

Safety Data Sheet



Merit® Turf and Ornamental Insecticide

Version 1 / AUS
102000026844

1/11
Revision Date: 24.06.2016
Print Date: 24.06.2016

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name Merit® Turf and Ornamental Insecticide
Product code (UVP) 80481853

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

Use Insecticide

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

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

Australia. GHS Hazardous Chemical Information

Acute toxicity: Category 4

H302 Harmful if swallowed.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazardous components which must be listed on the label:

Imidacloprid

Signal word: Warning

Hazard statements

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements



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- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
- P330 Rinse mouth.
- P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Imidacloprid 200 g/l
Chemical nature Suspension concentrate (=flowable concentrate)(SC)

Chemical Name	CAS-No.	Concentration [%]
Imidacloprid	138261-41-3	18.30
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	<= 0.001
Glycerine	56-81-5	10.00
1,2-Propanediol	57-55-6	>= 1.00 - <= 5.00
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

- Inhalation** Move to fresh air. When symptoms persist or in all cases of doubt seek medical advice.
- Skin contact** Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
- Eye contact** 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.
- Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms** Dizziness, Nausea, Abdominal pain
Local: No symptoms known or expected., Systemic: Apathy, Respiratory disorder, Trembling



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4.3 Indication of any immediate medical attention and special treatment needed

Risks	This product contains a nicotinoid.
Treatment	Treat symptomatically. Monitor: blood (Hb, RBC, WBC). Carefully monitor the respiratory functions. Oxygen or artificial respiration if needed. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote. Contraindications: alcohol.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO ₂), Sand
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5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO _x)
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5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
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Wear self-contained breathing apparatus and protective suit.

Further information	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
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Evacuate personnel to safe areas. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

Hazchem Code	•3Z
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SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. When dealing with a spillage do not eat, drink or smoke. Keep unauthorized people away.
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6.2 Environmental precautions	Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.
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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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

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 against fire and explosion No special precautions required.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt). After each day's use, wash gloves, face shield or goggles and contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Store in original container.

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
Glycerine (Inhalable mist.)	56-81-5	10 mg/m ³ (TWA)	12 2011	AU NOEL
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m ³ /150 ppm (TWA)	12 2011	AU NOEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	12 2011	AU NOEL

8.2 Exposure controls

Personal protective equipment - End user

Respiratory protection Respiratory protection is not required under anticipated circumstances of exposure.

Hand protection Elbow-length PVC or nitrile gloves



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Eye protection Goggles
Skin and body protection Cotton overall buttoned to the neck and wrist
Washable hat

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

Form suspension
Colour white to light beige
Odour weak, characteristic
pH 7.0 - 8.5 at 100 % (23 °C)
Flash point Not applicable
Auto-ignition temperature 405 °C
Density ca. 1.10 g/cm³ at 20 °C
Water solubility miscible
Partition coefficient: n-octanol/water Imidacloprid: log Pow: 0.57
Viscosity, dynamic 400 - 800 mPaxs at 23 °C Velocity gradient 7.5 /s
Surface tension 48.9 mN/m
Explosivity Not explosive
92/69/EEC, A.14 / OECD 113
9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition 210 °C
Exothermic decomposition.
The value mentioned relates to the active ingredient.

10.2 Chemical stability Stable under recommended storage conditions.

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



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- 10.4 Conditions to avoid** Heat, flames and sparks.
- 10.5 Incompatible materials** Acids, Bases, Strong oxidizing agents
- 10.6 Hazardous decomposition products** Thermal decomposition can lead to release of:
Hydrogen chloride (HCl)
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide
Nitrogen oxides (NO_x)

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- Acute oral toxicity** LD50 (Rat) > 1,218 mg/kg
- Acute inhalation toxicity** LC50 (Rat) > 2.238 mg/l
Exposure time: 4 h
Determined in the form of a respirable aerosol.
Highest attainable concentration.
- Acute dermal toxicity** LD50 (Rat) > 4,000 mg/kg
- Skin irritation** No skin irritation (Rabbit)
- Eye irritation** No eye irritation (Rabbit)
- Sensitisation** Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test

Assessment mutagenicity

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

Assessment developmental toxicity

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

Assessment repeated dose toxicity

Imidacloprid 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.
Irritating to skin., Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.



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Causes eye irritation.
Harmful if swallowed.

Early onset symptoms related to exposure

Refer to Section 4

Delayed health effects from exposure

Refer to Section 11

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

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) > 535 mg/l
Exposure time: 96 h

LC50 (Leuciscus idus (Golden orfe)) 237 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient imidacloprid.

LC50 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient imidacloprid.

LC50 (Cyprinus carpio (Carp)) 280 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient imidacloprid.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) > 535 mg/l
Exposure time: 24 h

EC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l
Exposure time: 24 h
The value mentioned relates to the active ingredient imidacloprid.

EC50 (Hyalella azteca (Scud)) 0.055 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient imidacloprid.

EC50 (Daphnia magna (Water flea)) 85 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient imidacloprid.



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- Toxicity to aquatic plants** IC50 (Desmodesmus subspicatus (green algae)) > 1,000 mg/l
Growth rate; Exposure time: 72 h
EC50 (Raphidocelis subcapitata (freshwater green alga)) > 100 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient imidacloprid.
- Toxicity to bacteria** EC50 (activated sludge) > 10,000 mg/l
The value mentioned relates to the active ingredient imidacloprid.
- Toxicity to other organisms** LD50 (Coturnix japonica (Japanese quail)) 31 mg/kg
The value mentioned relates to the active ingredient imidacloprid.
LD50 (Colinus virginianus (Bobwhite quail)) 152 mg/kg
The value mentioned relates to the active ingredient imidacloprid.
(Apis mellifera (bees))
The value mentioned relates to the active ingredient imidacloprid.
Toxic to bees.

12.2 Persistence and degradability

Biodegradability Imidacloprid:
Not rapidly biodegradable

Koc Imidacloprid: Koc: 225

12.3 Bioaccumulative potential

Bioaccumulation Imidacloprid:
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Imidacloprid: Moderately 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.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None

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Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IMIDACLOPRID SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IMIDACLOPRID SOLUTION)

IATA

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IMIDACLOPRID SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 59696

SUSMP classification (Poison Schedule)

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

SECTION 16. OTHER INFORMATION

Trademark information Merit® 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.



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Abbreviations and acronyms

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 CropScience "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.

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