

LEAP 840EC

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LEAP 840 EC
Other identifier: Acetochlor 840 EC
Recommended use: Herbicide
Restrictions on use: Agriculture, small-scale farming (where applicable)

Supplier: Villa Crop Protection (Pty) Ltd.
Co. Reg. No.: 1992/002474/07
 PO Box 10413
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: 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
Health		
Dermal	Skin Irrit. 2 Skin sens. 1	H315 H317
Eye	Eye dam. 1	H318
Inhalation	Acute Tox. 4	H332
Specific Target Organ Toxicity - Repeat Exposure	STOT SE 3	H335
Reproductive Toxicity	Repr. 2	H361
Specific Target Organ Toxicity - Single Exposure	STOT RE 2	H373
Environment		
Aquatic acute	Aquatic acute 1	H400
Aquatic chronic	Aquatic chronic 1	H410

The most important adverse effects:
Physiochemical effects: None known.
Human health effects:
 May be harmful if swallowed.
 May be harmful in contact with skin.
 Harmful if inhaled.
 Causes serious eye damage.

May cause an allergic skin reaction.
 Causes skin irritation.
 Suspected of damaging fertility or the unborn child.
 My cause damage to organs (kidney).

Label elements:



Signal word: Danger

Hazard statements:

H303: May be harmful if swallowed.
 H313: May be harmful in contact with skin.
 H315: Causes skin irritation.
 H317: May cause an allergic skin reaction.
 H318: Causes serious eye damage.
 H332: Harmful if inhaled.
 H335: May cause respiratory irritation.
 H361: Suspected of damaging fertility or the unborn child.
 H373: My cause damage to organs (kidney).
 H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.
 P261: Avoid breathing fume, gas, mists, vapours or spray.
 P264+P265: Wash hands and face thoroughly after handling. Do not touch eyes.
 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.
 P301+P302+P317: IF SWALLOWED OR ON SKIN: Get medical help.
 P302+P352: 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+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P318: IF exposed or concerned, get medical advice.
 P319: Get medical help if you feel unwell.
 P332+P317: If skin irritation occurs: get medical help.
 P362+P364: Take off contaminated clothing and wash it before reuse.
 P391: Collect spillage.

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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 4

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Acetochlor	34256-82-1	84 %	Skin irrit. 2 (H315) Skin sens. 1 (H317) Acute tox. 4 (H332) STOT SE 3 (H335) Carc. 2 (H351) Repr. 2 (H361f) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic chronic 1 (H410)
Benoxacor	98730-04-2	< 5 %	Skin sens. 1 (H317) Aquatic chronic 1 (H410)
Tristyryl Phenol ethoxylate			Aquatic Chronic 3 (H412)
Calcium dodecylbenzene sulphonate	26264-06-2	< 5 %	Acute tox. 4 (H302) Skin irrit. 2 (H315) Eye dam. 1 (H318) Aquatic chronic 4 (H413)
Heavy aromatic solvent	64742-94-5	< 1 %	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 contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. **Seek medical attention if you feel unwell after inhalation.**

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.

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.**

Ingestion: Seek medical attention immediately. 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: Causes serious eye damage. Causes skin irritation. Harmful if inhaled. May cause respiratory irritation. May be harmful if swallowed. May be harmful in contact with skin.

Anticipated delayed effects: Suspected of damaging fertility or the unborn child. May cause damage to organs (kidney). May cause genetic defects. May cause cancer.

Most important symptoms / effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: In case of fire and/or explosion do not breath fumes.

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 skin and eyes. **Do not breathe in spray mist or vapours.** Ventilate area

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of spill or leak, especially in contained areas. Contaminated work clothing should not be allowed out of the workplace.

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: Avoid release into the environment. Prevent spilled product from entering sewers, waterways, or ground water. This product is classified as very toxic / 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: Harmful if swallowed. Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. Do not inhale spray mist or vapours). Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Wash hands and face thoroughly after 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. Avoid excess heat). 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:

No occupational exposure limits have been determined for the significant ingredients in this product.

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

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: Employees must wear appropriate protective impervious clothing, rubber boots, hat, and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing if the solvent is not water.

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. Seek medical attention immediately as product can cause serious eye damage.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown, emulsifiable concentrate

Odour: Aromatic hydrocarbon

Odour threshold: Not available

pH (1% aqueous dilution): 5.4 – 7.4

Melting point: Not available.

Freezing Point: Not available.

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Boiling Point: Not available.
Flash Point: Not available.
Flammability: Not flammable
Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: 1.119 g/ml @ 20 °C.
Solubility: Not available.
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: Strong oxidizers, strong bases, strong reducing agents.

Hazardous decomposition products: Alcohols. carbon monoxide and carbon dioxide may form under burning conditions or with incomplete combustion.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Oral LD₅₀ > 2500 mg/kg

Dermal LD₅₀ > 4500 mg/kg

Inhalation LC₅₀ (4 h) > 3.4 mg/l

Skin Irritation / Corrosion: Causes skin irritation.

Eye Damage / Irritation: Causes serious eye damage.

Skin Sensitization: Product may cause an allergic skin reaction.

Respiratory Sensitization: May cause respiratory irritation.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

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

Specific target organ toxicity – repeated exposure: My cause damage to organs (kidney).

Aspiration hazard: Not classified.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled.

Ingestion: May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA:

Fish:

Acetochlor

LC ₅₀ (96 h)	Rainbow trout	0.36 mg/l
	Bluegill sunfish	1.3 mg/l

Benoxacor

LC ₅₀ (96 h)	Rainbow trout	2.4 mg/l
	Bluegill sunfish	6.5 mg/l

Daphnia:

Acetochlor

LC ₅₀ (48 h)		8.6 mg/l
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Benoxacor

EC ₅₀ (48 h)		11.5 mg/l
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Algae:

Acetochlor

EC ₅₀ (72 h)	<i>Skeletonema costatum</i>	0.010 mg/l
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Benoxacor

EC ₅₀ (72 h)	<i>Scenedesmus subspicatus</i>	0.63 mg/l
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Birds:

Acetochlor

Acute oral LD ₅₀	Mallard ducks	>2000 mg/kg
Dietary LD ₅₀ (5d)	Mallard ducks	>5620 mg/kg diet
	Bobwhite quail	>5620 mg/kg diet

Benoxacor

Acute oral LD ₅₀	Mallard ducks	2150 mg/kg
	Bobwhite quail	>2000 mg/kg

Bees:

Acetochlor

LD ₅₀ contact (48 h)		>200 µg/bee
LD ₅₀ oral (48 h)		>100 µg/bee

Benoxacor

LD ₅₀ contact (48 h)		>100 µg/bee
LD ₅₀ oral (48 h)		>100 µg/bee

Worms:

Acetochlor

LC ₅₀ (14 d)	<i>Eisenia fetida</i>	211 mg/kg soil
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Benoxacor

LC ₅₀ (14 d)	Earthworms	>1000 mg/kg soil
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ENVIRONMENTAL EFFECTS

Based on information for the formulation / active ingredient(s)

Plants:

Acetochlor: In maize, acetochlor is rapidly absorbed and metabolised in germinating plant. In intact plants,

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acetochlor is metabolised by several metabolic pathways, including hydrolytic/oxidative displacement of chlorine, and glutathione displacement of chlorine, followed by the formation of various sulphur-containing secondary catabolism products.

Benoxacor: in plants, one major metabolite, which was also observed in animal metabolism studies, and several minor metabolites, were found.

Persistence and degradability:

Acetochlor: DT₅₀ 8 - 18 days. Major metabolites are water-soluble acids resulting from oxidative displacement of chlorine (oxanilic acid), or from glutathione conjugation followed by catabolism to sulphur-containing acids, such as sulfonic and sulfinylacetic acids.

Benoxacor: DT₅₀ at 20°C 1-5 d (Calculated).

Bio-accumulative potential:

Acetochlor: extensively metabolised in rats and eliminated in excreta.

Benoxacor: Metabolised to water-soluble conjugation products following aromatic hydroxylation, deacetylation, and reductive chlorination.

Mobility in soil:

Acetochlor: adsorbed by soil with little leaching. Microbial degradation accounts for most loss from soil.

Benoxacor: Rapidly dissipated via the formation of non-extractable residues, (67-79% after 103 d) and is mineralised by microbial activity (up to 49-49% after 365d). Mean K_{oc} 21 ml/g (42-340 ml/g) indicates medium mobility.

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.

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). 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: 3082

Road Transport ADR / ORD:

Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor 840 g/l)

Maritime Transport IMDG / IMO:

Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor 840 g/l)

Marine pollutant (Y/N): Yes

Air Transport IATA / ICAO:

Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor 840 g/l)

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 1, 5, 10, 20 and 25 litres fluorinated plastic containers labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations, and explanations:

H304: May be fatal if swallowed and enters airways.

H412: Harmful to aquatic life with long lasting effects.

H413: May cause long-lasting harmful effects to aquatic life.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

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LD₅₀ 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

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For detailed information on revisions, contact the Registration holder.