

Material Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE CHEMICAL PRODUCT

Product Name: CONFEDERATE 350 SC INSECTICIDE

Product Type: Group 4A Insecticide /neo-nicotinoid insecticide

Product Use: A soil applied treatment for the control of Greyback and Childers canegrub in sugarcane and Silverleaf whitefly in various vegetable crops as specified in the Directions for Use table.

SECTION 2 : HAZARD IDENTIFICATION

Statement of Hazardous Nature:

This product is classified as: Xi, Irritating. Hazardous according to the criteria of NOHSC Australia.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

However, this is a C1 Combustible Liquid and for storage meets the definition of Dangerous Goods.

Risk Phrases: R22, R43, R36/38. Harmful if swallowed. May cause sensitisation by skin contact. Irritating to eyes and skin.

Safety Phrases: S20, S28, S36, S24/25. When using, do not eat or drink. After contact with skin, wash immediately with plenty of soap and water. Wear suitable protective clothing. Avoid contact with skin and eyes.

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

Marine Pollutant: None allocated.

SUSDP Classification: S6

UN Number: None allocated.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion
Imidacloprid	138261-41-3	35%
Isothiazone	55965-84-9	0.2%
Other non-hazardous ingredients	-	to 100%

SECTION 4: FIRST AID MEASURES

Call The Poisons Information Centre if you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, DO NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre, or seek medical attention at once.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazards: This product is classified as a C1 combustible product. There is no risk of an explosion from this product under normal circumstances if involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire Fighting: Fire decomposition products from product may be toxic if inhaled. Take appropriate protective measures. When fighting fires wear a splash suit complete with self contained breathing apparatus (AS/NZ 1715/1716). If a significant quantity of this product is involved in a fire, contact your local fire department. Bund area with sand etc to contain runoff from entering drains.

Extinguishing Media: Use foam, carbon dioxide, dry chemical or water-fog.

Flash point: > 100°C

Upper Flammability Limit: No data. **Lower Flammability Limit:** No data.

Autoignition temperature: No data. **Flammability Class:** C1

SECTION 6: ACCIDENTAL RELEASE MEASURES

In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike

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to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

SECTION 7: HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimize the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. Avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.

Flammability: C1- Combustible product

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure standards:

Exposure limits have not been established by NOHSC for any of the significant ingredients in this product.

The ADI for Imidacloprid is set at 0.06mg/kg/day. The corresponding NOEL is set at 6mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. (Values taken from Australian ADI List, May 2010)

Engineering Control: No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Personal Protective Equipment:

Australian Standards regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: PVC, rubber.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Safety deluge showers should, if practical, be provided near to where this product is being used.

Inhalation: Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a type G cartridge, suitable for agricultural chemicals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour: Red coloured liquid suspension.

Odour: Mild characteristic odour

Boiling Point: Not available.

Freezing/Melting Point: No specific data. Liquid at normal temperatures.

Volatiles: No data.

Vapour Pressure: No data.

Vapour Density: No data.

Specific Gravity: 1.19 at 20°C

Water Solubility: Miscible in water.

pH: No data. Expected to be neutral.

Odour Threshold: No data.

Evaporation Rate: No data.

Autoignition temp: No data.

Flash point: No data.

Flammability limit: No data.

Partition coefficient (octanol/water): 0.57 at 21°C (log P octanol/water)

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use as described on the label and in section 7.

Reactivity: This product may react with strong oxidizing agents.

Conditions to Avoid: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: Strong oxidising agents.

Fire Decomposition: This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Hazard reactions: None

SECTION 11: TOXICOLOGICAL INFORMATION

Isothiazol-3-one Isomer mixture is classed by ASCC as a potential sensitiser by skin contact.

Chronic toxicity: A 2-year feeding study in rats fed up to 1,800 ppm resulted in a No Observable Effect Level (NOEL) of 100 ppm (5.7 mg/kg body weight in males and 7.6 mg/kg in females). Adverse effects included decreased body weight gain in females at 300 ppm, and increased thyroid lesions in males at 300 ppm and females at 900 ppm. A 1-year feeding study

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in dogs fed up to 2,500 ppm resulted in a NOEL of 1,250 ppm (41 mg/kg). Adverse effects included increased cholesterol levels in the blood, and some stress to the liver (measured by elevated liver cytochrome p-450 levels).

Reproductive effects: A three generation reproduction study in rats fed up to 700 ppm Imidacloprid resulted in a NOEL of 100 ppm (equivalent to 8 mg/kg/day) based on decreased pup body weight observed at the 250 ppm dose level.

Teratogenic effects: A developmental toxicity study in rats given doses up to 100 mg/kg/day by gavage on days 6 to 16 of gestation resulted in a NOEL of 30 mg/kg/day (based on skeletal abnormalities observed at the next highest dose tested of 100 mg/kg/day). In a developmental toxicity study with rabbits given doses of Imidacloprid by gavage during days 6 through 19 of gestation, resulted in a NOEL of 24 mg/kg/day based on decreased body weight and skeletal abnormalities observed at 72 mg/kg/day (highest dose tested).

Mutagenic effects: Imidacloprid may be weakly mutagenic. In a battery of 23 laboratory mutagenicity assays, Imidacloprid tested negative for mutagenic effects in all but two of the assays. It did test positive for causing changes in chromosomes in human lymphocytes, as well as testing positive for genotoxicity in Chinese hamster ovary cells.

Carcinogenic effects: Imidacloprid is considered to be of minimal carcinogenic risk, and is thus categorized by EPA as a "Group E" carcinogen (evidence of noncarcinogenicity for humans). There were no carcinogenic effects in a 2-year carcinogenicity study in rats fed up to 1,800 ppm Imidacloprid.

Organ toxicity: In short-term feeding studies in rats, there were thyroid lesions associated with very high doses of Imidacloprid.

Fate in humans and animals: Imidacloprid is quickly and almost completely absorbed from the gastrointestinal tract, and eliminated via urine and faeces (70-80% and 20-30%, respectively, of the 96% of the parent compound administered within 48 hours). The most important metabolic steps include the degradation to 6-chloronicotinic acid, a compound that acts on the nervous system as described above. This compound may be conjugated with glycine and eliminated, or reduced to guanidine.

SECTION 12: ECOLOGICAL INFORMATION

This product is toxic to bees. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

This product is biodegradable. It will not accumulate in the soil or water or cause long term effects.

Effects on birds: Imidacloprid is toxic to upland game birds. The LD₅₀ is 152 mg/kg for bobwhite quail, and 31 mg/kg in Japanese quail. In studies with red-winged blackbirds and brown-headed cowbirds, it was observed that birds learned to avoid Imidacloprid treated seeds after experiencing transitory gastrointestinal distress (retching) and ataxia (loss of coordination). It was concluded that the risk of dietary exposure to birds via treated seeds was minimal. Based on these studies, Imidacloprid appears to have potential as a bird repellent seed treatment.

Effects on aquatic organisms: The toxicity of Imidacloprid to fish is moderately low. The 96-hour LC₅₀ of Imidacloprid is 211 mg/l for rainbow trout, 280 mg/l for carp, and 237 mg/l for golden orfe. In tests with the aquatic invertebrate Daphnia, the 48-hour EC₅₀ (effective concentration to

cause toxicity in 50% of the test organisms) was 85 mg/l. Products containing Imidacloprid may be very toxic to aquatic invertebrates.

Effects on other organisms: Imidacloprid is highly toxic to bees if used as a foliar application, especially during flowering, but is not considered a hazard to bees when used as a seed treatment.

Environmental Fate:

Breakdown in soil and groundwater: The half-life of Imidacloprid in soil is 48-190 days, depending on the amount of ground cover (it breaks down faster in soils with plant ground cover than in fallow soils). Organic material aging may also affect the breakdown rate of Imidacloprid. Plots treated with cow manure and allowed to age before sowing showed longer persistence of Imidacloprid in soils than in plots where the manure was more recently applied, and not allowed to age. Imidacloprid is degraded stepwise to the primary metabolite 6-chloronicotinic acid, which eventually breaks down into carbon dioxide. There is generally not a high risk of groundwater contamination with Imidacloprid if used as directed. The chemical is moderately soluble, and has moderate binding affinity to organic materials in soils. However, there is a potential for the compound to move through sensitive soil types including porous, gravelly, or cobbly soils, depending on irrigation practices.

Breakdown in water: The half-life in water is much greater than 31 days at pH 5, 7 and 9. No other information was found.

Breakdown in vegetation: Imidacloprid penetrates the plant, and moves from the stem to the tips of the plant. It has been tested in a variety

SECTION 13: DISPOSAL CONSIDERATIONS

Instructions for the disposal of this product and its containers are listed on the product label.

For collection of unwanted rural chemicals, contact ChemClear @1800 008 182 www.chemclear.com.au and for help with the disposal of empty drums, contact DrumMuster@ www.drummuster.com.au for local and State contacts.

SECTION 14: TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT: Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG) for transport by Road and Rail.

MARINE TRANSPORT: Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN Number: None allocated.

Class: None allocated.

Packing group: None allocated.

SECTION 15: REGULATORY INFORMATION

SUSDP: Schedule 6; POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

ADG Classification: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

AICS (Australia): All of the significant ingredients in this formulation are compliant with NICNAS regulations.

APVMA Registration Number: 64847

SECTION 16: OTHER INFORMATION

This MSDS contains only safety-related information sourced from the public domain and analytical results on this product:

Acronyms:

ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition

AICS Australian Inventory of Chemical Substances

CAS number Chemical Abstracts Service Registry Number

Hazchem Number Emergency action code of numbers and letters that provide information firefighters

IARC International Agency for Research on Cancer

ASCC Office of the Australian Safety and Compensation Council

NTP National Toxicology Program (USA)

R-Phrase Risk Phrase

SUSDP Standard for the Uniform Scheduling of Drugs & Poisons

UN Number United Nations Number

Police and Fire Brigade: Dial 000 **Poisons Information Centre (13 1126)**

Emergency contact: 04 0214 9346 (24 hours)

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