



Material Safety Data Sheet

MERIT® 2F INSECTICIDE

MSDS Number: 102000006536

MSDS Version 1.1

Revision Date: 01/31/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name MERIT® 2F INSECTICIDE
MSDS Number 102000006536
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. Harmful if swallowed or absorbed through skin. Keep out of reach of children and animals.

Physical State viscous liquid suspension

Odor mild

Appearance off-white

Routes of Exposure Inhalation, Skin contact, Skin Absorption

Immediate Effects

Eye May cause eye irritation. Eye injury may persist for several days.

Skin Harmful if absorbed through skin. No skin irritation. Non-sensitizing.

Ingestion Harmful if swallowed.

Inhalation Harmful if inhaled.

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



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Potential Environmental Effect Highly toxic to bees. Extremely toxic to aquatic and estuarine 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
lower flammability limit	not applicable
Upper Flammability Limit	not applicable
Fire and Explosion Hazards	In the event of fire the following can be released: hydrogen chloride (HCl) nitrogen oxides (NOx)
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



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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.

Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

Methods for Cleaning Up Dike area to prevent runoff. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container.

Additional Advice Contaminated soil may have to be removed and disposed. Contact Bayer for further assistance if necessary. Information regarding personal protective equipment, see section 8.

SECTION 7. HANDLING AND STORAGE

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.

Work/Hygienic Procedures Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Min/Max Storage Temperatures Do not transport or store above 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. Eye wash facility and safety shower should be available. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.

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

Eye/Face Protection splash goggles

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



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

Respiratory Protection No personal respiratory protective equipment normally required.
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

Glycerine	56-81-5	ACGIH	TWA		10 mg/m3
		Form of exposure		Mist.	
		OSHA Z1	PEL		5 mg/m3
		Form of exposure		Respirable fraction.	
		OSHA Z1	PEL		15 mg/m3
		Form of exposure		Total dust.	
		OSHA Z1A	TWA		5 mg/m3
		Form of exposure		Respirable fraction.	
		OSHA Z1A	TWA		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.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	off-white
Physical State	viscous liquid suspension
Odor	mild
pH	7.5
Density	approx. 1.12 g/cm ³ at 20 °C
Melting / Freezing Point	-6.7 °C / 19.9 °F
Water solubility	dispersible
Viscosity	350 - 500 mPa.s at 25 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Incompatibility	None known.



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Hazardous Decomposition Products hydrogen chloride (HCl)
Hydrogen cyanide (hydrocyanic acid)
Carbon dioxide (CO₂)
Carbon monoxide
nitrogen oxides (NO_x)

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.



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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.

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. Notify state/provincial or local authorities and Bayer immediately if you observe any adverse environmental effects due to the use of this product. Do not allow to get into surface water, drains and ground water. 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 Follow container label instructions for disposal of wastes generated during use in compliance with the product label. In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Container Disposal Not completely emptied packagings should be disposed of as hazardous waste.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for Domestic Surface Transportation

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



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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.

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