

## ALBION 100 EC

## SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** ALBION 50 EC  
**Other identifier:** Pinoxaden 50 EC  
**Recommended use:** Herbicide  
**Restrictions on use:** Agriculture

**Supplier:** Villa Crop Protection (Pty) Ltd.  
**Co. Reg. No.:** 1992/002474/07  
PO Box 10413  
Aston Manor, 1630, South Africa  
(011) 3962233  
(011) 3964666  
**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>Physical</b>		
Flammable	Flammable liquid 4	H227
<b>Health</b>		
Oral	Acute Toxicity 5	H303
Aspiration Hazard	Aspiration Toxicity 1	H304
Dermal	Skin Irritation 2 Skin Sensitisation 1	H315 H317
Eye	Eye Damage 1	H318
Inhalation	Acute Toxicity 4	H332
Reproductive Toxicity	Reproductive Toxicity 1B	H360
Specific Target Organ Toxicity – Repeated exposure	STOT RE 2	H373
<b>Environment</b>		
Aquatic Acute	Aquatic Acute 2	H401
Aquatic Chronic	Aquatic Chronic 2	H411

#### The most important adverse effects:

**Physiochemical effects:** Combustible liquid.

#### Human health effects:

May be harmful if swallowed. May be fatal if swallowed and enters airways.  
Causes skin irritation and serious eye damage.  
May cause an allergic skin reaction.

Harmful if inhaled.  
May damage fertility or the unborn child.  
May cause damage to organs (urinary) through prolonged or repeated exposure (oral).

#### Label elements:



**Signal word:** Danger.

#### Hazard statements:

H227: Combustible liquid.  
H303: May be harmful if swallowed.  
H304: May be fatal with swallowed and enters airways.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H332: Harmful if inhaled.  
H360: May damage fertility or the unborn child.  
H373: May cause damage to organs (urinary) through prolonged or repeated exposure (oral).  
H401: Toxic to aquatic life.  
H411: Toxic to aquatic life with long lasting effects.

#### Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.  
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261: Avoid breathing fumes, mists, vapours or spray.  
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.  
P271: Use only outdoors or in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release into the environment.  
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
P301+P316: IF SWALLOWED: Get emergency medical help immediately.  
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.  
P304+P340+P317: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.  
P305+P354+P338+P317: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.  
P318: IF exposed or concerned, get medical advice.  
P319: Get medical help if you feel unwell.

## ALBION 100 EC

P331: Do NOT induce vomiting.  
P333+P317: If skin irritation or rash occurs: Get medical help.  
P362+P364: Take off contaminated clothing and wash it before reuse.  
P391: Collect spillage.  
P403: Store in a well-ventilated place.  
P405: Store locked up.  
P501: Dispose of contents/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
Pinoxaden	243973-20-8	5 %	Acute Toxicity 4 (H302) Eye Irritation 2 (H319) Skin Sensitisation 1A (H317) Acute Toxicity 4 (H332) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Reproductive Toxicity 2 (H361d)
Cloquintocet-mexyl	99607-70-2	1.25 %	Skin Sensitisation 1 (H317) Acute Toxicity 4 (H332) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Tetrahydrofurfuryl alcohol	97-99-4	< 30 %	Eye Irritation 2 (H319) Reproductive Toxicity 1B (H360DF)
Isobutanol	78-83-1	< 15 %	Flammable liquid 3 (H226) Skin Irritation 2 (H315)

## SAFETY DATA SHEET

			Eye Damage 1 (H318) STOT SE 3 (H335) STOT SE 3 (H336)
Naphtha (petroleum), heavy aromatic	64742-94-5	< 60 %	Aspiration Toxicity 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. Get medical help if you feel unwell.

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

**Seek medical attention if irritation or rash occurs.**

**Eyes:** Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention.**

**Ingestion: Obtain medical attention immediately** or call a poison control centre for treatment advice. **Do not induce vomiting due to the aromatic solvent.** If vomiting occurs keep head lower than hips to prevent aspiration. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. Give slurry of activated charcoal in water to drink.

### Anticipated acute effects:

May be harmful if swallowed. May be fatal if swallowed and enters airways.

Causes skin irritation and serious eye damage.

May cause an allergic skin reaction.

Harmful if inhaled.

**Anticipated delayed effects:** May damage fertility or the unborn child. May cause damage to organs (urinary) through prolonged or repeated exposure (oral).

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

**Advice to physician:** There is no specific antidote available. Treat symptomatically and supportively.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used to cool unaffected stock, but avoid water coming into contact with product. Use as little water as possible.

**Unsuitable Extinguishing Media:** Fire may produce irritating or poisonous vapours (carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon

## ALBION 100 EC

## SAFETY DATA SHEET

fragments), mists or other products of 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 or 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 water courses 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, earth or silica gel.

**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:** May be fatal if swallowed and enters airways. Avoid contact with eyes

and skin. Do not inhale spray mist or vapours. Ensure adequate ventilation during handling and use. Do not handle broken containers without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly 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. 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:** Fluorinated plastic containers.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Permissible concentration:**

Components	Exposure limits	Type of exposure limit	Source
Isobutanol	50 ppm	8-hour TWA	"www.osha.gov"

**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:** Employees must wear appropriate chemically resistant gloves e.g., nitrile rubber gloves to prevent contact with this mixture.

**Eye Protection:** Wear a face shield when handling the concentrate and when applying the product. The use

## ALBION 100 EC

## SAFETY DATA SHEET

of safety goggles is recommended if a face shield is not used.

**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.

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Yellow orange to orange brown liquid, emulsifiable concentrate.

**Odour:** Aromatic odour.

**pH:** 3 – 7.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** 128°C.

**Flash Point:** >60°C.

**Flammability:** Combustible liquid.

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

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

**Relative Vapour Density:** Not available.

**Density:** 0.98 g/cm<sup>3</sup>.

**Solubility:** Emulsifies in water.

**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 2 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:** None known.

**Conditions to Avoid:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

**Incompatible Materials:** Strong oxidizers, strong bases, strong reducing agents.

**Hazardous Decomposition Products:** Combustion or thermal decomposition will cause the liberation of toxic and irritant vapours.

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Calculated according to GHS.

**Oral LD<sub>50</sub> (24 h)** >4000 mg/kg (rat).

**Dermal LD<sub>50</sub> (24 h)** >11 000 mg/kg (rat/rabbit).

**Inhalation LC<sub>50</sub> (4 h)** >1.05 mg/l (rat).

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

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

**Skin Sensitization:** May cause an allergic skin reaction.

**Respiratory Sensitization:** Not classified.

**Reproductive cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive toxicity:** May damage fertility or the unborn child.

**Specific target organ toxicity – single exposure:** Not classified.

**Specific target organ toxicity – repeated exposure:** May cause damage to organs (urinary), through prolonged or repeated exposure (oral).

**Aspiration hazard:** May be fatal if swallowed and enters airways.

**Chronic Effects:** Not available.

#### POTENTIAL ADVERSE EFFECTS:

**Inhalation:** Harmful if inhaled.

**Skin contact:** Causes skin irritation. May cause an allergic skin reaction.

**Eye contact:** Due to inert, this product may cause serious damage to eyes.

**Ingestion:** May be harmful if swallowed. May be fatal if swallowed and enters airways.

### 12. ECOLOGICAL INFORMATION

This product is toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### ECOTOXICITY DATA:

<b>Fish:</b>		
<b>Pinoxaden</b>		
LC <sub>50</sub> (96 h)	Rainbow trout	10.3 mg/l
	Fathead minnows	20 mg/l
	Sheepshead minnows	16 mg/l
<b>Cloquintocet-mexyl</b>		
LC <sub>50</sub> (96 h)	Rainbow trout & Carp	>76 mg/l
	Bluegill sunfish	>51 mg/l
	Catfish	14 mg/l
<b>Daphnia:</b>		
<b>Pinoxaden</b>		
LC <sub>50</sub> (48 h)		52 mg/l
<b>Cloquintocet-mexyl</b>		
LC <sub>50</sub> (48 h)		>0.82 mg/l
<b>Algae:</b>		
<b>Pinoxaden</b>		
E <sub>b</sub> C <sub>50</sub> (96 h)	<i>Navicula pelliculosa</i>	10.2 mg/l
	<i>Anabaena flos-aquae</i>	5.0 mg/l



## ALBION 100 EC

## SAFETY DATA SHEET

	<i>Skeletonema costatum</i>	0.909 mg/l
	<i>Pseudokirchneriella subcapitata</i>	16 mg/l
<b>Cloquintocet-mexyl</b> EC <sub>50</sub> (120 h)	<i>Scenedesmus subspicatus</i>	0.63 mg/l
	<i>Microcystis aeruginosa</i>	2.5 mg/l
	<i>Navicula</i>	1.7 mg/l
<b>Birds:</b> <b>Pinoxaden</b> Acute LD <sub>50</sub>	Bobwhite quail	>2250 mg/kg
Dietary LC <sub>50</sub> (5 d)	Bobwhite quail & Mallard ducks	>5620 mg/kg diet
<b>Cloquintocet-mexyl</b> Acute LD <sub>50</sub>	Bobwhite quail & Mallard ducks	>2000 mg/kg
<b>Bees:</b> <b>Pinoxaden</b> Oral LD <sub>50</sub>		>200 µg/bee
Contact LD <sub>50</sub>		>100 µg/bee
<b>Cloquintocet-mexyl</b> Oral and Contact LD <sub>50</sub> (48 h)		>100 µg/bee
<b>Worms:</b> <b>Pinoxaden</b> LC <sub>50</sub> (14 d)	<i>Eisenia fetida</i>	>1000 mg/kg soil
<b>Cloquintocet-mexyl</b> LC <sub>50</sub>	Earthworms	>1000 mg/kg soil

### ENVIRONMENTAL EFFECTS:

#### Plants:

**Pinoxaden:** Parent pinoxaden is rapidly degraded, DT<sub>50</sub> <1 day.

**Cloquintocet-mexyl:** Rapidly degraded to the free acid as the major metabolite.

#### Persistence and degradability:

**Pinoxaden:** Degrades quickly, DT<sub>50</sub> <1 day. Not persistent and does not accumulate in the soil.

**Cloquintocet-mexyl:** In soil, rapid degradation to the free acid, DT<sub>50</sub> 0.5 – 2.4 days. Further degradation and mineralisation of the acid occurs within a few weeks to a few months. DT<sub>50</sub> of the parent molecule <1 day in natural aquatic systems.

#### Bio-accumulative Potential:

**Pinoxaden:** Log K<sub>ow</sub> 3.2. Rapidly metabolised, DT<sub>50</sub> <1 day. Excretion is fast.

**Cloquintocet-mexyl:** Log K<sub>ow</sub> 5.2. Hydrolysed to the free acid as the major metabolite.

#### Mobility in soil:

**Pinoxaden:** K<sub>oc</sub> 121 – 852 ml/g. Does not leach into groundwater.

**Cloquintocet-mexyl:** Low soil mobility, strongly adsorbed to the soil and low leaching potential.

**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 vapour and 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:** 3082

**Road Transport ADR/IRD:**

Class: 9  
Packaging group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pinoxaden 50 g/l)

**Maritime Transport IMDG/IMO:**

Class: 9  
Packaging group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pinoxaden 50 g/l)

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

## ALBION 100 EC

## SAFETY DATA SHEET

### Air transport IATA/ICAO:

Class: 9  
 Packaging group: III  
 UN Proper Shipping Name: ENVIRONMENTALLY  
 HAZARDOUS  
 SUBSTANCE, LIQUID,  
 N.O.S. (pinoxaden 50  
 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.

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:** August 2022

**Reviewed:** August 2022

**Revision no.:** (1)

**Next revision date:** August 2027

For detailed information on revisions, contact the Registration holder.

### 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, 2, 5, 10, 20 and 25 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.

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

**H226:** Flammable liquid and vapour.

**H302:** Harmful if swallowed.

**H319:** Causes serious eye irritation.

**H335:** May cause respiratory irritation.

**H336:** May cause drowsiness or dizziness.

**H361:** Suspected of damaging fertility or the unborn child.

**H400:** Very toxic to aquatic life.

**H410:** Very toxic to aquatic life with long lasting effects.

**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.

**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