



Material Safety Data Sheet

TOPCHOICE™ INSECTICIDE

MSDS Number: 102000012961

MSDS Version 2.1

Revision Date: 01/29/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name TOPCHOICE™ INSECTICIDE
MSDS Number 102000012961
EPA Registration No. 432-1217

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>
Fipronil	120068-37-3	0.0143

SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	Caution! Harmful if absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.
Physical State	granular
Odor	odourless
Appearance	clear grey to brown
Routes of Exposure	Ingestion, Eye contact, Skin Absorption, Inhalation
Immediate Effects	
Eye	Causes eye irritation. Do not get in eyes.
Skin	Harmful if absorbed through skin. Avoid contact with skin and clothing. May cause skin irritation.
Ingestion	Ingestion of large amounts may be harmful (see Signs and Symptoms). Do not take internally.
Inhalation	Avoid breathing dust. No specific effects on humans are known under normal use conditions.



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Chronic or Delayed Long-Term	This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.
Potential Environmental Effect	Toxic to birds. Toxic to aquatic and estuarine invertebrates. Toxic to fish.

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	
Signs and Symptoms	Symptoms of Overexposure lethargy Tremors Convulsions
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	not applicable
Suitable Extinguishing Media	Water spray, Foam, Dry chemical, Carbon dioxide (CO2)



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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.

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.

Methods for Cleaning Up

Avoid dust formation. 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.

Storing Procedures

Do not contaminate water, food, or feed by storage or disposal.

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 clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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

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.



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Engineering Controls	Ensure adequate ventilation. Use with local exhaust ventilation.
Eye/Face Protection	Safety glasses with side-shields
Hand Protection	Waterproof 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear grey to brown
Physical State	granular
Odor	odourless
pH	8.1 (1 %)
Bulk Density	40 - 44 lbs/cu.ft.
Water solubility	dispersible

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatibility	Strong acids Strong bases Strong oxidizing agents
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Carbon oxides Sulphur compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The inhalation LC50 study was bridged from a similar granular formulation containing the active ingredient, fipronil. The non-acute information pertains to the technical-grade active ingredient.



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Acute Oral Toxicity	male/female combined rat: LD50: > 5,000 mg/kg
Acute Dermal Toxicity	male/female combined rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	male/female combined rat: LC50: > 5.2 mg/l Exposure time: 4 h Determined in the form of a respirable fine dust. (actual)
	male/female combined rat: LC50: > 20 mg/l Exposure time: 1 h Determined in the form of a respirable fine 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	Fipronil caused liver, kidney or thyroid effects and/or neurobehavioral effects (e.g., tremors) in chronic toxicity studies in rats and dogs. Fipronil did not induce any microscopic lesions in the neural tissues.

Assessment Carcinogenicity

Fipronil has been classified by EPA as a Category C carcinogen based on thyroid tumors in rats only. These tumors are produced by a mechanism which is not relevant to human cancer. Fipronil did not produce an increase in tumor incidence in mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive & Developmental Toxicity	REPRODUCTION: Fipronil was not considered a primary reproductive toxicant in rats. DEVELOPMENTAL TOXICITY: Fipronil was not a developmental toxicant in rats and rabbits.
Neurotoxicity	Fipronil caused transient neurobehavioral effects (e.g., tremors) in neurotoxicity studies in rats. Delays in developmental landmarks were observed in rats at maternally toxic doses.



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Mutagenicity Fipronil was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to Fish Lepomis macrochirus (Bluegill sunfish)
flow-through test
LC50: 85 µg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fipronil.

Rainbow trout (Oncorhynchus mykiss)
flow-through test
LC50: 248 µg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient fipronil.

Acute Toxicity to Aquatic Invertebrates Daphnia
flow-through test
EC50: 190 µg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient fipronil.

Toxicity to other organisms Mallard duck
LC50: > 5,000 mg/kg
Exposure time: 8 d
The value mentioned relates to the active ingredient fipronil.

Bobwhite quail
LC50: 48 mg/kg
Exposure time: 8 d
The value mentioned relates to the active ingredient fipronil.

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. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.



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SECTION 13. DISPOSAL CONSIDERATIONS

- General Disposal Guidance** Pesticide wastes are acutely hazardous. 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. 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 Transportation
- FREIGHT CLASSIFICATION:**
Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 432-1217

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.



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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 - 0 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: 01/29/2007

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