

# MOCAP® 200 EC

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** MOCAP® 200 EC  
**Other identifier:** Ethoprophos 200 EC  
**Recommended use:** Insecticide  
**Restrictions on use:** Agriculture

**Supplier:** Villa Crop Protection (Pty) Ltd.  
 PO Box 801  
 Kempton Park, 1620, South Africa

**Telephone:** (011) 3962233

**Fax:** (011) 3964666

**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

### Emergency telephone numbers:

#### 24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918

(Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

Griffon Poison Information Centre +27 82 446 8946

(Client: Villa Crop Protection)

### Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946

Poisons Information Centre +27 861 555 777

### Villa Crop Protection Emergency number:

#### National Safety, Health and Environmental Manager:

+27 63 698 0668

## Label elements:



**Signal word:** Danger

### Hazard statements:

H301: Toxic if swallowed.

H304: May be fatal if swallowed and enters airways.

H310: Fatal in contact with skin.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H330: Fatal if inhaled.

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

### Precautionary statements:

P260: Do not breathe mist/spray.

P262: Do not get in eyes, on skin, or on clothing

P264: Wash hands and face thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

P284: In case of inadequate ventilation wear respiratory protection.

P301/310: IF SWALLOWED: Immediately call a POISON CENTER.

P302/352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305/351/338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTRE.

P330: Rinse mouth.

P331: Do NOT induce vomiting.

P332/313: If skin irritation occurs: get medical advice.

P333/313: If skin irritation or rash occurs: Get medical advice.

P361/364: Take off immediately all contaminated clothing and wash before reuse.

P362/364: Take off contaminated clothing and wash it before reuse.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place.

P405: Store locked up.

## 2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
<b>Health</b>		
Oral	Acute tox. 3	H301
Dermal	Acute tox. 2	H310
	Skin Irrit. 2	H315
Inhalation	Acute tox. 2	H330
Skin sensitizer	Skin Sens. 1	H317
Eye	Eye Dam. 1	H318
Aspiration hazard	Asp. Tox. 1	H304
<b>Environment</b>		
Aquatic Acute	Aquatic Acute 2	H401
Aquatic chronic	Aquatic Chronic 2	H411

### The most important adverse effects:

#### Physicochemical effects:

None known

#### Human health effects:

Fatal if inhaled.

Fatal in contact with skin.

Causes serious eye damage.

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P501: Dispose of content/container to suitable landfill in accordance with local regulations.

**Special labelling of certain mixtures:**

None known.

**Other hazards:**

None known.

**Toxicity:**

Classification according to GHS: Category 2  
 Classification according to WHO: Category Ib  
 Classification according to GPIC: Category Ia

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture  
**Composition:**

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Ethoprophos	13194-48-4	21.23	Skin Sens. 1 (H317) Aquatic acute 1 (H400) Aquatic chronic 1 (H410) Acute tox. 1 (H310) Acute tox 3 (301) Acute tox. 2 (H330)
Tristyrylpheno lethoxyate	99734-09-5	>5	Aquatic chronic 3 (H412)
Alkylaryl sulfonate	11117-11-6	>4	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic chronic 3 (H412) Acute tox. 4 (H312)
Heavy aromatic solvent	64742-94-5	>60	Asp. Tox 1 (H304)

### 4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

**Inhalation:** Remove person from source of poisoning and keep the person calm and reassured. If the patient is not breathing, commence with artificial respiration and provide oxygen or closed chest cardiac massage.

**Skin:** Remove contaminated clothing immediately and rinse contaminated area thoroughly with cold water and non-scrubbing soap. Do not rub skin. Emergency personnel should wear gloves and avoid contamination.

**Eyes:** Flush contamination out of eyes with clean lukewarm water for at least 15 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face.

**Ingestion: Do not induce vomiting. Do not induce vomiting.** If swallowed, drink 2 to 3 glasses of water. **Do not induce vomiting or give anything by mouth to an unconscious person.** Vomiting may occur spontaneously.

**Anticipated acute effects:**

Toxic if swallowed  
 Harmful in contact with skin

**Anticipated delayed effects:** None known.

**Most important symptoms/effects:** None known.

**Advice to physician:** Support respiration, measures should include the removal of secretions, maintenance of the patient's airway and if necessary, artificial ventilation. If cyanosis is absent, administer 2 to 4 mg atropine sulphate intravenously (0.05 mg/kg for children). Repeat atropine sulphate at 5 to 10-minute intervals until patient is fully atropinized (dry flushed skin, tachycardia, papillary dilation) and maintain for at least 48 hours. If cyanotic, give initial atropine sulphate dose intramuscularly and start measures to improve ventilation.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Use carbon dioxide, dry chemical powder or water fog.

**Unsuitable Extinguishing Media:** Do not use water jet, as this will spread the fire.

**Specific hazards:** During fire, gases hazardous to health may be formed.

**Special Fire Fighting Procedures:** Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

**Personal protective equipment:** Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid contact with eyes. Do not breathe in spray mist or dust/fumes/vapours. Ventilate area of spill or leak, especially in contained areas.  
**Protective equipment:** Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

**Emergency procedures:** Alert firefighting personnel, evacuate unprotected personnel and animals.

**Environmental Precautions:** Prevent spilled product from entering sewers, waterways or ground water. This product is classified to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.)

**Methods and Materials for Containment:** Contain spilled product by diking area with sand or earth.

**Methods and Materials for Clean-up:** Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

## 7. HANDLING AND STORAGE

### Handling:

**Precautions for safe handling:** Toxic if swallowed. Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

**General occupational hygiene:** Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

### Storage:

**Conditions for safe storage:** Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed, in an isolated, dry, cool and well-ventilated area. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

**Incompatible substances and mixtures:** Refer to product label.

**Packaging material:** Fluorinated plastic containers.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Naphthalene	50 mg/cm <sup>3</sup>	PEL	OSHA

### Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

### Personal Protective Equipment

**Respiratory Protection:** For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved air-purifying respirator with cartridges/canisters approved for organic vapours.

**Hand Protection:** The use of chemically protective (impervious) gloves is recommended to prevent against skin contact.

**Eye Protection:** The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

**Skin and Body Protection:** Employee must wear appropriate protective (impervious) clothing e.g. goggles boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Light yellow liquid, Emulsifiable concentrate.

**Odour:** Petrol-like odour.

**pH (1% aqueous dilution):** 6.0 @ 26 °C.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

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**Flash Point:** 56 °C.  
**Flammability:** Not available.  
**Upper/lower explosion limits:** Not available  
**Vapour Pressure (mm Hg):** Not available.  
**Relative Vapour Density:** Not available.  
**Density/Relative density:** 0.939 mg/l @ 20 °C.  
**Solubility:** Not available.  
**n-octanol/water partition coefficient:** Not available.  
**Auto-ignition temperature:** Not available.  
**Decomposition temperature:** Not available.  
**Viscosity:** 0.00107 Pa/s at 40 °C and 0.00176 Pa/s at 20 °C.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions.  
**Reactivity:** non-reactive.  
**Possibility of Hazardous Reactions:** Will not occur.  
**Conditions to Avoid:** Contact with incompatible materials.  
**Incompatible Materials:** Alkaline metals, Isocyanates.  
**Hazardous Decomposition Products:** Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned.

## 11. TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:**  
**Calculated according to GHS.**  
**Oral LD<sub>50</sub> (24 h) rat** 291 mg/kg.  
**Dermal LD<sub>50</sub> (24 h) rabbit** 121 mg/kg.  
**Inhalation LC<sub>50</sub> (4 h) rat** 0.85 mg/l.  
**Skin Irritation/Corrosion:** Causes skin irritation.  
**Eye Damage/Irritation:** Causes serious eye damage.  
**Skin Sensitization:** May cause allergic skin reaction.  
**Respiratory Sensitization:** Fatal if inhaled.  
**Reproductive cell mutagenicity:** Not available.  
**Carcinogenicity:** Not available.  
**Reproductive toxicity:** Not available.  
**Specific target organ toxicity – single exposure:** Not available.  
**Specific target organ toxicity – repeated exposure:** Not available.  
**Aspiration hazard:** May be fatal if swallowed and enters airways.  
**Chronic Effects:** Not available.  
**POTENTIAL ADVERSE EFFECTS:**  
**Inhalation:** Fatal if inhaled.  
**Skin contact:** Causes skin irritation.  
**Eye contact:** Causes serious eye damage.  
**Ingestion:** May be fatal if swallowed.

## 12. ECOLOGICAL INFORMATION

This product is toxic to aquatic organisms with long lasting effects.

### ECOTOXICITY DATA: Active ingredient.

**Fish:**

LC <sub>50</sub> (96 h)	Rainbow trout	13.8 mg/l.
	Bluegill sunfish	2.1 mg/l.
	Goldfish	13.6 mg/l.

**Birds:**

Acute oral LD <sub>50</sub>	Mallard ducks	61 mg/kg
	Hens	5.6 mg/kg

**Bees:**  
 Not hazardous to bees when used as directed

**Plants:** In plants such as haricot beans and maize, ethoprophos is rapidly broken down into non-toxic metabolites such as methyl propyl sulphide, methyl propyl sulfoxide and methyl propyl sulfone.

### ENVIRONMENTAL EFFECTS:

**Persistence and degradability:** Not determined.  
**Bio-accumulative Potential:** Not determined.  
**Mobility in soil:** Not determined.  
**Other adverse effects:** Not determined.

## 13. DISPOSAL CONSIDERATIONS

**Waste:** Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant. Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

**Container:** Emptied containers retain vapour and product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to one third of that of the container. Add the rinsing's to the contents of the spray tank before recycling or destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dumpsite, incineration plant or recycling company. Observe all labelled safeguards until container is destroyed.

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## 14. TRANSPORT INFORMATION

**UN Number:** 3018  
**Road Transport ADR/IRD:**  
 Class: 6.1  
 Packaging group: I  
 UN Proper Shipping Name: Organophosphorus Pesticide, Liquid, Toxic (Ethoprophos 200 g/l)

**Maritime Transport IMDG/IMO:**  
 Class: 6.1  
 Packaging group: I  
 UN Proper Shipping Name: Organophosphorus Pesticide, Liquid, Toxic (Ethoprophos 200 g/l)

**Marine Pollutant (Y/N):** Yes, considered a marine pollutant.

**Air Transport IATA/ICAO:**  
 Class: 6.1  
 Packaging group: I  
 UN Proper Shipping Name: Organophosphate Pesticide, Liquid, Toxic (Ethoprophos 200 g/l)

**Special/Environmental Precautions: None known.**  
**Transport in bulk** (according to MARPOL 73/78, Annex II and the IBC code): Not available.

health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

### END OF DOCUMENT

**Compiled:** July 2017  
**Reviewed:** June 2019  
**Revision no.:** (2)  
**Next revision date:** June 2024

For detailed information on revisions, contact the Registration holder.

## 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation for the mixture:**  
 OSHA 1993 Regulations for Hazardous Chemical Substances.

**Relevant information regarding restrictions:** None.

**EU regulation:** Regulation EC1272/2008 (EU-GHS/CLP)

**Other national regulations:** None.

**Chemical Safety Assessment carried out?** No

## 16. OTHER INFORMATION

**Packaging:** Packed in 1, 5, 10, 20 and 25 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.

**Additional H statements (formulants):**  
 H312: Harmful in contact with skin.  
 H314: Causes severe skin burns and eye damage.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.  
 H412: Harmful to aquatic life with long lasting effects.

**Disclaimer:** The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to