

MATERIAL SAFETY DATA SHEET

Initiator® Systemic Plant Insecticide and Fertiliser

Date of Issue: April 19th, 2007

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Initiator® Systemic Plant Insecticide and Fertiliser
Other names: None
Product code: 5763478
Chemical group: Guanidine
Recommended use: For use in the improvement of establishment of young eucalypt plantations by providing enhanced growth and extended protection against damage caused by various insect pests.
Formulation: Tablet
Supplier: Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd
ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone: (03) 9248 6888
Facsimile: (03) 9248 6800
Website: www.bayercropscience.com.au
Contact: Technical Manager (03) 9248 6888
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

Hazard designation: Not hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases: Not applicable
Safety phrases: See Sections 4, 5, 6, 7, 8, 9, 13
ADG classification: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSDP classification: Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/kg):
Imidacloprid	[138261-41-3]	200
Other ingredients	(non hazardous)	800

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Initiator® Systemic Plant Insecticide and Fertiliser

Date of Issue: April 19th, 2007

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 Material Safety Data Sheet to a doctor.

- Inhalation:** Presentation as a solid tablet makes inhalation unlikely.
- Skin contact:** If contact occurs with the skin wash area with soap and water.
- Eye contact:** Contact with eyes is unlikely due to tablet formulation. If tablets disintegrate or are crushed, and contact occurs with the fragments, irrigate eyes immediately with copious quantities of water for 15 minutes.
- Ingestion:** Give plenty of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical assistance.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** Symptoms of intoxication that may arise if the product is mishandled include nausea, abdominal pain and diarrhoea. Muscular cramps, apathetic state, depressed muscular tone, respiratory disturbance and trembling are also possible in severe cases of poisoning.
- Medical attention:** Treatment
Basic aid, decontamination, symptomatic treatment.
Note for physicians
Check blood pressure and pulse rate frequently since bradycardia and hypotension are possible. Provide supportive measures for respiratory and cardiac function. Give artificial respiration if signs of paralysis appear. Additional therapeutic measures involve elimination of the substance from the body or acceleration of its excretion (gastro-lavage, saline laxatives). No specific antidote known.
Contraindications: Absorption promoting agents such as alcoholic beverages and milk. Oils and fats are of no special significance due to the low liposolubility of the active ingredient.

5. FIRE FIGHTING MEASURES

- Extinguishing media:** Water spray, carbon dioxide, foam, dry chemical.
- Hazards from combustion products:** In the event of a fire the formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.
- Precautions for fire fighters:** Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Contain fire-fighting water by bunding area with sand or earth to prevent it entering any bodies of water. Dispose of extinguishing agent and spillage safely later. Contamination of water bodies should be avoided.

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Initiator® Systemic Plant Insecticide and Fertiliser

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6. ACCIDENTAL RELEASE MEASURES

Wear suitable protective clothing and boots. Prevent tablets from entering drains, sewers or any body of water. Contain spill using a practical physical method to prevent dispersal of tablets. Fill along with any contaminated material into sealable containers for disposal at an approved local waste disposal site. Clean affected area with an aqueous detergent and a small amount of water. On completion of clean-up remove and wash all protective clothing and equipment with detergent and water. Any heavily contaminated clothing should be placed in a plastic garbage bag and placed in a sealable drum. Do not smoke, eat or drink during clean up operation.

7. HANDLING AND STORAGE

Handling: Keep out of reach of children.

Storage: Store in original container tightly closed in a cool, well ventilated area out of direct sunlight. Do not store near any material intended for consumption by humans or animals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: No exposure standards have been assigned by Worksafe Australia for the active ingredient or the excipients in the formulation.

Engineering controls: Not applicable

Personal Protective Equipment:

Eyes:	Avoid contact with eyes.
Clothing:	Avoid contact with skin. Wear cotton overalls buttoned to the neck and wrist and a washable hat.
Gloves:	Wear waterproof gloves.
Respiratory:	Not applicable
Other:	Do not eat, drink or smoke until after washing. Wash thoroughly after handling. After each day's use wash gloves and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Grey brown tablet
Odour:	Slight characteristic mouldy odour
Vapour pressure:	2×10^{-9} mbar at 20°C (imidacloprid)
Vapour density:	Not available
Boiling point:	Not applicable
Solubility:	Miscible
pH:	6.5 (1% in water)
Flash Point:	No flashpoint up to 100 °C
Flammability (explosive) limits:	Not determined
Attrition resistance	>99% on a 125 microgram sieve
Octanol/water partition coefficient:	<i>Imidacloprid</i> : Log P_{ow} = 0.57 (21° C)
Formulation:	Tablet

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10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	Hazardous polymerization will not occur.
Conditions to avoid:	Extreme heat
Incompatible materials:	Avoid oxidising agents
Hazardous decomposition products:	In the event of fire, the formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	Tablet presentation makes inhalation unlikely.
Skin contact:	Repeated exposure may cause some irritation. Unlikely to be a skin sensitiser.
Eye contact:	Fragments from damaged tablets may cause eye irritation.
Ingestion:	Harmful if swallowed. Symptoms of intoxication that may arise if the product is mishandled include: apathetic state, depressed muscular tone, respiratory disturbance and trembling. Muscular cramps are also possible in severe cases of poisoning.
Other:	None

ANIMAL TOXICITY DATA

For liquid formulation with same concentration of imidacloprid:

Acute:

Oral toxicity:	LD ₅₀ rat: > 2000 mg/kg
Dermal toxicity:	LD ₅₀ rat: > 5000 mg/kg
Inhalation toxicity:	LC ₅₀ (4 h) rat: 6.0 mg/L
Skin irritation:	Not irritating – rabbit
Eye irritation:	Not irritating – rabbit
Sensitisation:	Not available

Chronic:

Animal studies show no evidence of carcinogenic effects and no teratogenic potential.

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12. ECOLOGICAL INFORMATION

Imidacloprid is toxic to certain aquatic species. Dangerous to bees. Do not contaminate ponds, waterways or drains with the product or used containers.

Ecotoxicity:

Imidacloprid:
Fish toxicity:
LC₅₀: 237 mg/L (96 h); golden orfe (*Leuciscus idus melanotis*)
LC₅₀: 211 mg/L (96 h); rainbow trout (*Oncorhynchus mykiss*)
Aquatic invertebrate toxicity:
EC₅₀: 85 mg/L (48 h) *Daphnia magna*
Algae toxicity:
EC₅₀: > 100 mg/L (72 h); green alga (*Pseudokirchneriella subcapitata*)
Bacteria toxicity:
EC₅₀: > 10000 mg/L; activated sludge (OECD 209)
Bird toxicity:
Acute oral LD₅₀: 31 mg/kg; Japanese quail
Acute oral LD₅₀: 152 mg/kg; bobwhite quail

Environmental fate, persistence and degradation: Imidacloprid shows a medium adsorption to soil. Classified as immobile in soil. Not expected to leach.

13. DISPOSAL CONSIDERATIONS

Do not dispose of undiluted chemicals on site. Dispose of at a local authority landfill. If no landfill is available, bury the container 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.

14. TRANSPORT INFORMATION

UN number: Not applicable
Proper shipping name: Not applicable
Class and Subsidiary Risk: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Packing Group: Not applicable
EPG: Not applicable
Hazchem code: Not applicable
Marine pollutant: No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988
Australian Pesticides and Veterinary Medicines Authority Approval Number: 60391

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16. OTHER INFORMATION

Trademark information: Initiator[®] is a Registered Trademark of Bayer.

Preparation information: Replaces October 4th, 2006 edition
Reasons for update: Correction of imidacloprid CAS No.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

This MSDS 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 MSDS 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.

END OF MSDS