

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Gaucho® 600 Flowable Seed Dressing Insecticide

Other names None

Product code 4953311 (20 L), 4953303 (175 L), 6528805 (1000 L)

Chemical group Chloronicotinyl

Recommended use Agricultural insecticide used as a seed treatment

Formulation Flowable concentrate for seed treatment (FS)

Supplier 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 Development Manager (03) 9248 6888

Emergency Telephone Number 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW HAZARDOUS SUBSTANCE (see Risk phrases below) – DANGEROUS GOOD

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)

Risk phrases R22 – Harmful if swallowed.
R43 – May cause sensitisation by skin contact.

Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13

ADG classification Classified as a “Dangerous good” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail:
PESTICIDE, LIQUID, TOXIC, N.O.S. (contains imidacloprid), Division 6.1, UN 2902, Packing Group III.

SUSDP classification Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Imidacloprid	[138261-41-3]	600
Glycerin	[56-81-5]	124
Propane-1,2-diol	[57-55-6]	7 to 17
Isothialozone	[55965-84-9]	~ 0.02
Other ingredients, including emulsifiers, stabilisers and water	Non-hazardous	~ 499

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

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 the doctor.

Inhalation	If inhaled, remove to fresh air and keep warm and at rest. Seek medical advice if at all worried.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical advice if at all worried.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes. Obtain medical advice.
Ingestion	Obtain immediate medical advice as above. Give plenty of water to drink. Never give anything by mouth to an unconscious person.
First Aid Facilities	Provide washing facilities in the workplace.
Medical attention	<p><u>Information for the physician:</u> The active ingredient, imidacloprid belongs to the following chemical group: chloronicotinyl or neonicotinoid Therapeutic measures: Basic aid, decontamination, symptomatic treatment.</p> <p><u>Symptoms</u> <i>Local:</i> None expected. <i>Systemic:</i> Apathetic state, depressed muscular tone, respiratory disturbances and trembling. Muscular cramps are also possible in severe cases of poisoning.</p> <p><u>Treatment</u> <i>Local:</i> See First Aid Measures above. <i>Systemic:</i> Symptomatic (nicotine-like effects). Check blood pressure and pulse rate frequently, as bradycardia and hypotonia are possible. Provide supportive measures for respiratory function and cardiac action. Give artificial respiration if signs of paralysis appear. Additional therapeutic measures involve elimination of the substance from the body or acceleration of its excretion (gastrolavage, saline laxatives). <i>Antidote:</i> None known. <i>Contraindications:</i> Absorption promoting agents such as alcoholic beverages and milk. Oils and fats are of no particular use, as the active ingredient has low liposolubility.</p>

5. FIRE FIGHTING MEASURES

Extinguishing media	Sprayed water jet, foam, extinguishing powder, carbon dioxide, sand.
Hazards from combustion products	In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.
Precautions for fire fighters	Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later. Do not release contaminated water into the environment.

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with the spilled material or contaminated surfaces. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8 - PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Clean floor and any contaminated items with a damp cloth and place the cloth in the disposal drum afterwards. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

7. HANDLING AND STORAGE

Handling Keep out of reach of children. Will irritate the eyes and skin. Avoid contact with eyes and skin. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Storage Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. When treated seed is stored it should be kept apart from other grain and the bags or other containers should be clearly marked to indicate the contents have been treated with this product. Do NOT allow seed treated with this product to contaminate seed intended for human or animal consumption. Bags that have held treated seed are not to be used for any other purpose. If the seed is not used immediately after treatment it should be stored in a dry, well-ventilated place.

Flammability Not flammable – water based product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards NOHSC exposure standard for propane-1,2-diol (particulate only): TWA 10 mg/m³
NOHSC exposure standard for propane-1,2-diol total (vapour+particulate) 474 mg/m³ (150ppm)
NOHSC exposure standard for glycerin mist: TWA 10 mg/m³

Definition:

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Biological limit values None allocated

Engineering controls Control process conditions to avoid contact. Use in a well-ventilated area only.

Personal Protective Equipment

- Wear goggles if exposure is likely.
- Wear cotton overalls buttoned to the neck and wrist and a washable hat if skin exposure is likely.
- Wear elbow-length PVC gloves.
- Wear a disposable mask if inhalation is possible.

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige liquid suspension
Odour:	Slight characteristic
pH:	5.0 – 9.0
Vapour pressure:	4×10^{-7} mPa at 20° C (imidacloprid)
Vapour density:	Not available
Boiling point:	Not available
Freezing/melting point:	Not available
Solubility:	Miscible with water
Specific Gravity:	1.24 at 20° C
Flash Point:	No flash point up to 100° C
Flammability (explosive) limits:	Not applicable
Auto-ignition temperature:	Not available
Partition coefficient (octanol/water):	<i>Imidacloprid</i> : Log P_{ow} = 0.57 (21° C)

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Avoid extreme heat.
Incompatible materials	Avoid strong oxidising agents.
Hazardous decomposition products	None under normal conditions. In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	May be harmful if inhaled.
Skin contact	Irritating to skin. Repeated skin exposure may cause allergic disorders.
Eye contact	Irritating to eyes.
Ingestion	Harmful if swallowed. Symptoms of poisoning include: Apathetic state, depressed muscular tone, respiratory disturbances and trembling. Muscular cramps are also possible in severe cases of poisoning.

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

11. TOXICOLOGICAL INFORMATION - continued

ANIMAL TOXICITY DATA –SIMILAR FORMULATION

Acute:

Oral toxicity	LD ₅₀ rat: > 200 to < 2000 mg/kg
Dermal toxicity	LD ₅₀ rat: > 4000 mg/kg
Inhalation toxicity	LC ₅₀ rat: > 1.86 mg/L aerosol (4 hour) (highest technically producible concentration)
Skin irritation	Not irritating (rabbit)
Mucous membrane irritation	Not irritating (rabbit)
Sensitisation	Sensitising (guinea pig)

Chronic:

Animal studies with imidacloprid showed no evidence of oncogenic effects, no evidence of carcinogenic effects and no teratogenic potential. Imidacloprid is not mutagenic.

12. ECOLOGICAL INFORMATION

Imidacloprid is toxic to certain aquatic species. Dangerous to bees. Toxic to birds. DO NOT contaminate streams, rivers or waterways with Gaucho, the used containers, or bags that have held treated seed.

Do NOT allow seed treated with this product to be used for or contaminate seed intended for animal consumption or poultry feed. Do NOT feed treated seed or otherwise expose to wild or domestic birds. Any spillages of treated seed, however minor, must be cleaned up immediately, preferably by recovery and re-use. If disposal is required, ensure treated seeds are thoroughly buried and not accessible to birds and other wildlife.

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*)

LC₅₀: 280 mg/L (96 h); carp (*Cyprinus carpio*)

Aquatic invertebrate toxicity:

EC₅₀: 0.055 mg/L (48 h); *Hyalella azteca*

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, degradability and mobility

Imidacloprid shows a medium adsorption to soil. Classified as immobile in soil. Not expected to leach.

MATERIAL SAFETY DATA SHEET



Date of Issue: 20 March 2008

13. DISPOSAL CONSIDERATIONS

Rinse container before disposal. Add rinsings to mixing vessel. 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. Dispose of waste product through a reputable waste contractor.

14. TRANSPORT INFORMATION

UN number	2902
Proper shipping name	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains imidacloprid)
Class/Division and Subsidiary Risk	6.1 No subsidiary risk
Packing Group	III
EPG	Guide 34 - Dangerous Goods - Initial Emergency Response Guide
Hazchem code	2X
Marine Pollutant	No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988.

Australian Pesticides and Veterinary Medicines Authority approval number: 46227.

See also Section 2.

16. OTHER INFORMATION

Trademark information Gaucho® is a Registered Trademark of Bayer.

Preparation information Replaces 04/08/03 MSDS.
Reasons for revision: Updated product size/pack sizes; Inclusion of propane-1,2-diol as it has an exposure standard; Inclusion of isothiazolone; updated oral tox information; use of Division instead of Class when define Division 6.1 Dangerous Goods; updated regulatory information to include APVMA rather than NRA.

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