



**Material Safety Data Sheet**

**CRITERION 2F INSECTICIDE**

MSDS Number: 102000015064

MSDS Version 2.1

Revision Date: 05/19/2008

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

**Product Name** CRITERION 2F INSECTICIDE  
**MSDS Number** 102000015064  
**EPA Registration No.** 432-1312

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	21.40

**SECTION 3. HAZARDS IDENTIFICATION**

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

**Emergency Overview** Caution! Hazard to humans and domestic animals. Keep out of reach of children and animals. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist.

**Physical State** liquid suspension

**Odor** mild

**Appearance** off-white

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

**Immediate Effects**

**Eye** May cause mild irritation to eyes. Avoid contact with eyes.

**Skin** May cause slight irritation. Harmful if absorbed through skin. Avoid contact with skin and clothing.

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

**Inhalation** Avoid inhalation of vapour or mist.



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

**Potential Environmental Effect** Highly toxic to bees. 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.

**SECTION 5. FIRE FIGHTING MEASURES**

**Flash point** > 93 °C / > 199 °F

**Suitable Extinguishing Media** Water spray, Foam, Carbon dioxide (CO2), Dry chemical

**Fire Fighting Instructions** 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.

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



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**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**      Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. 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**              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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.
  
- 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 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.
  
- Eye/Face Protection**                      Tightly fitting safety goggles
  
- Hand Protection**                          Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)



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Chemical resistant gloves made of waterproof material such as polyethylene or polyvinyl chloride

**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**

Imidacloprid	138261-41-3	OES BCS*		0.7 mg/m3
Glycerine	56-81-5	ACGIH	TWA	10 mg/m3
		OSHA Z1	PEL	5 mg/m3
		OSHA Z1	PEL	15 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		OSHA Z1A	TWA	10 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3

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

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	off-white
<b>Physical State</b>	liquid suspension
<b>Odor</b>	mild
<b>pH</b>	7.5
<b>Density</b>	1.12 g/cm <sup>3</sup> at 20 °C
<b>Melting / Freezing Point</b>	-6.7 °C / 19.9 °F
<b>Water solubility</b>	dispersible
<b>Viscosity</b>	350 - 600 mPa.s

**SECTION 10. STABILITY AND REACTIVITY**

<b>Hazardous Decomposition Products</b>	Thermal decomposition can lead to release of: Hydrogen chloride (HCl) Hydrogen cyanide (hydrocyanic acid) Carbon dioxide (CO <sub>2</sub> ) Carbon monoxide
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Nitrogen oxides (NOx)

**Hazardous Reactions** Stable under recommended storage conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Only acute toxicity studies have been conducted on this product as formulated. The non-acute information pertains to the active ingredient, imidacloprid.

**Acute Oral Toxicity** male rat: LD50: > 4,870 mg/kg

female rat: LD50: 4,143 mg/kg

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

**Acute Inhalation Toxicity** male/female combined rat: LC50: > 5.33 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
(actual)

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

**Skin Irritation** rabbit: No skin irritation.

**Eye Irritation** rabbit: Minimally irritating.

**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**  
None.
- NTP**  
None.
- IARC**  
None.
- OSHA**  
None.

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



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**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.

**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. Apply this product as specified on the label. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**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** Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or 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 shipment by any mode of transportation

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

**SECTION 15. REGULATORY INFORMATION**

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**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.

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 - 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: 05/19/2008

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