

# EDB MO

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** EDB MO  
**Other identifier:** Ethylene Dibromide  
 1800 g/l

**Recommended use:** Nematicide/Insecticide  
**Restrictions on use:** Agriculture

**Supplier:** Universal Crop Protection (Pty) Ltd.  
**Co. Reg. No.:** 1983/008184/07  
 PO Box 801,  
 Kempton Park, 1620, South Africa

**Telephone:** (011) 396 2233  
**Fax:** (011) 396 4666  
**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

**Emergency telephone numbers:**  
**24 Hr Transport / Spill emergency no:**  
 (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

## 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 Toxicity 3	H301
Dermal	Acute Toxicity 3 Skin Irritation 2	H311 H315
Eye	Eye irritation 2	H319
Inhalation	Acute Toxicity 3	H331
Specific Target Organ Toxicity Single Exposure	STOT SE 3	H335
Mutagenicity	Mutagenicity 1B	H340
Carcinogenicity	Carcinogenicity 1B	H350
Reproductive Hazard	Reproductive Toxicity 2	H361d
Specific Target Organ Toxicity Repeated Exposure	STOT RE 1	H372
<b>Environment</b>		
Aquatic Acute	Aquatic Acute 3	H402

Aquatic Chronic 2	Aquatic Chronic 2	H411
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**The most important adverse effects:**  
**Physiochemical effects:** None known.  
**Human health effects:**  
 Toxic if swallowed, inhaled or in contact with skin.  
 Causes skin irritation and serious eye irritation.  
 May cause respiratory irritation.  
 May cause genetic defects.  
 May cause cancer.  
 Suspected of damaging fertility or the unborn child.  
 Causes damage to the central nervous system through prolonged or repeated exposure.

### Label elements:



**Signal word:** Danger

### Hazard statements:

H301: Toxic if swallowed.  
 H311: Toxic in contact with skin.  
 H315: Causes skin irritation.  
 H319: Causes serious eye irritation.  
 H331: Toxic if inhaled.  
 H335: May cause respiratory irritation.  
 H340: May cause genetic defects.  
 H350: May cause cancer.  
 H361d: Suspected of damaging fertility or the unborn child.  
 H372: Causes damage to the central nervous system through prolonged or repeated exposure.  
 H402: Harmful to aquatic life.  
 H411: Toxic to aquatic life with long lasting effects.

### Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.  
 P260: Do not breathe mists, vapours and spray.  
 P264+P265: Wash hands thoroughly after handling. Do not touch eyes.  
 P270: Do not eat, drink or smoke when using this product.  
 P271: Use only outdoors or in a well-ventilated area.  
 P273: Avoid release into the environment.  
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

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P301+P310: IF SWALLOWED: Immediately call a POISON CENTER.

P301+P302+P304+P316: IF SWALLOWED, INHALED OR ON SKIN: Get emergency medical help immediately.

P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P318: IF exposed or concerned, get medical advice.

P330: Rinse mouth.

P337+P317: If eye irritation persists: Get medical help.

P361+P364: Take off immediately all contaminated clothing and wash before reuse.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

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

### Other hazards:

None known.

### Toxicity:

Classification according to GHS: Category 3

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Ethylene dibromide	106-93-4	92%	Acute Toxicity 3 (H301) Acute Toxicity 3 (H311) Skin Irritation 2 (H315) Eye Irritation 2 (H319) Acute Toxicity 3 (H331) STOT SE 3 (H335) Carcinogen 1B (H350) Aquatic Chronic 2 (H411)
Ethylene dibromide (cont.)			
Naphtha Solvent	64742-82-1	< 5 %	Aspiration Toxicity 1 (H304)

			Mutagen 1B (H340) Carcinogen 1B (H350) STOT RE 1 (H372)
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### 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 and consult a doctor.

**Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed.

**Immediately seek medical attention.**

**Skin:** Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Immediately seek medical attention.**

**Eyes:** Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention if irritation persists or patient feels unwell.**

**Ingestion: Immediately seek medical attention or call a poison control centre for treatment advice.**

Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

#### Anticipated acute effects:

Toxic if swallowed, inhaled or in contact with skin.

Causes skin irritation and serious eye irritation.

May cause respiratory irritation.

#### Anticipated delayed effects:

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to the central nervous system through prolonged or repeated exposure.

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

**Advice to physician:** There is no specific antidote available.

Treat symptomatically and supportively. EDB causes CNS depression, pulmonary edema, metabolic acidosis, acute renal and hepatic failure, and skeletal muscle necrosis. Suggest a blood bromine test. Dermal contact results in delayed onset of erythema, edema, and skin necrosis.

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Monitor for hypotension, respiratory depression and the need for endotracheal intubation. Consider phenobarbital and/or phenytoin or fosphenytoin if seizures are uncontrollable or recur after diazepam 30 mg (adults) or 10 mg (children > 5 years).

### PULMONARY EDEMA (NONCARDIOGENIC):

Maintain ventilation and oxygenation with close arterial blood gas monitoring. Early use of PEEP and mechanical ventilation may be needed to maintain pO<sub>2</sub> greater than 50 mmHg with FIO<sub>2</sub> less than 60%. DIMERCAPROL (BAL) THERAPY should be considered in life threatening cases as a means of limiting sulfhydryl enzyme inhibition but has not been critically tested in controlled studies.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam.

**Unsuitable Extinguishing Media:** Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible.

**Specific hazards:** Hazards or hazardous products may arise from combustion.

**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. Remain upwind of fire. 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.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Avoid contact with eyes and skin. **Do not breathe in spray mist / 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 as toxic to aquatic organisms with 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 spilt 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 spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt 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. Do not inhale spray mist or vapours. 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-

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ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. 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:** Metal drums.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Ethylene dibromide	20 ppm	8h TWA	"www.osha.gov"
Naphthalene	10 ppm	TWA OEL-RL	"Hazardous Chemical Substances Regulations, 1995"

#### 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:** Chemically protective impervious gloves must be worn to prevent against skin contact.

**Eye Protection:** Chemical safety goggles must be worn to prevent eye contact. Contact lenses are not protective eye devices.

**Skin and Body Protection:** Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

**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:** Colourless/clear liquid.

**Odour:** Sweet, faintly nauseating odour.

**Odour threshold:** Not available.

**pH (1% aqueous dilution):** Not available.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** 39 °C.

**Flammability:** Not classified as flammable.

**Upper / lower explosion limits:** Not available.

**Vapour Pressure (mm Hg):** Not available.

**Relative Vapour Density:** Not available.

**Density / Relative density:** 1.95 g/ml.

**Solubility:** 0.43g/100 g at 30 °C. Miscible.

**n-octanol / water partition coefficient:** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Viscosity:** Not available.

### 10. STABILITY AND REACTIVITY

**Chemical stability:** The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

**Reactivity:** None known.

**Possibility of hazardous reactions:** Unlikely to occur.

**Conditions to avoid:** Extreme heat or exposure to flames.

**Incompatible materials:** Reacts violently with chemically active metals such as sodium, potassium, calcium, powdered aluminium, zinc, magnesium, liquid ammonia and strong oxidizers. It will attack some forms of rubber including natural rubber, plastics, coatings and greases.

**Hazardous decomposition products:** Hydrogen bromide and bromide fumes will be formed in the presence of air, carbon monoxide.

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### 11. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Calculated according to GHS.

Oral LD<sub>50</sub> >100 mg/kg (rat)

Dermal LD<sub>50</sub> >320 mg/kg (rat)

Inhalation LC<sub>50</sub> (4h) >3.2 mg/ℓ (rat, vapour)

**Skin Irritation / Corrosion:** Causes skin irritation.

**Eye Damage / Irritation:** Causes serious eye irritation.

**Skin Sensitization:** Product is not a skin sensitizer.

**Respiratory Sensitization:** May cause respiratory irritation.

**Reproductive cell mutagenicity:** May cause genetic defects.

**Carcinogenicity:** May cause cancer.

**Reproductive toxicity:** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity – single exposure:** May cause respiratory irritation.

**Specific target organ toxicity – repeated exposure:** Causes damage to the central nervous system through prolonged or repeated exposure.

**Aspiration hazard:** Not classified.

**Chronic Effects:** Not available.

#### POTENTIAL ADVERSE EFFECTS:

**Inhalation:** Toxic if inhaled.

**Ingestion:** Toxic if swallowed.

**Skin:** Toxic in contact with skin.

### 12. ECOLOGICAL INFORMATION

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

#### ECOTOXICITY DATA:

##### Active ingredient / inert name

##### Fish:

LC <sub>50</sub> (48 h)	Sheepshead minnows	4.8 mg/ℓ
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#### ENVIRONMENTAL EFFECTS

**Plants:** No information available.

**Persistence and degradability:** No information available.

**Bio-accumulative potential:** Following oral or dermal administration, it is rapidly absorbed and eliminated mainly in urine.

**Mobility in soil:** No information available.

**Other adverse effects:** No information available.

### 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.

**Container:** Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler ([www.croplife.co.za](http://www.croplife.co.za)). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

### 14. TRANSPORT INFORMATION

**UN Number:** 2902

#### Road Transport ADR / ORD:

Class: 6.1  
 Packaging group: III  
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (Ethylene dibromide 1800 g/ℓ)

#### Maritime Transport IMDG / IMO:

Class: 6.1  
 Packaging group: III  
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (Ethylene dibromide 1800 g/ℓ)

**Marine pollutant (Y/N):** Yes

#### Air Transport IATA / ICAO:

Class: 6.1  
 Packaging group: III  
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S. (Ethylene dibromide 1800 g/ℓ)

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**Special / Environmental Precautions:** Wedge drums tightly to avoid movement.

**Transport in bulk:** Refer to MARPOL 73/78, Annex II and the IBC code.

### 15. REGULATORY INFORMATION

**Safety, health and environmental regulations / legislation for the mixture:**

OHSA 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 5 and 20 litre drums; labelled according to South African regulations and guidelines.

**Other hazard statements, abbreviations and explanations:**

**H304:** May be fatal if swallowed and enters airways.

**IATA:** International Air Transport Association.

**IBC:** International Bulk Chemical.

**ICAO:** International Civil Aviation Organization.

**IMDG:** International Maritime Dangerous Goods

**IMO:** International Maritime Organization.

**LD<sub>50</sub> value:** The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

**OEL/RL:** Occupational exposure limit-recommended limit.

**TWA:** Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

**ST/STEL:** Short-term exposure limits.

**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 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:** March 2019

**Reviewed:** June 2022

**Revision no.:** (2)

**Next revision:** June 2027

For detailed information on revisions, contact the Registration holder.