

**MOCAP<sup>®</sup> BRAND EC NEMATICIDE/INSECTICIDE**

MSDS Version 4.1

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name** MOCAP<sup>®</sup> BRAND EC NEMATICIDE/INSECTICIDE  
**Chemical Name** Ethoprop, ENT27318, V-C 9-104, MOBIL 10000, Prophos, Ethoprophos  
**Synonym**  
**MSDS Number** 108  
**Chemical Family** Organoposphate  
**Chemical Formulation** C8H19O2PS2  
**EPA Registration No.** 264-458  
**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

**Product Use Description** FIFRA regulated use only.

**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>
ETHOPROP	13194-48-4		69.6000
NAPHTHALENE	91-20-3	<	2.8000
Other ingredients (Trade secret)			

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### SECTION 3. HAZARDS IDENTIFICATION

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

#### **Emergency Overview**

Danger! Poisonous if swallowed, inhaled or absorbed through the skin. Rapidly absorbed through skin. Combustible liquid.

#### **Physical State**

liquid

#### **Odor**

mercaptan odor

#### **Appearance**

amber oily liquid.

#### **Immediate Effects**

##### **Eye**

May be absorbed through the eye and produce symptoms similar to those from ingestion. May cause redness, tearing.

##### **Skin**

Highly toxic if absorbed through the skin. May produce symptoms similar to those from ingestion. Causes redness, swelling.

##### **Ingestion**

May be fatal if swallowed. This product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced signs and symptoms. Aspiration of the swallowed or vomited product can cause severe pulmonary complications. 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**

Highly toxic if inhaled. May produce symptoms similar to those from ingestion. May cause headache, nausea, vomiting.

#### **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

#### **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 15 minutes. Seek medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

#### **Ingestion**

If victim is conscious and alert, give 2-3 glasses of water to drink and induce

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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

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.

If emesis has not occurred, the stomach should be emptied by gastric lavage. This product is a cholinesterase inhibitor. Severe symptoms and signs include diarrhea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary edema, cyanosis, loss of sphincter control, convulsions, and coma.

Support respiration as needed. Measures should include removal of secretions, maintenance of patent airway, and, if necessary, artificial ventilation.

If cyanosis is absent, give Atropine 2-4 mg intravenously (0.05 mg/kg for children). Repeat Atropine at 5 to 10 minute intervals until atropinization occurs (dry, flushed skin, tachycardia, pupillary dilation), and maintain for 48 hours. If cyanotic, give initial atropine intramuscularly and start measures to improve ventilation.

Start 2-PAM at the same time. Give 1 to 2 gm 2-PAM (20 to 40 mg/kg for children) in 100 cc saline over 15 to 30 minutes. If pulmonary edema is present, give intravenously slowly as a 5% solution in water over 5 minutes.

A second dose may be given after 1 hour if muscle weakness persists. Additional doses may be given cautiously for persistent muscle weakness. May be given by intramuscular or subcutaneous routes if intravenous administration is not feasible.

In case of skin contact, wash patient with soap and water followed by wash with 95% ethyl alcohol. Keep patient under constant observation for 24 to 36 hours. Symptoms may persist for 1 month.

## SECTION 5. FIRE FIGHTING MEASURES

### Flash Point

84 °C / 183 °F  
Method: Tagliabue Closed Cup  
Combustible.

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**Lower Flammable Limit** 0.6 %(V)

**Upper Flammable Limit** 7 %(V)

**Fire and Explosion Hazards** Product will burn under fire conditions.

**Suitable Extinguishing Media** dry chemical, foam, water, carbon dioxide (CO<sub>2</sub>)

**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. Stay upwind if possible. Keep out of low areas. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

### 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. Evacuate and isolate spill area. Stay upwind if possible. Exclude all except properly equipped emergency personnel.

Cleanup and Disposal of Spill: Pump any free liquid into an appropriate closed container. Absorb with vermiculite or other inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Decontaminate tools and equipment following cleanup.

**Land Spill or Leaks** Containment of Spill: Stop leak if it can be done without risk. 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: Do not flush to drain. 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. 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.

### SECTION 7. HANDLING AND STORAGE

**Handling Procedures** Do not breathe vapors and mists. Do not get on skin or in eyes. Do not ingest.

**Storing Procedures** Store in an area that is away from ignition sources. Store in an area away from food, feedstuffs, fertilizers and seed.

**Work/Hygienic** Personal hygiene is an important work practice exposure control measure and

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**Procedures** 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.

**Min/Max Storage Temperatures** Not Available

### 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: local exhaust ventilation at the point of generation.

**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. Face contact should be prevented through use of a face shield.

**Body Protection** Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard of use conditions and exposure potential. 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

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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.

### General Protection

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

### Exposure Limits

NAPHTHALENE	91-20-3	ACGIH	TWA		10 ppm
		ACGIH	STEL		15 ppm
		NIOSH	REL	10 ppm	50 mg/m <sup>3</sup>
		NIOSH	STEL	15 ppm	75 mg/m <sup>3</sup>
		OSHA Z1	PEL	10 ppm	50 mg/m <sup>3</sup>
		OSHA Z1A	TWA	10 ppm	50 mg/m <sup>3</sup>
		OSHA Z1A	STEL	15 ppm	75 mg/m <sup>3</sup>
		US CA OEL	TWA PEL	10 ppm	50 mg/m <sup>3</sup>
		US CA OEL	STEL	15 ppm	75 mg/m <sup>3</sup>

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	amber oily liquid.
<b>Physical State</b>	liquid
<b>Odor</b>	mercaptan odor
<b>pH</b>	Not applicable
<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air = 1)</b>	Not available
<b>Specific Gravity</b>	1.03 at 20 °C

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<b>Boiling Point</b>	Not available
<b>Melting/Freezing Point</b>	< 0 °C
<b>Solubility (in water)</b>	insoluble
<b>Molecular Weight</b>	242.3 g/mol
<b>Decomposition Temperature</b>	203 °C
<b>Other Information</b>	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

<b>Chemical Stability</b>	This material is stable under normal handling and storage conditions described in Section 7.
<b>Conditions to Avoid</b>	extreme heat
<b>Incompatibility</b>	strong oxidizing agents bases
<b>Hazardous Products of Decomposition</b>	Decomposition Type: thermal oxides of sulfur oxides of phosphorus carbon oxides

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**Hazardous Polymerization  
(Conditions to avoid)** not applicable

### SECTION 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity** Female Rat: LD50: 15.9 mg/kg  
Male Rat: LD50: 46.7 mg/kg

**Acute Dermal Toxicity** Male Rat: LD50: 369 mg/kg  
Female Rat: LD50: 166 mg/kg

**Acute Inhalation Toxicity** Male Rat: LC50: 0.86 mg/l 4 h  
Female Rat: LC50: 0.32 mg/l 4 h  
Acute Respiratory Irritation:  
No test data found for product.

**Skin Irritation** No test data found for product.

**Eye Irritation** No test data found for product.

No additional test data found for product.

#### Assessment Carcinogenicity

**ACGIH**

NAPHTHALENE 91-20-3 Group A4

**NTP**

NAPHTHALENE 91-20-3

**IARC**

None

**OSHA**

None

### SECTION 12. ECOLOGICAL INFORMATION

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



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**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.

**Container Disposal** Any container or equipment used should be decontaminated immediately after use.

EPA HAZARDOUS WASTE - NO

**RCRA Classification** Not Regulated under this Statute

### SECTION 14. TRANSPORT INFORMATION

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

### SECTION 15. REGULATORY INFORMATION

#### US Federal

**EPA Registration No.** 264-458

#### TSCA list

NAPHTHALENE 91-20-3

#### TSCA 12b export notification

None

#### SARA Title III - section 302 - notification and information

ETHOPROP 13194-48-4

#### SARA Title III - section 313 - toxic chemical release reporting

ETHOPROP 13194-48-4

NAPHTHALENE

91-20-3

1.0%

1.0%

#### US States Regulatory

##### CA Prop65

This product contains a chemical known to the state of California to cause cancer. ETHOPROP 13194-48-4

#### US State right-to-know ingredients

ETHOPROP 13194-48-4

NAPHTHALENE

91-20-3

CA, IL, LA, MA, NJ, PA

CA, CT, IL, MN, NJ, PA, RI

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### Canadian Regulations

Canadian Registrat. No.  
Canadian Domestic Substance List  
NAPHTHALENE 91-20-3

### Environmental

CERCLA  
NAPHTHALENE 91-20-3 100 lbs  
Clean Water Section 307 Priority Pollutants  
NAPHTHALENE 91-20-3  
Safe Drinking Water Act Maximum Contaminant Levels  
NAPHTHALENE 91-20-3

### International Regulations

#### EU Classification

NAPHTHALENE 91-20-3 Harmful Dangerous for the environment

R Phrases

Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrases

Keep out of the reach of children. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### European Inventory of Existing Commercial Substances (EINECS)

ETHOPROP 13194-48-4  
NAPHTHALENE 91-20-3

## SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	3	2	1	
NFPA	3	2	1	

Reason for Revisions: Company name change.

Print Date: 12/17/2002

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

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