

Section 1 - Identification of Chemical Product and Company

Statement of Hazardous Nature

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

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

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Substance: Propiconazole is an azole derivative.
Trade Name: Farnoz Aurora Turf Systemic Fungicide
Product Use: Agricultural fungicide for use as specified on product label.
Creation Date: June, 2002
Revision Date: June, 2002

Section 2 – Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m ³)	STEL (mg/m ³)
Propiconazole	60207-90-1	25	not set	not set
Ethoxylated castor oil	61791-12-6	10-20	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: R36. Irritating to eyes.

Safety Phrases: S25. Avoid contact with eyes.

SUSDP Classification: S6

ADG Classification: None allocated. Not a Dangerous Good.

UN Number: None allocated

Emergency Overview

Physical Description & colour: Clear amber liquid.

Odour: Characteristic odour.

Major Health Hazards: No major health hazards are known.

Potential Health Effects

Inhalation

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

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

Skin Contact:

Short term exposure: This 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 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.

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

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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.

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

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: 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. 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.

Fire Fighting: When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus.

Flash point: Not flammable.

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. 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 class of poison. 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/m³)** **STEL (mg/m³)**

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

The ADI for Propiconazole 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, January 2001.

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: Protective glasses or goggles must be worn when this product is being used. Failure to protect your eyes may lead to severe harm to eyes or to general health. Emergency eye wash facilities must also be available in an area close to where the product is being used.

Skin Protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types.

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

Respirator: If there is a significant chance that vapours or mists are likely to build up in the area where this product is being used, we recommend that you use a respirator. It should be fitted with a suitable cartridge. Otherwise, not normally necessary.

Eyebaths or eyewash stations should be provided near to where this product is being used.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Clear amber liquid.
Odour:	Characteristic 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:	0.99-1.00 at 20°C
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: This product should be kept in a cool place, preferably below 30°C.

Incompatibilities: 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

Local Effects:

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

Classification of Hazardous Ingredients

For Propiconazole:

LD₅₀ Oral (Rat) 1517mg/kg

LD₅₀ Oral (Mouse) 1419mg/kg

LD₅₀ Dermal (Rat) >4000mg/kg

LD₅₀ Dermal (Rabbit) >6000mg/kg

LC₅₀ Inhal (Rat, 4hr) >5800mg/m³

Section 12 – Ecological Information

Birds: LD₅₀ Japanese quail: 2223mg/kg

LD₅₀ Bobwhite quail: >2825mg/kg

LD₅₀ mallard ducks: >2510mg/kg

Fish: LC₅₀ carp: 6.8mg/L

LC₅₀ rainbow trout: 5.3mg/L

LC₅₀ golden orfe: 5.1mg/L

Algae: EC₅₀ 0.02-13.6mg/L

Bees: not toxic to bees

Daphnia: EC₅₀ 4.8mg/L

After oral administration to the rat, propiconazole is rapidly absorbed and also rapidly and almost completely eliminated with urine and faeces. Residues in tissues were generally low and there was no evidence for accumulation or retention of propiconazole or its metabolites. The major sites of enzymatic attack are the propyl side-chain and the cleavage of the dioxolane ring, together with some attack at the 2,4-dichlorophenyl and 1,2,4-triazole rings. In the mouse, the major metabolic pathway is via cleavage of the dioxolane ring.

Plants: Degradation proceeds through hydroxylation of the n-propyl side-chain and deketalisation of the dioloxane ring. After cleavage of triazole, triazole-alanine is formed as the main metabolite. Metabolites are conjugated mostly as glucosides.

The main degradation pathways are hydroxylation of the propyl side-chain and the dioxolane ring, and finally formation of the 1,2,4-triazole. K_{oc (ads)} 950ml/g, immobile in soil.

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

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

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UN Number

United Nations Number

Contact Points:

Call Farnoz 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)**

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. Farnoz 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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