

SAFETY DATA SHEET

Pilot Pro 225

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: Pilot Pro 225
Other identifier: Bixafen 75 g/l + Prothioconazole 50 g/l EC
Pesticide Classification: Fungicide
Restrictions on use: Agriculture

Supplier

Enviro Bio-Chem (Pty) Ltd
 Co. Reg. No.: 2013/194774/07
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Registration Holder

Enviro Crop Protection (Pty) Ltd
 Co. Reg. No.: CK2007/027855/07
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Telephone: +27 12 006 0063
Fax: 086 541 7948
Website: www.envirobiochem.co.za

24 Hr Emergency Number: Spillage: 0861 000 366

In case of Poisoning:

Griffon Poison Information Centre: +27 82 446 8946
 Tygerberg Hospital: (+27 21) 931 6129
 Poison Emergency Enquiries: (+27 21) 689 5227

2. HAZARD IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	Hazard statements
Acute toxicity, Oral	Category 4	H302
Acute toxicity, Inhalation	Category 4	H332
Aspiration hazard	Category 1	H373
Aquatic Toxicity Acute	Category 1	H400
Aquatic Toxicity Chronic	Category 2	H411

The most important adverse effects:

The most important adverse physiochemical effects: None Known.

The most important adverse human health effects: May be fatal if swallowed and enters airways

Label elements:



Signal word: Danger

Hazard statements:

H302: Harmful if swallowed
H332: Harmful if inhaled
H373: May be fatal if swallowed and enters airways
H400: Very toxic to aquatic life
H411: Toxic to aquatic life with long lasting effects

Precautionary statements:

P102: Keep out of reach of children.
P103: Read label before use.
P260: Do not breathe dusts, mists and sprays.
P271: Use only outdoors or in a well-ventilated area.
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.
P301+P317: IF SWALLOWED: Get medical help.
P304: IF INHALED: Get medical help.
P319: Get medical help if you feel unwell.
P330: Rinse mouth.
P340: Remove person to fresh air and keep comfortable for breathing.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with local/regional/ national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances/ Mixture: Mixture

Composition:

Substance name (IUPAC)	CAS Number.	Concentration % by weight	Classification EC1272/2008
Bixafen	581809-46-3	7.5%	Aquatic Acute 1 (H400)
Prothioconazole	178928-70-6	15%	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Castor oil, Ethoxylated	61791-12-6	<15%	Aquatic Acute 1 (H400)
Solvesso 150	64742-94-5	<70%	Aspiration Toxicity 1 (H304)

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

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 / poison control centre.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation persists / person feels unwell. 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 / person feels unwell.

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 immediately.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If

material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Anticipated acute effects: May be fatal if swallowed and enters airways.

Anticipated delayed effects None known.

Most important symptoms/effects: None known.

Advice to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control centre or doctor or going for treatment.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide, dry powder, or alcohol-resistant foam for small fires and water spray can be used for larger fires or cooling of unaffected stock but avoid the accumulation of polluted run-off from the site.

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

Specific hazards: Hazardous Combustion Products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide

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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin. Do not breathe in spray mist or dust. Ventilate area of spill, 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. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA and full turnout gear. Use an approved/certified respirator or equivalent Avoid contact with eyes and skin. Do not breathe in fumes. Refer to section 8 for recommended personal protective equipment. Evacuate unnecessary personnel

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very 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 spilled product by diking area with sand or earth.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush

or compressed air. 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. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation. 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: Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Wash 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.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits:

No data available.

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.

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

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 clothing; 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.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Light yellow
Odour	Odourless
Odour threshold	No data available
pH	4.0 – 8.0
Melting point / freezing point (° C)	Not applicable
Boiling point (° C)	No data available
Flash point (° C)	No data available
Evaporation rate	No data available
Flammability	Not flammable
Upper /lower flammability limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density (25°C)	1.03
Water solubility (g/l) at 20°C	Not applicable
Partition coefficient: n-octanol/water partition coefficient	No data available
Auto-ignition temperature (° C)	No data available
Decomposition temperature (° C)	No data available
Viscosity, dynamic (mPa s)	No data available
Explosive properties	Not explosive

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: No dangerous reaction known under conditions of normal use.

Possibility of Hazardous Reactions: Polymerization will not occur.

Conditions to Avoid: Extreme heat or exposure to flames.

Incompatible Materials: Non known

Hazardous Decomposition Products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Acute Oral LD₅₀ (rat): > 900 mg/kg

Acute Dermal LD₅₀ (rat): > 2000 mg/kg

Acute Inhalation LC₅₀ (rat, 4 hr): > 2.8 mg/l air.

Skin Irritation: Not classified.

Eye Damage/Irritation: Not classified.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic Effects (other targets e.g. developmental): Not classified

12. ECOLOGICAL INFORMATION

The product is classified as a marine pollutant.

ECOTOXICITY DATA:

Active ingredient: Bixafen CAS No. 581809-46-3

Fish

LC₅₀ (96 hr) 0.095 mg/l (rainbow trout); 0.105 mg/l (fathead minnows).

Daphnia

EC₅₀ (48 hr) 1.2 mg/l

Algae

ErC₅₀ (72h) 0.0965 mg/l (*Pseudokirchneriella subcapitata*)

Birds

Acute oral LD₅₀ >2000 mg/kg Bobwhite quail
Dietary LC₅₀ >5000 mg/kg diet Bobwhite quail and Mallard ducks

Bees

Toxicity to bees LD₅₀ (oral) >121 µg/bee.
Toxicity to bees LD₅₀ (contact) >100 µg/bee.

Worms

LC₅₀ (14d) >1000 mg/kg soil (Earthworms)

Biodegradability: Bixafen is a slowly degrading compound in soil. Under dark laboratory conditions, the half-life in both aerobic and anaerobic soils was greater than one year. In field dissipation studies conducted across Europe, the geometric mean DT₅₀ was approximately 200 days. In aquatic systems under aerobic conditions, DT₅₀ values in the water phase of two water/sediment systems were 22.5 days and 25.5 days (best-fit kinetics). Due to the limited decline of bixafen observed in the total water/sediment systems, reliable DT₅₀ or DT₉₀ values for the total system could not be determined.

Bioaccumulation: No major metabolites were detected in the soil studies. Under environmental conditions, bixafen is considered hydrolytically stable, and direct phototransformation in water contributes little to its degradation. (Note: This text does not provide actual bioaccumulation data such as bioconcentration factor (BCF) or bioaccumulation factor (BAF). If your dossier requires a bioaccumulation section, it should ideally be completed using BCF or fish bioaccumulation study data from the registration dossier or EFSA assessment.).

Mobility: Bixafen is immobile in soil, indicating a low potential for movement through the soil profile. Irradiation by sunlight may contribute slightly to degradation on the soil surface, but this is considered a minor pathway.

Additional information: Avoid release to the environment.

Active ingredient: Prothioconazole CAS No. 178928-70-6

Fish

LC₅₀ (96 hr) 1.83 mg/l (rainbow trout); >4.59 mg/l (bluegill sunfish).

Daphnia

LC₅₀ (48 hr) 1.30 mg/l

Algae

ErC₅₀ (72h) 2.18 mg/l (*Pseudokirchneriella subcapitata*)

Birds

Acute oral LD₅₀ >2000 mg/kg Bobwhite quail and canaries
Dietary LC₅₀ 8 days >5000 mg/kg diet Bobwhite quail and Mallard ducks

Bees

Toxicity to bees LD₅₀ (oral) >71 µg/bee.
Toxicity to bees LD₅₀ (contact) >200 µg/bee.

Worms

LC₅₀ (14d) >1000 mg/kg soil (*Eisenia fetida*)

Biodegradability: Prothioconazole is rapidly degraded in the environment to the major metabolites prothioconazole-desthio and prothioconazole-S-methyl. Under laboratory conditions (20 °C), soil DT₅₀ values were 0.07–1.3 days for prothioconazole, 7–34 days for prothioconazole-desthio, and 6–46 days for prothioconazole-S-methyl. In aerobic water/sediment systems, prothioconazole degraded rapidly with a DT₅₀ for the total system of 2–3 days. The principal metabolites detected were prothioconazole-desthio and 1,2,4-triazole in the water layer, and prothioconazole-S-methyl in the sediment.

Bioaccumulation: Prothioconazole is rapidly and extensively absorbed and eliminated, predominantly via the faeces, and does not show potential for accumulation in animals. It is extensively metabolised through conjugation with glucuronic acid, oxidative hydroxylation of the phenyl moiety, and desulfuration. In the environment, the parent compound and its major metabolites also exhibit low potential for accumulation.

Mobility: The parent compound and its major metabolites exhibit low potential for leaching, indicating limited mobility in soil. This is supported by relatively high K_{oc} values of 1765 mL/g for prothioconazole, 523–625 mL/g for prothioconazole-desthio, and 1974–2995 mL/g for prothioconazole-S-methyl, indicating moderate to strong adsorption to soil organic matter.

Additional information: Avoid release to the environment.

13. DISPOSAL CONSIDERATION

Pesticide Disposal: 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.

Package Product Wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. 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.

Ecology - waste materials: Avoid release to the environment.

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 (Bixafen + Prothioconazole 225 EC)

Maritime Transport IMDG/IMO:

Class: 9
 Packaging group: III
 UN proper Shipping Name: Environmentally hazardous substance, Liquid, N.O.S (Bixafen + Prothioconazole 225 EC)

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 (Bixafen + Prothioconazole 225 EC)

15. REGULATORY INFORMATION
Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 8, 2019.

Relevant information regarding restrictions: None.

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

Other national regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management Waste Act 59 of 2008. Act 36 of 1947 of the Republic of South Africa. This product is registered under it is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Note: Read and understand all the information on the product label before using the product.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed
H332: Harmful if inhaled
H373: May be fatal if swallowed and enters airways
H400: Very toxic to aquatic life
H411: 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.

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

Compiled: /
Reviewed: July 2026
Next revision: July 2031

For detailed information on revisions, contact the registration holder.