



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

1/10  
Revision Date: 04.09.2017  
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### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Banol® Turf and Ornamental Systemic Fungicide  
**Product code (UVP)** 05933765

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use** Fungicide

#### 1.3 Details of the supplier of the safety data sheet

**Supplier** Bayer Cropscience Pty Ltd  
ABN 87 000 226 022  
Level 1, 8 Redfern Road  
3123 Hawthorn East  
Victoria  
Australia

**Telephone** (03) 9248 6888

**Telefax** (03) 9248 6800

**Responsible Department** 1800 804 479 Technical Information Service

**Website** [www.environmentalscience.bayer.com.au](http://www.environmentalscience.bayer.com.au)

#### 1.4 Emergency telephone no.

**Emergency telephone no.** 1800 033 111 IXOM Operations Pty Ltd

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification in accordance with Australian GHS Regulation

Skin sensitisation: Category 1  
H317 May cause an allergic skin reaction.

#### 2.2 Label elements

Hazard label for supply/use required.

##### Hazardous components which must be listed on the label:

Propamocarb hydrochloride

**Signal word:** Warning

##### Hazard statements

H317 May cause an allergic skin reaction.

##### Precautionary statements

P261 Avoid breathing mist and spray.  
P280 Wear protective gloves.  
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P501 Dispose of contents/container in accordance with local regulation.



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

2/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

### 2.3 Other hazards

No other hazards known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature

Propamocarb hydrochloride 722 g/l (600g/l propamocarb)  
Soluble concentrate (SL)

Chemical name	CAS-No.	Concentration [%]
Propamocarb hydrochloride	25606-41-1	66.50
Other ingredients (non-hazardous) to 100%		

## SECTION 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.**

### 4.1 Description of first aid measures

<b>General advice</b>	Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move the victim to fresh air and keep at rest. Keep patient warm and at rest. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off with soap and water. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Call a physician or poison control center immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

**Symptoms** The following symptoms may occur: Lethargy, Ataxia, Spasm

### 4.3 Indication of any immediate medical attention and special treatment needed

**Risks** This product, although being a carbamate, is NOT a cholinesterase inhibitor.

**Treatment** Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.  
Contraindication: atropine.



**Banol® Turf and Ornamental Systemic Fungicide**

Version 1 / AUS  
10200000806

3/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

**SECTION 5. FIRE FIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released:., Carbon monoxide (CO), Hydrogen chloride (HCl), Nitrogen oxides (NOx)

**5.3 Advice for firefighters**

**Special protective equipment for firefighters** Wear self-contained breathing apparatus and protective suit.

**Further information** Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Avoid contact with spilled product or contaminated surfaces. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code**Not applicable

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Precautions** Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Keep people away from and upwind of spill/leak. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**6.4 Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

**SECTION 7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**Advice on protection** No special precautions required.



**Banol® Turf and Ornamental Systemic Fungicide**

4/10

Version 1 / AUS  
10200000806

Revision Date: 04.09.2017  
Print Date: 07.09.2017

**against fire and explosion**

**Hygiene measures** Avoid contact with skin, eyes and clothing. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Keep out of the reach of children. Store in original container. Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from frost.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Propamocarb hydrochloride	25606-41-1	1.1 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**Additional advice**  
Not established.

**8.2 Exposure controls**

**Respiratory protection** Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

**Hand protection** Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.  
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.  
Material Nitrile rubber  
Rate of permeability > 480 min  
Glove thickness > 0.4 mm  
Protective index Class 6  
Directive Protective gloves complying with EN 374.

**Eye protection** Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection** Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit.



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

5/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

**General protective measures**      Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

### Engineering Controls

**Advice on safe handling**      Use only in area provided with appropriate exhaust ventilation.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	Liquid
<b>Colour</b>	colourless to light yellow
<b>Odour</b>	slightly perceptible
<b>pH</b>	2.0 - 4.0 at 100 % (23 °C)
<b>Boiling point/boiling range</b>	ca. 100 °C
<b>Flash point</b>	>100 °C No flash point - Determination conducted up to the boiling point.
<b>Auto-ignition temperature</b>	The product is not self-ignitable.
<b>Density</b>	ca. 1.09 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	completely miscible
<b>Partition coefficient: n-octanol/water</b>	Propamocarb hydrochloride: log Pow: -1.2
<b>Viscosity, dynamic</b>	34.23 mPa.s at 20 °C

**9.2 Other information**      Further safety related physical-chemical data are not known.

## SECTION 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

**Thermal decomposition**      Stable under normal conditions.

**10.2 Chemical stability**      Stable under normal conditions.

**10.3 Possibility of hazardous reactions**      No hazardous reactions when stored and handled according to prescribed instructions.



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

6/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

- 10.4 Conditions to avoid** Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** Store only in the original container.
- 10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>	LD50 (Rat) > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 4.95 mg/l Exposure time: 4 h
<b>Acute dermal toxicity</b>	LD50 (Rat) > 5,000 mg/kg
<b>Skin irritation</b>	No skin irritation (Rabbit)
<b>Eye irritation</b>	No eye irritation (Rabbit)
<b>Sensitisation</b>	Sensitising (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

#### Assessment mutagenicity

Propamocarb hydrochloride was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

Propamocarb hydrochloride was not carcinogenic in lifetime feeding studies in rats and mice.

#### Assessment toxicity to reproduction

Propamocarb hydrochloride did not cause reproductive toxicity in a two-generation study in rats.

#### Assessment developmental toxicity

Propamocarb hydrochloride caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Propamocarb hydrochloride are related to maternal toxicity.

#### Assessment STOT Specific target organ toxicity – repeated exposure

Propamocarb hydrochloride did not cause specific target organ toxicity in experimental animal studies.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Information on likely routes of exposure

May be harmful if inhaled.  
May cause skin irritation., May cause sensitisation by skin contact.  
May cause eye irritation.  
May be harmful if swallowed.

#### Early onset symptoms related to exposure

Refer to Section 4

#### Delayed health effects from exposure

Refer to Section 11



**Banol® Turf and Ornamental Systemic Fungicide**

Version 1 / AUS  
10200000806

7/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

**Exposure levels and health effects**

Refer to Section 4

**Interactive effects**

Not known

**When specific chemical data is not available**

Not applicable

**Mixture of chemicals**

Refer to Section 2.1

**Further information**

No further toxicological information is available.

<b>SECTION 12. ECOLOGICAL INFORMATION</b>
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**12.1 Toxicity**

**Toxicity to fish**

LC50 (*Lepomis macrochirus* (Bluegill sunfish)) > 92 mg/l  
static test; Exposure time: 96 h  
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

**Chronic toxicity to fish**

*Oncorhynchus mykiss* (rainbow trout)  
NOEC: > 100 mg/l  
Exposure time: 21 d

**Toxicity to aquatic invertebrates**

EC50 (*Daphnia magna* (Water flea)) > 106 mg/l  
static test; Exposure time: 48 h  
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

**Toxicity to aquatic plants**

IC50 (*Raphidocelis subcapitata* (freshwater green alga)) > 85 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

**Toxicity to other organisms**

LD50 (*Anas platyrhynchos* (Mallard duck)) > 1,842 mg/kg  
The value mentioned relates to the active ingredient propamocarb-hydrochloride.  
  
LD50 (*Colinus virginianus* (Bobwhite quail)) > 1,842 mg/kg  
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

**12.2 Persistence and degradability**

**Biodegradability**

Propamocarb hydrochloride:  
rapidly biodegradable

**Koc**

Propamocarb hydrochloride: Koc: 719

**12.3 Bioaccumulative potential**

**Bioaccumulation**

Propamocarb hydrochloride:



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

8/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

Does not bioaccumulate.

### 12.4 Mobility in soil

**Mobility in soil** Propamocarb hydrochloride: Slightly mobile in soils

### 12.5 Other adverse effects

**Additional ecological information** No other effects to be mentioned.

## SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. 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.

Do not reuse container for any other purpose.

## SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations not classified as dangerous goods.

## SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994  
Australian Pesticides and Veterinary Medicines Authority approval number: 62826

### SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

## SECTION 16. OTHER INFORMATION

**Trademark information** Banol® is a registered trademark of the Bayer Group.

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 should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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.

### Abbreviations and acronyms





## Banol® Turf and Ornamental Systemic Fungicide

9/10

Version 1 / AUS  
10200000806

Revision Date: 04.09.2017  
Print Date: 07.09.2017

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

# Safety Data Sheet



## Banol® Turf and Ornamental Systemic Fungicide

Version 1 / AUS  
10200000806

10/10  
Revision Date: 04.09.2017  
Print Date: 07.09.2017

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END OF SDS