



**Material Safety Data Sheet**

**MERIT® 0.3 G INSECTICIDE**

MSDS Number: 102000014486  
 MSDS Version 1.0  
 Revision Date: 03/08/2006

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name** MERIT® 0.3 G INSECTICIDE  
**MSDS Number** 102000014486  
**EPA Registration No.** 432-1450  
**Product Use** Insecticide for systemic insect control in turfgrass and landscape ornamentals.

Bayer Environmental Science  
 2 T.W. Alexander Drive  
 Research Triangle PK, NC 27709  
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)  
 For Product Information call: 1-800-331-2867

**SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Imidacloprid	138261-41-3	0.30

**SECTION 3. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Caution! Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing. Highly toxic to aquatic invertebrates.

**Physical State** granular

**Appearance** tan to grey

**Routes of Exposure** Eye contact, Ingestion, Skin contact, Skin Absorption

**Immediate Effects**

**Eye** Causes eye irritation. Avoid contact with eyes.

**Skin** Harmful if absorbed through skin. Avoid contact with skin and clothing.

**Ingestion** Harmful if swallowed. Do not take internally.

**Chronic or Delayed Long-Term** This product or its components may have target organ effects.



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**Medical Conditions Aggravated by Exposure** No specific medical conditions are known which may be aggravated by exposure to this product.

**SECTION 4. FIRST AID MEASURES**

**General** When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Eye** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

**Skin** Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

**Ingestion** Call a physician or poison control center immediately. Rinse out mouth and give water in small gulps to drink. 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. Do not leave victim unattended.

**Inhalation** Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

**Notes to Physician Treatment** There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

**SECTION 5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media** water spray, carbon dioxide (CO2), dry chemical, foam

**Fire Fighting Instructions** Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.



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**Methods for Cleaning Up** Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional Advice** Use personal protective equipment. Do not allow product to enter streams, sewers or other waterways.

**SECTION 7. HANDLING AND STORAGE**

**Handling Procedures** Handle and open container in a manner as to prevent spillage.

**Storing Procedures** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**Work/Hygienic Procedures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. As soon as practical, wash thoroughly and change into clean clothing.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**General Protection** Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

**Engineering Controls** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Eye/Face Protection** safety glasses

**Hand Protection** Chemical resistant nitrile rubber gloves

**Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.

**Respiratory Protection** When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

<b>Exposure Limits</b>				
Calcium carbonate	1317-65-3	NIOSH	REL	5 mg/m3
		Form of Exposure	Respirable.	
		NIOSH	REL	10 mg/m3
		Form of Exposure	Total	



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NIOSH	REL		10 mg/m3
Form of Exposure		Total	
NIOSH	REL		10 mg/m3
Form of Exposure		Total	
NIOSH	REL		5 mg/m3
Form of Exposure		Respirable.	
NIOSH	REL		5 mg/m3
Form of Exposure		Respirable.	
OSHA Z1	PEL		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1	PEL		15 mg/m3
Form of Exposure		Total dust.	
OSHA Z1	PEL		15 mg/m3
Form of Exposure		Total dust.	
OSHA Z1	PEL		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1	PEL		15 mg/m3
Form of Exposure		Total dust.	
OSHA Z1	PEL		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1A	TWA		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1A	TWA		15 mg/m3
Form of Exposure		Total dust.	
OSHA Z1A	TWA		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1A	TWA		15 mg/m3
Form of Exposure		Total dust.	
OSHA Z1A	TWA		5 mg/m3
Form of Exposure		Respirable fraction.	
OSHA Z1A	TWA		15 mg/m3
Form of Exposure		Total dust.	
US CA OEL	TWA PEL		5 mg/m3
Form of Exposure		Respirable fraction.	
US CA OEL	TWA PEL		10 mg/m3
Form of Exposure		Total dust.	
US CA OEL	TWA PEL		5 mg/m3
Form of Exposure		Respirable fraction.	
US CA OEL	TWA PEL		10 mg/m3
Form of Exposure		Total dust.	
ACGIH	TWA		10 mg/m3
Form of Exposure		Inhalable particles.	
ACGIH	TWA		3 mg/m3
Form of Exposure		Respirable particles.	
Z3	TWA		15 millions of particles per cubic foot of air
Form of Exposure		Respirable fraction.	
Z3	TWA		50 millions of particles per cubic foot of air
Form of Exposure		Total dust.	



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Z3	TWA	5 mg/m3
Form of Exposure	Respirable fraction.	
Z3	TWA	15 mg/m3
Form of Exposure	Total dust.	

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	tan to grey
<b>Physical State</b>	granular
<b>pH</b>	5.5 - 8.0
<b>Bulk Density</b>	25 - 60 lbs./cu. ft.

**SECTION 10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable
<b>Incompatibility</b>	strong acids strong oxidizing agents bases
<b>Hazardous Decomposition Products</b>	In case of fire hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx)

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute toxicity data have been bridged from similar Merit granular formulations containing a higher percentage of the active ingredient, imidacloprid. The non-acute information pertains to the technical-grade active ingredient.

<b>Acute Oral Toxicity</b>	male/female rat: LD50: > 4,820 mg/kg
<b>Acute Dermal Toxicity</b>	male/female rabbit: LD50: > 2,000 mg/kg



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**Acute Inhalation Toxicity** male/female rat: LC50: > 5.09 mg/l  
Exposure time: 4 h  
Determined in the form of dust.  
(actual)

male/female rat: LC50: > 20 mg/l  
Exposure time: 1 h  
Determined in the form of dust.  
Extrapolated from the 4 hr LC50.  
(actual)

**Skin Irritation** rabbit: Non-irritant.

**Eye Irritation** rabbit: Mild eye irritation.

**Sensitization** guinea pig: Non-sensitizing.

**Chronic Toxicity** In chronic dietary studies in rats and dogs exposed to imidacloprid, the target organs were the thyroids and/or liver.

**Assessment Carcinogenicity**

In oncogenicity studies in rats and mice, imidacloprid was not considered carcinogenic in either species.

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**Reproductive & Developmental Toxicity**

**REPRODUCTION:** In a two-generation reproduction study in rats, imidacloprid was not a primary reproductive toxicant. Offspring exhibited reduced body weights at the high dose and in conjunction with maternal toxicity.

**DEVELOPMENTAL TOXICITY:** In developmental toxicity studies in rats and rabbits, there was no evidence of an embryotoxic or teratogenic potential for imidacloprid. In both species, developmental effects were observed only at high doses and in conjunction with maternal toxicity.

**Neurotoxicity**

In acute and subchronic neurotoxicity screening studies in rats, imidacloprid produced slight neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes observed in the neural tissues.

In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to imidacloprid showed decreased motor activities. These effects occurred at the highest dose tested and in conjunction with maternal toxicity. There were no correlating morphological changes observed in the neural tissues.



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**Mutagenicity**                      The imidacloprid mutagenicity studies, taken collectively, demonstrate that the active ingredient is not genotoxic or mutagenic.

**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions**                      Highly toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance**                      Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal**                      Empty residue into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14. TRANSPORT INFORMATION**

TRANSPORTATION CLASSIFICATION:  
Not Regulated for Transportation

FREIGHT CLASSIFICATION:  
Insecticides or Fungicides, N.O.I., other than poison

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.**                      432-1450

**US Federal Regulations**

**TSCA list**

None.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.



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This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

None.

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 1      Flammability - 0      Reactivity - 1      Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 03/08/2006

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