



## MATERIAL SAFETY DATA SHEET

# EnviroMax Imidacloprid 200SC Turf, Crop & Ornamental Insecticide.

### Section 1: Identification of the Product and Company

<b>Product Name:</b>	EnviroMax Imidacloprid 200SC Turf, Crop & Ornamental Insecticide.
<b>Other Names:</b>	Imidacloprid suspension concentrate; Imidacloprid is a guanidine derivative
<b>Recommended Use:</b>	For the control of certain insect pests in various crop and non-crop situations as specified on the product label.
<b>Supplier:</b>	EnviroMax Technologies Pty Ltd.
<b>Street Address:</b>	Level 3, 549 Queen St., Brisbane, Queensland 4000, Australia.
<b>Telephone:</b>	+61- (0) 4099 26561

### Section 2: Hazard Identification

<b>Hazard Classification:</b>	HAZARDOUS SUBSTANCE. NOT A DANGEROUS GOOD
<b>Risk Phrases:</b>	R22 Harmful if swallowed. R43 May cause sensitisation by skin contact.

### Section 3: Composition / Information On Ingredients

#### Chemical Identity of Ingredients

Common Name	CAS Number	Concentration
Imidacloprid	138261-41-3	200 g/L
Hexahydro-1,3,5-tris (2-hydroxy-ethyl)-sym-triazine	4719-04-4	< 2%
Other non-hazardous ingredients	-	> 60%

### Section 4: First Aid Measures

#### General Advice:

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

Remove contaminated clothing and shoes immediately. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed. Get medical attention immediately if irritation develops or persists.

#### Eye Contact:

No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation

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becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

### **Ingestion:**

If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give water to drink. Call a Poisons Information Centre or a doctor immediately.

### **Advice to Doctor:**

Treat symptomatically. Symptoms of poisoning would be expected to be similar to nicotinic signs and symptoms, including fatigue, twitching, cramps, and muscle weakness including the muscles necessary for breathing

## **Section 5: Fire Fighting Measures**

### **Suitable extinguishing media:**

Sprayed water jet, foam, extinguishing powder, carbon dioxide, and sand.

### **Hazards from Combustion Products**

The dehydrated components may emit the formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides. Do not breathe fumes.

### **Precautions for Fire Fighters and Special Protective Equipment**

Fight fire in the early stages if safe to do so. Wear respiratory protection. Well ventilated areas: wear full face mask with combination filter eg., ABEK-P2 (offers no protection from carbon monoxide). Enclosed premises: wear respirator with independent air supply. Contain firefighting water. If at all possible do not allow fire fighting water to enter drains and waterways..

### **Hazchem Code**

Not applicable.

### **Additional Information**

Contain water from fires to prevent escape to drains and water bodies.

## **Section 6: Accidental Release Measures**

### **Accidental release**

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. Contain spill by absorbing with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. In the event of a major spill, prevent spillage from entering drains or water courses with absorbent material and call emergency services.

### **Personal protection**

See section 8 below.

## **Section 7: Handling And Storage**

### **Precautions for safe handling**

Use only in accordance with the instructions provided on the container label, including the Safety Directions.

### **Conditions for safe storage**

Keep out of reach of children. Store in the closed, original container in a dry, well ventilated area, as cool as possible.

## **Section 8: Exposure Controls / Personal Protection**

### **National exposure standards**

The NOHSC exposure standard (TWA) for glycerin mist is: 10 mg/m<sup>3</sup>

The NOHSC exposure standard (TWA) for propylene glycol is: 474 mg/ m<sup>3</sup> (150 ppm)

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a

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particular substance when calculated over a normal eight-hour working day, for a five-day working week.

## Biological limit values

No biological limit allocated.

## Engineering controls

Use only in a well ventilated area. Control process conditions to avoid contact with skin.

## Personal protective equipment

When preparing product for use wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. Re-entry period: Do not enter treated area until spray has dried unless wearing protective clothing.

## Hygiene Measures

Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

### Section 9: Physical and Chemical Properties

<b>Appearance:</b>	Opaque cream liquid
<b>Odour:</b>	Slight characteristic
<b>pH:</b>	5.0 – 7.0 (1% w/w solution)
<b>Vapour pressure:</b>	$4 \times 10^{-7}$ mPa at 20° C (imidacloprid)
<b>Vapour density:</b>	Not data available
<b>Boiling point/range:</b>	Not data available
<b>Freezing point:</b>	Not data available
<b>Solubility:</b>	Forms a suspension in water
<b>Specific gravity:</b>	1.1-1.2
<b>Flash point:</b>	Not available
<b>Flammable limits in air:</b>	Not combustible
<b>Ignition temperature:</b>	No data available

### Section 10: Stability And Reactivity

#### Chemical stability

Stable under normal storage conditions and use.

#### Conditions to avoid

Avoid extreme heat and sunlight.

#### Incompatible materials

Avoid acids, alkalis, strong oxidising agents.

#### Hazardous decomposition products

None when stored and used as directed.

#### Hazardous reactions

None when stored and used as directed. In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.

### Section 11: Toxicological Information

#### Inhalation

Unlikely to be harmful if inhaled.

#### Skin Contact

Repeated exposure may cause allergic disorders (preservative).

#### Eye Contact

Unlikely to irritate the eyes.

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## 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.

## IMIDACLOPRID TOXICITY

Imidacloprid is moderately toxic. The oral dose of technical grade imidacloprid that resulted in mortality to half of the test animals (LD50) is 450 mg/kg body weight in rats and 131 mg/kg in mice. The 24-hour dermal LD50 in rats is >5,000 mg/kg. It is considered non-irritating to eyes and skin (rabbits), and non-sensitizing to skin (guinea pigs) (3). The LC50 in rats is > 69 mg/cubic metre air in aerosol form, and >5323 mg/cubic metre dust. These values represent the maximum attainable airborne concentrations.

**Reproductive effects:** A three generation reproduction study in rats fed up to 700 ppm imidacloprid resulted in a No Observable Effect Level (NOEL) of 100 ppm (equivalent to 8 mg/kg/day) based on decreased pup body weight observed at the 250 ppm dose level.

**Chronic Toxicity:** The NOEL from a 2-year feeding study in rats fed up to 1,800 ppm was 100 ppm. 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.

**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).

**Mutagenic Effects:** Evidence of mutagenic effects from exposure to Imidacloprid is inconclusive. In 23 laboratory mutagenicity assays, imidacloprid tested negative for mutagenic effects in all but two. 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. There were no carcinogenic effects in a 2-year carcinogenicity study in rats fed up to 1,800 ppm imidacloprid

**Organ Toxicity:** Organ toxicity is not expected from exposures from use as per the label directions.

**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). 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.

## Other information

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. Values taken from Australian ADI List, 30 September 2011.

## Section 12: Ecological Information

### ENVIRONMENTAL TOXICITY

#### Effects on Birds:

Imidacloprid is toxic to birds (LD50 is 152 mg/kg for bobwhite quail, and 31 mg/kg in Japanese quail), HOWEVER risk to birds from instructed use is low. Red-winged blackbirds and brown-headed cowbirds were observed to learn to avoid imidacloprid treated seeds and based on these studies, imidacloprid appears to repel birds.

#### Effects on Aquatic Organisms:

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Imidacloprid has moderately low toxicity to fish. The 96-hour LC50 is 211 mg/l for rainbow trout, 280 mg/l for carp, and 237 mg/l for golden orfe. The aquatic invertebrate Daphnia has a 48- hour EC50 of 85 mg/L.

## Effects on Other Animals (Non-target species):

Imidacloprid is highly toxic to bees. Do not use when bees are nearby or near flowering plants.

## ENVIRONMENTAL FATE

### Persistence:

Half-life in soil is 48-190 days, depending on the amount of ground cover (faster in soils with plant ground cover).

### Mobility:

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 soils, depending on irrigation practice.

### Bioaccumulative potential:

Imidacloprid is not expected to bioaccumulate in the environment.

## Section 13: Disposal Considerations

### Product Disposal:

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®).

### Container Disposal

Do not use this container for any other purpose. Triple or preferably pressure rinse empty containers before disposal or recycling. Add rinsings to spray tank. 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 500mm in a disposal pit specifically marked and set up for this purpose clear of water ways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

## Section 14: Transport Information

<b>UN Number:</b>	Not applicable
<b>UN Proper Shipping Name:</b>	Not applicable
<b>Class and subsidiary risk(s):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Special precautions for user:</b>	None
<b>Hazchem Code:</b>	Not applicable

### ADG Code:

NOT considered dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

## Section 15: Regulatory Information

<b>SUSDP:</b>	5 - CAUTION
<b>Commonwealth requirements:</b>	None
<b>AgVet Code Act 1994:</b>	Registered - 66253

## Section 16: Other Information

### Acronyms

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**AgVet Code Act 1994** – Agricultural and Veterinary Chemicals Code Act 1994

**LD<sub>50</sub> or LC<sub>50</sub>** – Estimated lethal dose / concentration to kill 50% of the population/sample.

**NIOSH** - National Institute for Occupational Safety and Health (USA)

**SUSDP** - Standard for the Uniform Scheduling of Drugs and Poisons

### References:

Pesticide Information Profile Imidacloprid. Cornell University, Ithaca, NY, USA.  
<http://pmep.cce.cornell.edu/profiles/extoxnet/haloxyp-methylparathion/imidacloprid-ext.html>

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