

**Material Safety Data Sheet****ENVIDOR® 2 SC MITICIDE**

MSDS Number: 102000011424

MSDS Version 2.1

Revision Date: 01/11/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name ENVIDOR® 2 SC MITICIDE
MSDS Number 102000011424
EPA Registration No. 264-831

Bayer CropScience
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: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Spirodiclofen	148477-71-8	22.30
Glycerine	56-81-5	

SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	Caution! Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Physical State	viscous liquid suspension
Appearance	white to beige
Routes of Exposure	Ingestion, Eye contact, Skin contact, Skin Absorption
Immediate Effects	
Eye	Do not get in eyes.
Skin	Harmful if absorbed through skin. May cause sensitization by skin contact. Avoid contact with skin and clothing.
Ingestion	Harmful if swallowed. Do not take internally.
Chronic or Delayed Long-Term	This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA. This product or its components may have target organ effects.

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Potential Environmental Effect Highly toxic to bees. Toxic to fish and 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	Not relevant; aqueous solution
Fire and Explosion Hazards	In the event of fire the following can be released: Hydrogen chloride (HCl) Carbon monoxide (CO)
Suitable Extinguishing Media	Water, Dry chemical, Foam
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.

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Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
Methods for Cleaning Up	Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Additional Advice	Use personal protective equipment.

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>Wash thoroughly and put on clean clothing. Before removing gloves clean them with soap and water. Remove Personal Protective Equipment (PPE) immediately after handling this product.</p>
Min/Max Storage Temperatures	<p>Recommended minimum transport/storage temperature: -10 °C / 14 °F</p> <p>Recommended maximum transport/storage temperature: 40 °C / 104 °F</p>

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	<p>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.</p> <p>Follow all label instructions. Train employees in safe use of the product.</p>
Eye/Face Protection	Safety glasses
Hand Protection	Chemical resistant nitrile rubber gloves



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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

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.	
Spirodiclofen	148477-71-8	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.	
		OES BCS*			0.39 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	viscous liquid suspension
pH	4 - 6 (100 %)
Specific Gravity	1.09 at 20 °C
Density	1.09 g/cm ³ at 20 °C
Melting / Freezing Point	-17.8 °C / -0.0 °F
Water solubility	miscible
Viscosity	700 - 1,000 mPa.s at 23 °C

SECTION 10. STABILITY AND REACTIVITY

Hazardous Reactions Stable under recommended storage conditions.

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SECTION 11. TOXICOLOGICAL INFORMATION

Only acute studies have been performed on this product as formulated. The non-acute information pertains to the technical -grade active ingredient, spirodiclofen.

Acute Oral Toxicity male/female combined rat: LD50: > 2,000 mg/kg

Acute Dermal Toxicity male/female combined rat: LD50: > 4,000 mg/kg

Acute Inhalation Toxicity male/female combined rat: LC50: > 3.146 mg/l
Exposure time: 4 h
Determined in the form of a respirable aerosol.
(actual)

male/female combined rat: LC50: > 12.58 mg/l
Exposure time: 1 h
Determined in the form of a respirable aerosol.
Extrapolated from the 4 hr LC50.
(actual)

Skin Irritation rabbit: No skin irritation.

Eye Irritation rabbit: No eye irritation.

Sensitization guinea pig: sensitizing

Chronic Toxicity Spirodiclofen caused effects in the liver, kidney, adrenal, uterus, prostate and/or testis in chronic studies in rats, mice and dogs.

Assessment Carcinogenicity

Spirodiclofen has been classified by EPA as "likely to be carcinogenic to humans" based on uterine and testicular tumors in rats and liver tumors in mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

**Reproductive &
Developmental Toxicity**

REPRODUCTION: Spirodiclofen was not primary reproductive toxicant in a two-generation reproduction study in rats. Reproductive effects were observed only at doses that caused systemic toxicity.

DEVELOPMENTAL TOXICITY: Spirodiclofen was not a primary developmental toxicant in rats and rabbits. A developmental effect was observed in rabbits but

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was considered secondary to maternal toxicity.

Neurotoxicity

Spirodiclofen was not a neurotoxicant in acute and subchronic screening studies in rats.

Mutagenicity

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

SECTION 12. ECOLOGICAL INFORMATION**Environmental
Precautions**

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

SECTION 13. DISPOSAL CONSIDERATIONS**General Disposal
Guidance**

Pesticide wastes are toxic. Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

Container Disposal

Triple rinse containers. If burned, stay out of smoke. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.

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. 264-831

US Federal Regulations**TSCA list**

Glycerine

56-81-5

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

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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

Glycerine

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IL, MN, RI

Canadian Regulations**Canadian Domestic Substance List**

Glycerine

56-81-5

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)**

Glycerine

56-81-5

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1

Flammability - 1

Reactivity - 0

Others - none

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

Reason to Revise: Updated Section 11: Toxicological Information

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