



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
 MSDS Version 1.3
 Revision Date: 02/01/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name CRITERION™ 0.5 G INSECTICIDE
MSDS Number 102000007119
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.

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.



Material Safety Data Sheet

MSDS Number: 102000007119
MSDS Version 1.3

CRITERION™ 0.5 G INSECTICIDE

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.
Potential Environmental Effect	Highly toxic to aquatic invertebrates.

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	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. 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 sips 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.



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
 MSDS Version 1.3

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/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</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 to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
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	<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>Remove soiled clothing immediately and clean thoroughly before using again. 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. Wash thoroughly and put on clean clothing.</p>



Material Safety Data Sheet

CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
MSDS Version 1.3

Min/Max Storage Temperatures Recommended maximum transport/storage temperature: 38 °C / 100 °F
The 30-day storage temperature average must not exceed the recommended maximum.

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.

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	0.025 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 exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.
		Z3	TWA	0.1 mg/m3
		Form of exposure		Respirable.
		Remarks		The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.
		Z3	TWA	0.3 mg/m3
		Form of exposure		Total dust.



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
 MSDS Version 1.3

		Remarks	The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits.
	US CA OEL	TWA PEL	0.1 mg/m ³
	Form of exposure		Respirable dust.
	US CA OEL	TWA PEL	0.3 mg/m ³
	Form of exposure		Total dust.
	TX ESL	ST ESL	1 ug/m ³
	TX ESL	ST ESL	1 ug/m ³
	Form of exposure		Respirable.
	TX ESL	AN ESL	0.1 ug/m ³
	TX ESL	AN ESL	0.1 ug/m ³
	Form of exposure		Respirable.
Imidacloprid	138261-41-3	OES BCS*	0.7 mg/m ³

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	grey
Physical State	solid granular
Odor	none
Bulk Density	55 - 60 lb/ft ³ (loose)
Water solubility	insoluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Hydrogen chloride (HCl) Hydrogen cyanide (hydrocyanic acid) Carbon dioxide (CO ₂) Nitrogen oxides (NO _x)
Hazardous Reactions	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

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



Material Safety Data Sheet

MSDS Number: 102000007119
MSDS Version 1.3

CRITERION™ 0.5 G INSECTICIDE

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 combined rat: LD50: > 4,820 mg/kg
- Acute Dermal Toxicity** male/female combined rabbit: LD50: > 2,000 mg/kg
- Acute Inhalation Toxicity** male/female combined rat: LC50: > 5.09 mg/l
Exposure time: 4 h
Determined in the form of dust.
(actual)
- male/female combined 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: No skin irritation.
- Eye Irritation** rabbit: Mild eye irritation.
- Sensitization** guinea pig: Non-sensitizing.
- Chronic Toxicity** Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

Assessment Carcinogenicity

Imidacloprid was not carcinogenic in studies in rats and mice.

ACGIH

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

NTP

None.

IARC

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

OSHA

None.

Reproductive & Developmental Toxicity REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Neurotoxicity Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
MSDS Version 1.3

Mutagenicity Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions 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. Do not allow to get into surface water, drains and ground water.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations. 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

EPA Registration No. 432-1328

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

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



Material Safety Data Sheet
CRITERION™ 0.5 G INSECTICIDE

MSDS Number: 102000007119
MSDS Version 1.3

harm.

US State Right-To-Know Ingredients

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

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.

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: Updated for general editorial purposes.

Revision Date: 02/01/2008

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.