

SAFETY DATA SHEET

GUARDIAN® SEED TREATMENT INSECTICIDE



Version 1.14 Revision Date: 25.05.2016 MSDS Number: 000000003157 Country: AU
Language: EN

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GUARDIAN® SEED TREATMENT INSECTICIDE

Product code : 000000003157

Details of the supplier of the safety data sheet

Company: Arysta LifeScience Australia Pty Ltd
c/o Level 3, 70 Hindmarsh Square
Adelaide SA
Australia
5000
Telephone : + 61 8 8112 0900

Prepared by sds.request@arysta.com

Further information for the safety data sheet :
sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone number: +61 2801 44558, ORICA : 1800 033 111 (24 hr Service)
For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor at once.
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide
Seed treatment

Restrictions on use : Agriculture
For professional users only.
APVMA No: 60666

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4


GHS Label element

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Hazard pictograms : 

Signal word : Warning

Hazard statements : H302 Harmful if swallowed.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Hazardous substance
Dangerous goods
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Imidacloprid - 600 g/l

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
Imidacloprid	138261-41-3	>= 30 - < 60
glycerol	56-81-5	>= 10 - < 30
propane-1,2-diol	57-55-6	< 10
5-Chloro-2-methyl-3(2H)isothiazole mixt. with 2-Methyl-3(2H)isothiazolone	55965-84-9	< 10

SECTION 4. FIRST AID MEASURES

General advice : For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor at once.

If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If not breathing, give artificial respiration.
Call a physician or poison control centre immediately.
If breathing is difficult, give oxygen.
Keep respiratory tract clear.

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- In case of skin contact : Wash off with soap and plenty of water.
If symptoms persist, call a physician.
Take off contaminated clothing and wash before reuse.
- In case of eye contact : If eye irritation persists, consult a specialist.
- If swallowed : Rinse mouth with water.
If victim is fully conscious, give a cupful of water.
DO NOT induce vomiting unless directed to do so by a physician or
poison control center.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Do not give milk or alcoholic beverages.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed.
Symptoms may be delayed.
- Notes to physician : The first aid procedure should be established in consultation
with the doctor responsible for industrial medicine.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
Burning produces irritant fumes.
Burning produces noxious and toxic fumes.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
Avoid release to the environment.
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The product should not be allowed to enter drains, water courses or the soil.

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.
No special handling advice required.

Hygiene measures : General industrial hygiene practice.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerol	56-81-5	TWA (Mist)	10 mg/m ³	AU OEL
		Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica		
		TWA	10 mg/m ³	ACGIH
propane-1,2-diol	57-55-6	TWA (particulate)	10 mg/m ³	AU OEL
		TWA (Total (vapour and particles))	150 ppm 474 mg/m ³	AU OEL

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	: liquid, suspension
Colour	: red
Odour	: slight, characteristic
Odour Threshold	: No data available
pH	: 7.2, (25 °C) 6.9, 1 % (25 °C) (as aqueous solution)
Melting point/freezing point	: < 0 °C
Boiling point/boiling range	: ca. 100 °C (1,013 hPa)
Flash point	: > 100 °C
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 23.7 hPa similar to water
Relative vapour density	: No data available
Relative density	: 1.25 (20 °C)
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: log Pow: 0.57 (20 °C) Information taken from reference works and the literature.
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: 1,720 mPa.s (20 °C) 946 mPa.s (40 °C)
Viscosity, kinematic	: No data available
Oxidizing potential	: No information available.

SECTION 10. STABILITY AND REACTIVITY

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Reactivity	: Stable under recommended storage conditions.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: No data available
Hazardous decomposition products	: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: 607.41 mg/kg
Method: Calculation method

Acute toxicity estimate: 966.18 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

glycerol:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 18,700 mg/kg

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat): 20,000 mg/kg

LD50 (Rabbit): 18,500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 20,800 mg/kg

Skin corrosion/irritation

Components:

glycerol:

Species: Rabbit
Exposure time: 24 h
Result: No skin irritation

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Serious eye damage/eye irritation

Components:

glycerol:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

glycerol:

Test Type: Patch Test

Species: Human

Result: Patch test on human volunteers did not demonstrate sensitisation properties.

Chronic toxicity

Germ cell mutagenicity

Components:

glycerol:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Species: Rat (males)
Cell type: Bone marrow
Application Route: Oral
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

glycerol:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

glycerol:

Reproductive toxicity - Assessment : No toxicity to reproduction
No effects on or via lactation

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STOT - repeated exposure

Components:

glycerol:

Exposure routes: Oral

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Imidacloprid:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 211 mg/l
Exposure time: 96 h

Toxicity to terrestrial organisms : LC50 (Colinus virginianus (Bobwhite quail)): 1,500 ppm

LC50 (Anas platyrhynchos (Mallard duck)): 4,700 ppm

Remarks: Highly toxic.

glycerol:

Toxicity to fish : LC50 (Carassius auratus (goldfish)): > 5,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): > 5,000 mg/l
Exposure time: 48 h

propane-1,2-diol:

Toxicity to fish : LC50 (Fish): > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): > 100 mg/l

Toxicity to algae : ErC50 (Chlamydomonas reinhardtii (green algae)): > 100 mg/l

5-Chloro-2-methyl-3(2H)isothiazole mixt. with 2-Methyl-3(2H)isothiazolone:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.098 mg/l
Exposure time: 28 d

EC50 (Oncorhynchus mykiss (rainbow trout)): 0.22 mg/l
Exposure time: 96 h

EC50 (Lepomis macrochirus (Bluegill sunfish)): 0.3 mg/l

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Exposure time: 96 h
Test Type: flow-through test

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): 0.004 mg/l
Exposure time: 21 d

EC50 (Daphnia magna (Water flea)): 0.1 mg/l
Exposure time: 48 h
Test Type: flow-through test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (algae)): 0.048 mg/l
Exposure time: 72 h
Test Type: static test

EC50 (Lemna gibba (gibbous duckweed)): 4.5 mg/l
Exposure time: 14 d
Test Type: static test

Toxicity to bacteria : EC20 (activated sludge): 0.97 mg/l
Exposure time: 3 h

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

glycerol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable
Biodegradation: 92 %
Exposure time: 30 d

propane-1,2-diol:

BOD/COD : BOD: .86 (BOD5)COD: 1.585

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

glycerol:

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Remarks: Bioaccumulation is unlikely.

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Partition coefficient: n-octanol/water : log Pow: -2.6
Method: calculated

propane-1,2-diol:
Partition coefficient: n-octanol/water : log Pow: -1

Mobility in soil

Product:

Mobility : Remarks: No data available

Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of wastes in an approved waste disposal facility.
The product should not be allowed to enter drains, water courses or the soil.
In accordance with local and national regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Imidacloprid)

Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3082

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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid)

Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imidacloprid)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imidacloprid)

Class : 9
Packing group : III
Labels : 9
Remarks : SP No. AU01 Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;
(a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or
(b) IBCs.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

APVMA Product Number: 60666
Standard for the Uniform : Schedule 6
Scheduling of Medicines and
Poisons

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Prohibition/Licensing Requirements

: There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TDG - Transportation of Dangerous Goods; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Date format : dd.mm.yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Carechem24 International Worldwide Coverage

Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 0800 100 7479
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Emergency Phone Number	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	South Africa	+27 21 300 2732
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States of America and Canada	+1866 928 0789 +1 215 207 0061
<u>Latin America:</u>	Brazil	+55 11 3197 5891
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670