



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 10200007119
 MSDS Version 1.2
 Revision Date: 02/03/2006

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name CRITERION™ 0.5 G INSECTICIDE
MSDS Number 10200007119
EPA Registration No. 432-1328

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	0.50
Quartz (Silica, Crystalline)	14808-60-7	3.82

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. Wash thoroughly with soap and water after handling. Highly toxic to aquatic invertebrates.

Physical State solid granular
Odor none
Appearance grey
Routes of Exposure Eye contact, Skin Absorption, Skin contact, Ingestion
Immediate Effects
Eye Causes eye irritation. Do not get in eyes.
Skin Harmful if absorbed through skin. Avoid contact with skin and clothing.



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Ingestion	Do not take internally. Harmful if swallowed.
Chronic or Delayed Long-Term	<p>This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.</p> <p>This product or its components may have target organ effects.</p>
Medical Conditions Aggravated by Exposure	No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

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 poison control center or doctor for treatment advice.
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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 poison control center or doctor for further treatment advice.
Notes to Physician Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.



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SECTION 5. FIRE FIGHTING MEASURES

Flash Point	not applicable
Suitable Extinguishing Media	water, carbon dioxide (CO2), dry chemical, foam
Fire Fighting Instructions	<p>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.</p> <p>In the event of fire, wear self-contained breathing apparatus.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
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	<p>Do not contaminate water, food, or feed by storage or disposal.</p> <p>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.</p>
Work/Hygienic Procedures	<p>Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.</p> <p>Take off contaminated clothing and shoes immediately. Then wash thoroughly and put on clean clothing.</p> <p>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.</p>
Min/Max Storage	30 day average temperature not to exceed 38°C (100°F)



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Temperatures

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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

Eye/Face Protection tightly fitting safety goggles

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.

Exposure Limits

Quartz (Silica, Crystalline)	14808-60-7	ACGIH	TWA	0.05 mg/m3
		Form of Exposure		Respirable fraction.
		ACGIH NIC	TWA	0.025 mg/m3
		Form of Exposure		Respirable fraction.
		NIOSH	REL	0.05 mg/m3
		Form of Exposure		Respirable dust.
		OSHA Z1A	TWA	0.1 mg/m3
		Form of Exposure		Respirable dust.
		Z3	TWA	2.4 millions of particles per cubic foot of air
		Form of Exposure		Respirable.
		Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
		Z3	TWA	0.1 mg/m3
		Form of Exposure		Respirable.
		Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher



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	Z3	TWA	exposure limits. See regulation for specific equation.	0.3 mg/m3
	Form of Exposure		Total dust.	
	Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.	
	US CA OEL	TWA PEL	Respirable dust.	0.1 mg/m3
	Form of Exposure		Total dust.	
	US CA OEL	TWA PEL	Respirable fraction.	0.3 mg/m3
	Form of Exposure		Total dust.	
	OSHA Z1	PEL	Respirable fraction.	5 mg/m3
	Form of Exposure		Total dust.	
	OSHA Z1	PEL	Total dust.	15 mg/m3
	Form of Exposure			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	grey
Physical State	solid granular
Odor	none
Bulk Density	55-60 lbs/cu ft
Water Solubility	insoluble

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions to Avoid	Extreme temperatures.
Hazardous Decomposition Products	hydrogen chloride (HCl) hydrogen cyanide (hydrocyanic acid) carbon dioxide (CO2) nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Only an acute eye irritation study has been performed on this product as formulated. All other acute toxicity



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

Acute Oral Toxicity male/female rat: LD50: > 4,820 mg/kg

Acute Dermal Toxicity male/female rabbit: LD50: > 2,000 mg/kg

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.

Subchronic Toxicity In a 3-week dermal toxicity study, rabbits treated with imidacloprid showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose.

In a 4-week inhalation study, rats exposed to high concentrations of imidacloprid exhibited decreased body weight gains and changes in clinical chemistries and organ weights.

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

Quartz (Silica, Crystalline) 14808-60-7 Group A2

NTP

Quartz (Silica, Crystalline) 14808-60-7

IARC

Quartz (Silica, Crystalline) 14808-60-7 Overall evaluation: 1

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.



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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.

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

Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for Domestic Surface Shipment

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

SECTION 15. REGULATORY INFORMATION

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US Federal Regulations

TSCA list

Quartz (Silica, Crystalline) 14808-60-7

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 contains a chemical known to the State of California to cause cancer.

Quartz (Silica, Crystalline) 14808-60-7

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

US State Right-To-Know Ingredients

Quartz (Silica, Crystalline) 14808-60-7 IL, MA, MN, RI

Canadian Regulations

Canadian Domestic Substance List

Quartz (Silica, Crystalline) 14808-60-7

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Quartz (Silica, Crystalline) 14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: Removed Product Use from Section 1; made other minor changes as needed.

Revision Date: 02/03/2006

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responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.