



Material Safety Data Sheet
FORBID™ 240 SC INSECTICIDE/MITICIDE

MSDS Number: 102000008393
 MSDS Version 1.0
 Revision Date: 06/06/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name FORBID™ 240 SC INSECTICIDE/MITICIDE
MSDS Number 102000008393
PCP Registration No. 28590

Bayer CropScience Inc
 #100 - 3131 - 114th Avenue SE
 Calgary, AB T2Z 3X2
 Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-888-283-6847

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous Component Name</u> | <u>CAS-No.</u> | <u>Average % by Weight</u> |
|---------------------------------|----------------|----------------------------|
| Spiromesifen | 283594-90-1 | 23.30 |
| Glycerine | 56-81-5 | 10.00 |

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution! Poison. Keep out of the reach of children. May be harmful if swallowed or inhaled. May be harmful if absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

Physical State viscous liquid suspension

Odor musty earthy

Appearance off-white

Routes of Exposure Ingestion, Eye contact, Skin Absorption

Immediate Effects

Eye Causes eye irritation. Do not get in eyes.

Skin May be harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion May be harmful if swallowed. Do not take internally.

Inhalation May be harmful if inhaled. Do not breathe vapours or spray mist.



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Potential Environmental Effect 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 | > 93.4 °C / 200.1 °F |
| Autoignition Temperature | 405 °C / 761 °F |
| Lower Flammability Limit | no data available |
| Upper Flammability Limit | no data available |
| Explosiveness | no data available |
| Suitable Extinguishing Media | Water spray, Foam, Dry powder, Carbon dioxide (CO2), Sand |



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|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Fighting Instructions | Keep out of smoke. Cool closed containers/ tanks exposed to fire with water spray. Fight fire from upwind position. Do not allow run-off from fire fighting to enter drains or water courses. Wear self-contained breathing apparatus and protective suit. |
| Dust Explosion Class | Not applicable. |

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). Keep in suitable, closed containers for disposal. 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. Protect from freezing. |
| Work/Hygienic Procedures | Handle in accordance with good industrial hygiene and safety practice. 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. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing. |

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
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| 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 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|



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PPE separately from other laundry.

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

Eye/Face Protection Safety glasses with side-shields

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 | OEL (QUE) | TWA | | 10 mg/m3 |
| | | Form of exposure | | Mist. | |
| | | CAD AB OEL | TWA | | 10 mg/m3 |
| | | Form of exposure | | Mist. | |
| | | CAD BC OEL | TWA | | 10 mg/m3 |
| | | Form of exposure | | Mist. | |
| | | CAD BC OEL | TWA | | 3 mg/m3 |
| | | Form of exposure | | Respirable mist | |
| | | CAD ON OEL | TWA | | 10 mg/m3 |
| | | Form of exposure | | Mist. | |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|------------------------------------------|
| Appearance | off-white |
| Physical State | viscous liquid suspension |
| Odor | musty earthy |
| pH | 3.5 - 4.5 (undiluted) |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Density | approx. 1.029 g/cm ³ at 20 °C |
| Evaporation rate | no data available |
| Boiling Point | no data available |
| Melting / Freezing Point | -18 °C / -0 °F |



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| Decomposition Temperature | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | 600 - 1,100 mPa.s |

SECTION 10. STABILITY AND REACTIVITY

| | |
|-----------------------------------------|------------------------------------------|
| Conditions to Avoid | Freezing |
| Incompatibility | no data available |
| Hazardous Decomposition Products | Thermal decomposition Carbon monoxide |
| Hazardous Reactions | Stable under normal conditions. |

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient, spiromesifen technical.

| | |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Acute Oral Toxicity | rat: LD50: > 2,000 mg/kg |
| Acute Dermal Toxicity | rat: LD50: > 4,000 mg/kg |
| Acute Inhalation Toxicity | rat: LC50: > 2.8 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. |
| | rat: LC50: > 11.2 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50. |
| Skin Irritation | rabbit: No skin irritation. |
| Eye Irritation | rabbit: No eye irritation. |
| Sensitization | guinea pig: Non-sensitizing. |
| Chronic Toxicity | Spiromesifen caused effects in the liver, uterus, adrenal and/or thyroid (secondary effect) in chronic studies in rats and dogs. |
| Assessment Carcinogenicity | Spiromesifen was not carcinogenic in lifetime feeding studies in rats and mice. |



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ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Reproductive & Developmental Toxicity

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

DEVELOPMENTAL TOXICITY: Spiromesifen was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rats but were considered secondary to maternal toxicity.

Neurotoxicity

Spiromesifen caused transient neurobehavioral effects without correlating neuropathological changes in acute and subchronic neurotoxicity screening studies in rats.

Mutagenicity

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

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

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



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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Dispose in accordance with all local, state/provincial and federal regulations. It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

Container Disposal Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Consult state and local regulations regarding the proper disposal of container.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
 Not regulated for Domestic Surface Transportation

IMDG CLASSIFICATION:
 Environmentally Hazardous Substances, Liquid, N.O.S.(Spiromesifen)// 9 // UN3082 // PG III

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

TDG (Canada):
 Not regulated for road or rail.

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 28590

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.



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US State Right-To-Know Ingredients
None.

Canadian Regulations
Canadian Domestic Substance List
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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 - 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; Updated Section 11: Toxicological Information.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 06/06/2007

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