

**SEVIN® BRAND 4F CARBARYL INSECTICIDE**

MSDS Version 2.1

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

| | |
|--------------------------------|--------------------------------------|
| Product Name | SEVIN® BRAND 4F CARBARYL INSECTICIDE |
| Chemical Name | |
| Synonym | Carbaryl |
| MSDS Number | 194 |
| Chemical Family | |
| Chemical Formulation | C12H11NO2 |
| EPA Registration No. | 264-349 |
| Canadian Registrat. No. | |

Bayer CropScience
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For Product Use Information: (866)-992-2937 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Component Name</u> | <u>CAS No.</u> | <u>Concentration % by Weight</u> | |
|---|----------------|----------------------------------|----------------|
| | | <u>Minimum</u> | <u>Maximum</u> |
| CARBARYL, (1-NAPHTHYL N- METHYLCARBAMATE) | 63-25-2 | 41.2000 | |
| 1,2-Propylene glycol | 57-55-6 | | |
| ETHANOL | 64-17-5 | | |
| Other ingredients (Trade secret) | | | |

SECTION 3. HAZARDS IDENTIFICATION

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

| | |
|----------------------------------|--|
| <u>Emergency Overview</u> | Caution. May be harmful if swallowed or inhaled. |
| Physical State | liquid |
| Odor | mild |
| Appearance | off-white to pale yellow |
| Immediate Effects | |
| Eye | Causes redness, irritation, tearing. |

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| | |
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| Skin | Harmful if absorbed through skin. May produce symptoms similar to those from ingestion. |
| Ingestion | Harmful if ingested. This product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced signs and symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions. |
| Inhalation | Harmful if inhaled. May produce symptoms similar to those from ingestion. |
| 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. |
| Medical Conditions Aggravated by Exposure | Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease. |

SECTION 4. FIRST AID MEASURES

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| Eye | Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention. |
| Skin | In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use. |
| Ingestion | If victim is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical. |
| Inhalation | Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention. |
| Note to Physician | <p>All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.</p> <p>This product contains a methyl carbamate insecticide, which is a cholinesterase inhibitor. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of</p> |

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overexposure are spontaneously and rapidly reversible.

Specific treatment consists of parenteral atropine sulfate. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours.

To aid in confirmation of a diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Call 1-800-334-7577 before sending samples. Analysis will be arranged by Bayer.

Persons regularly exposed in manufacturing and handling this product should have a preexposure and periodic red blood cell cholinesterase level checks. Narcotics and other sedative should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point > 93 °C / > 199 °F

Lower Flammable Limit Data

Upper Flammable Limit No Data

Fire and Explosion Hazards Product will burn under fire conditions.

Suitable Extinguishing Media Small Fires:, carbon dioxide (CO2), dry chemical

Large Fires:, alcohol foam, polymer foam, water spray

Fire Fighting Instructions Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal Evacuation Procedures and Safety: Wear appropriate gear for the situation. See Personal Protection information in Section 8.

Cleanup and Disposal of Spill: Recover material, if possible. Absorb with vermiculite or other inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. Decontaminate tools and equipment following cleanup.

Land Spill or Leaks Containment of Spill: Dike spill using absorbent or impervious materials such as earth, sand or clay. Follow procedure under Cleanup and Disposal of Spill. Collect and contain contaminated absorbent and dike material for disposal.

Environmental and Regulatory Reporting: Runoff from fire control or dilution water may cause pollution. Prevent material from entering public sewer system or any waterway. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies. If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Avoid direct or prolonged contact with skin and eyes. Do not ingest.

Storing Procedures Store in original container. Keep in a dry, cool place. Store in an area that is away from foodstuffs or animal feed, out of reach of children and animals.

Work/Hygienic Procedures Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

Wash exposed skin promptly to remove accidental splashes of contact with this material.

In addition, based upon the specific hazard of this product: Do not take clothing/objects contaminated by this material off the work site. Shower and change into street clothes before leaving the work site.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation

Eye/Face Protection Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

Body Protection Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

Respiratory Protection When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridge/canister approved for use against pesticides.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

Exposure Limits

| | | | | |
|---|---------|------------------|--------------------------|----------|
| CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) | 63-25-2 | ACGIH | TWA | 5 mg/m3 |
| | | NIOSH | REL | 5 mg/m3 |
| | | OSHA Z1 | PEL | 5 mg/m3 |
| | | OSHA Z1A | TWA | 5 mg/m3 |
| | | US CA OEL | TWA PEL | 5 mg/m3 |
| 1,2-Propylene glycol | 57-55-6 | WEEL | TWA | 50 ppm |
| | | Form of Exposure | Total vapor and aerosol. | |
| | | WEEL | TWA | 10 mg/m3 |
| | | Form of Exposure | Aerosol. | |

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|---------|---------|-----------|------------------|------------------------|-------------|
| | | ACGIH | TWA | | 3 mg/m3 |
| | | | Form of Exposure | Respirable. | |
| | | 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. | |
| | | US CA OEL | TWA PEL | | 5 mg/m3 |
| | | | Form of Exposure | Respirable fraction. | |
| | | 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. | |
| | | US CA OEL | TWA PEL | | 10 mg/m3 |
| | | | Form of Exposure | Total dust. | |
| | | ACGIH | TWA | | 10 mg/m3 |
| | | | Form of Exposure | Inhalable particulate. | |
| ETHANOL | 64-17-5 | ACGIH | TWA | | 1,000 ppm |
| | | NIOSH | REL | 1,000 ppm | 1,900 mg/m3 |
| | | OSHA Z1 | PEL | 1,000 ppm | 1,900 mg/m3 |
| | | OSHA Z1A | TWA | 1,000 ppm | 1,900 mg/m3 |
| | | US CA OEL | TWA PEL | 1,000 ppm | 1,900 mg/m3 |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------|--------------------------|
| Appearance | off-white to pale yellow |
| Physical State | liquid |
| Odor | mild |
| pH | 4 - 5 at 5 wt/wt%. |
| Vapor Pressure | 17.8 mmHg at 20 °C |
| Vapor Density (air = 1) | 0.62 |
| Specific Gravity | 1.1 at 20 °C |
| Boiling Point | 98 °C at 760 mmHg |
| Melting/Freezing Point | -3 °C |
| Solubility (in water) | miscible |

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Molecular Weight 201.2 g/mol

Decomposition Temperature 140 °C

Other Information Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability This material is stable under normal handling and storage conditions described in Section 7.

Conditions to Avoid extreme heat
open flame

Incompatibility strong acids
bases

Hazardous Products of Decomposition Decomposition Type: thermal
oxides of nitrogen
carbon oxides
methyl isocyanate
(trace; no adverse effects expected)

Hazardous Polymerization (Conditions to avoid) not applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity Rat: LD50: 590 mg/kg

Acute Dermal Toxicity Rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity Rat: LC50: > 1.8 mg/l 4 h

Acute Respiratory Irritation:
No test data found for product.

Skin Irritation Rabbit: Minimally Irritating

Eye Irritation Rabbit: Slightly irritating.

Chronic Toxicity Carbaryl has been shown to cause tumors in laboratory animals in lifetime feeding studies. Carbaryl, when administered by various routes, at doses toxic to the maternal animals, has been shown to produce developmental toxicity in a

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number of species. Carbaryl produces no teratogenic effect in the absence of maternal toxicity.

Assessment Carcinogenicity

ACGIH

| | | |
|--|---------|----------|
| CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) | 63-25-2 | Group A4 |
| ETHANOL | 64-17-5 | Group A4 |

NTP

None

IARC

| | | |
|--|---------|---|
| CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) | 63-25-2 | 3 |
|--|---------|---|

OSHA

None

SECTION 12. ECOLOGICAL INFORMATION

Ecological Information For ecotoxicological data call the product information phone number listed in Section 1.

Environmental Fate For chemical fate data call the product information phone number listed in Section 1.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

EPA Hazardous Waste - No

RCRA Classification 63-25-2 CARBARYL, (1-NAPHTHYL N- METHYLCARBAMATE)

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U279

SECTION 14. TRANSPORT INFORMATION

For Transportation Regulatory Information call the Product Information phone number in Section 1.

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SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No. 264-349

TSCA list

CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) 63-25-2

1,2-Propylene glycol 57-55-6

ETHANOL 64-17-5

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) 63-25-2 1.0%

US States Regulatory

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

CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) 63-25-2 CA, CT, IL, MA, MN, NJ, PA, RI

1,2-Propylene glycol 57-55-6 PA, RI

ETHANOL 64-17-5 CA, CT, IL, MA, MN, NJ, PA, RI

Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

1,2-Propylene glycol 57-55-6

ETHANOL 64-17-5

Environmental

CERCLA

CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) 63-25-2 100 lbs

ETHANOL 64-17-5 100 lbs

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

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EU Classification

None

European Inventory of Existing Commercial Substances (EINECS)

| | |
|--|---------|
| CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE) | 63-25-2 |
| 1,2-Propylene glycol | 57-55-6 |
| ETHANOL | 64-17-5 |

SECTION 16. OTHER INFORMATION

| | Health | Flammability | Reactivity | Others |
|------|--------|--------------|------------|--------|
| HMIS | 2 | 1 | 1 | |
| NFPA | 2 | 1 | 1 | |

Reason for Revisions: Company name change.

Print Date: 12/18/2002

Supersedes MSDS, which is older than: 12/16/2002

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