MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Imidacloprid 600 SC Insecticide**

Other Names: Imidacloprid. Group 4A Insecticide.
Use: Agricultural Insecticide for control of various insect pests..
Company: Apparent Pty Ltd.
Address: Suite G.08, 762 Toorak Road, Glen Iris VIC 3146
PO Box 3092, Cotham PO, Kew, Vic 3101
ACN/ABN: 143 724 136
Telephone Number: 03 9817 5536 **Fax Number:** 03 9817 7845
Emergency Contact : 0411 227 338
Email: wwardell@bigpond.net.au

SECTION 2 HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.

Risk Phrases:	R43	May cause sensitisation by skin contact.
Safety Phrases:	S2	Keep out of reach of children.
	S13	Keep away from food, drink and other animal foodstuffs.
	S20/21	When using do not eat or drink/smoke.
	S24/25	Avoid contact with skin/eyes.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	*CAS NUMBER*	*PROPORTION*
Imidrocloprid	138261-41-3	600 g/L
Propane-1,2-diol	57-55-6	< 5% w/w
Preservative	(mixture)	< 5% w/w
Other ingredients (including water) determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: Rinse any residual product from mouth and lips. Give plenty of water to drink and seek medical help. Phone Australia 13 11 26.

Eye contact: Flush with running water until product is removed. Seek medical advice if irritation persists.

Skin contact: Remove contaminated clothing. Wash thoroughly under running water using a mild soap. Seek medical advice if irritation, reddening and/or other damage occurs. Launder contaminated clothing before re-use.

Inhalation: Remove affected person to fresh air until recovered.

Advice to Doctor: Has a nicotine like effect. 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.

SECTION 4 FIRST AID MEASURES (Continued)

Additional therapeutic measures involve elimination of the substance from the body or acceleration of its excretion (gastric lavage, saline laxatives, activated charcoal).

Contra-indications: Absorption promoting agents such as alcoholic beverages and milk.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media: Product is non-combustible. Choose extinguishing media to suit the burning material. If waterspray is used, contain all runoff. If the water in the formulation is evaporated by prolonged heating, the residue will burn.

Hazards from combustion products: Non-combustible, however after heating to dryness product is likely to decompose and continued strong heating and will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergence procedures / Material and methods for containment and cleanup procedures:
Wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill. If material is leaking from a container, stop the leak only if this can be done safely. Prevent spillage entering drains or watercourse.

In the case of spillage, stop leak if safe to do so, and contain spill and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Soil is a suitable absorbent, especially soils high in clay. Soil can be used to form bunds to contain spillage. Contaminated soil should be collected for disposal at a suitable landfill. Personal protective equipment and clothing should be washed with soapy water. Keep out animals and unprotected persons.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Harmful if swallowed. May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When preparing product for use, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. This product is a Schedule 5 Poison (S5) and must be stored and sold in accordance with the relevant Health Department regulations.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
Exposure guidelines have not been established for this product by Safe Work Australia, however the manufacturer recommends the following guideline.

Atmospheric Contaminant	Exposure Standard (TWA)
Propane-1,2-diol	474 mg/m³ (150 ppm)

TWA = Time-Weight Average

Biological Limit Values:
No biological limit allocated.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Engineering controls:
Use in ventilated areas adequate to keep exposure below the TWA. Supplement natural ventilation if necessary. Keep containers closed when not in use.

Personal Protective equipment (PPE):
General: When preparing product for use, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige liquid suspension.
Odour:	Faint.
Boiling point:	Not data available.
Freezing point:	Not data available.
Solubility in Water:	Product will suspend, not dissolved.
pH:	6.5 – 8 (1% solution).
Specific Gravity:	Approximately 1.1
Flammability:	Non-flammable liquid, unless dried.
Poisons Schedule:	S5.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product should be stable in storage for at least 2 years after manufacture. Some settling might occur, and containers should be agitated at least once every 12 months to resuspend any sediment.
Conditions to avoid: Do not store for prolonged periods in direct sunlight.
Incompatible materials: Strong acids, bases or oxidizing agents.
Hazardous decomposition products: After heating to dryness product is likely to decompose and continued strong heating and will emit toxic fumes.
Hazardous reactions: Not likely to polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:

ACUTE EFFECTS

Swallowed:	Acute Oral LD_{50} (rat) = 5000 mg/kg. Swallowing large quantities may cause vomiting, diarrhoea, abdominal pain, lethargy, depressed muscular tone, muscular cramps, respiratory disturbances and trembling. Harmful if swallowed.
Eye:	Mild irritant. May cause discomfort if contact is prolonged.
Skin:	Acute dermal LD_{50} (rat) > 2,000 mg/kg. May irritate the skin, not a sensitiser.
Inhaled:	Should not cause severe effects if treated promptly. May cause irritation to the respiratory tract and symptoms similar to the effects described under 'swallowed'.

Acute toxicity:
Exposure to humans most commonly occurs through spray mist or accidental ingestion of product.

Chronic toxicity: Evidence from animal studies indicates that repeated or prolonged exposure to imidacloprid there was no evidence of a carcinogenic effect, is unlikely to be genotoxic, is not teratogenic.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

The results of periodic examinations of employees exposed to imidacloprid showed no adverse health effects. No epidemiological studies of the effects of imidacloprid and no information on symptoms of poisoning or clinical signs were available. A 4-year-old child who ingested about 10 mg/kg bw of a veterinary preparation of imidacloprid showed no signs of poisoning or adverse health effects.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No information is available for the product. The following information refers to the active ingredient, imidacloprid. Toxic to upland game birds (Bobwhite quail LD_{50} 152 mg/kg). Toxic to fish and aquatic species - rainbow trout LD_{50} = 211 mg/L and golden orfe LD_{50} = 237 mg/L. toxic to *Daphnia magna* LC_{50} (48 hour) = 85 mg/L. Toxic to bees when used as a spray, but when used as a seed treatment it has been shown to be safe to bees. DO NOT contaminate streams, rivers or water courses.

Environmental Fate: No information is available for the product. The following information refers to the active ingredient, imidacloprid. Imidacloprid has medium absorption to soil with a half life of 48-190 days. The hydrolysis half-life of imidacloprid can range from 33 - 44 days at pH 7 and 25°C. The aqueous photolysis half-life is less than 3 hours. Imidacloprid has a photolysis half-life of 39 days at the soil surface, with a range of 26.5 - 229 days when incorporated into the soil. Persistence in soil allows for continual availability for uptake by plant roots. The combination of low Koc between 132 - 310 and high water solubility of 514 ppm suggests a potential to leach to ground water.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities. On site disposal of the concentrated product is not acceptable. Ideally the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

Disposal of empty containers: Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. 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 deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Marine and Air Transport: Apparent Imidacloprid 600 SC Herbicide is classified as a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 20% Imidacloprid). Hazchem code ●3Z. Hazard Identification Number (HIN) 90. Emergency Guide 47 (Australian Standards).

This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.
This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 66888.
This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xn: Harmful.
This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th Ed).

Requirements concerning special training:
Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 21 January 2013. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code:	Australian Dangerous Goods Code (for the transport of Dangerous Goods by Road and Rail).
Carcinogen:	An agent which is responsible for the formation of a cancer.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
HSIS:	Hazardous Substances information System.
Lacrimation:	The production, secretion, and shedding of tears.
Lavage:	A general term referring to cleaning or rinsing.
Mutagen:	An agent capable of producing a mutation.
NOHSC:	National Occupational Health and Safety Commission.
Pneumonitis:	A general term that refers to inflammation of lung tissue.
PPE:	Personal protective equipment.
Teratogen:	An agent capable of causing abnormalities in a developing foetus.
TWA:	The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.
Safe Work Australia:	Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". HSIS - Safe Work Australia website. (2013).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.

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.

End MSDS