water at mildly acidic to neutral pH values.

When exposed to light, Fipronil has a half-life of 3.6 hours in water, and 34 days in loamy soil.

Toxic to bees. Toxic to aquatic organisms.

## Section 13 - Disposal Considerations

**Disposal:** 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.

Do NOT dispose of undiluted chemicals onsite. If recycling replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should NOT be burnt.

## Section 14 - Transport Information

**ADG Code:** 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 ingredient: Fipronil, is mentioned in the SUSMP.

## SAFETY DATA SHEET



## Section 16 - Other Information

**This SDS 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 (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</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>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

THIS SDS 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 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)

### SAFETY DATA SHEET