



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424

MSDS Version 2.2

Revision Date: 02/22/2011

Print Date: 02/23/2011

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. HAZARDS IDENTIFICATION

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

Emergency Overview 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

Odor slight

Appearance white to beige

Exposure routes 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.

Potential Environmental Effect

Highly toxic to bees. Toxic to fish and aquatic invertebrates.



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
MSDS Version 2.2

SECTION 3. 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 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	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	Not relevant; aqueous solution
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available
Explosiveness	no data available



Material Safety Data Sheet
ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
 MSDS Version 2.2

Fire and Explosion Hazards	In the event of fire the following may 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 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	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, sawdust).
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 crop protection products, 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 soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. 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.



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
MSDS Version 2.2

Min/Max Storage Temperatures Recommended minimum transport/storage temperature: -10 °C / 14 °F
Recommended maximum transport/storage temperature: 40 °C / 104 °F

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.
Follow all label instructions. Train employees in safe use of the product.

Eye/Face Protection Safety glasses

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

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
			TWA	10 mg/m3
Spirodiclofen	148477-71-8	OES BCS*	TWA	5 mg/m3
			TWA	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

Odor slight

pH 4 - 6 (100 %)

Vapor Pressure no data available



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424

MSDS Version 2.2

Vapor Density (Air = 1)	no data available
Specific Gravity	1.09 at 20 °C
Density	1.09 g/cm ³ at 20 °C
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	-17.8 °C / -0.0 °F
Water solubility	miscible
Partition coefficient: n-octanol/water	no data available
Viscosity	700 - 1,000 mPa.s at 23 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	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



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
MSDS Version 2.2

Sensitisation guinea pig: Sensitising

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 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 was considered secondary to maternal toxicity.

Assessment neurotoxicity Spirodiclofen was not a neurotoxicant in acute, subchronic or developmental neurotoxicity 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.



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
MSDS Version 2.2

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.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

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

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 56-81-5 IL, MN, RI

Canadian Regulations

Canadian Domestic Substance List

Glycerine 56-81-5



Material Safety Data Sheet

ENVIDOR® 2 SC MITICIDE

MSDS Number: 102000011424
MSDS Version 2.2

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

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

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

Reason for Revision: Updated for general editorial purposes. The following sections have been revised:
Section 16: Other Information.

Revision Date: 02/22/2011

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