

MSDS – Material Safety Data Sheet

LAST REVISED: 06.12
MSDS NO.: ACAS 12

PAKUA 450 EC

1. IDENTIFICATION OF THE SUBSTANCE

Product Identification: Light amber liquid
Common Name: Prochloraz
Chemical Family: Azole
Chemical Formula: C₁₅H₁₆Cl₃N₃O₂
Use: Used as fungicide
UN No: 1993

Supplier: Ag-Chem Africa (Pty) Ltd
288 Mundt Street
Waltloo
012 - 803 0145

Emergency number: 012 - 803 0145

Poison Centre: Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
082 446 8946

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition: Prochloraz 450 g/l

3. HAZARDS IDENTIFICATION

Emergency Overview

- Harmful: may cause lung damage if swallowed.
- Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Likely routes of exposure: Skin, eyes, inhalation and ingestion.

Potential Health Effects

Inhalation:

Irritating to respiratory system.

Ingestion:

Harmful if swallowed.

4. FIRST AID MEASURES

Symptoms of poisoning:

Skin irritation may be aggravated in people with existing skin lesions. Breathing spray mist or vapour may aggravate acute or chronic asthma and inflammatory or fibrotic pulmonary disease. The following symptoms may appear: headache, dizziness and unconsciousness.

Inhalation:

Remove patient to fresh air. If not breathing give artificial respiration. Keep patient warm and at rest. Seek medical attention if necessary. If unconscious call a doctor immediately. Transport patient in lying position.

Ingestion:

Rinse mouth. Do not induce vomiting because of risk of aspiration. In the case of spontaneous vomiting, hold the patient's head in a prone position to prevent stomach contents getting into the trachea. Have patient drink plenty of water. Administer medicinal charcoal. Take patient to a doctor and show this safety data sheet.

Skin Contact:

Remove any contaminated clothing and shoes. Wash skin immediately with mild soap and water after wiping off excess chemical. Seek medical attention if necessary. Wash clothing and clean shoes before re-use. Persons who become sensitised may require specialized medical management with anti-inflammatory agents.

Eye Contact:

Immediately flush eyes with water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove any contact lenses after 5 minutes. Get medical attention if necessary.

Note to physician:

There is no specific antidote. Treat symptomatically and give supportive therapy. If swallowed, gastric irrigation with added activated charcoal. Give oxygen if necessary. Medical supervision for at least 48 hours is recommended. Monitor the liver and central nervous system functions.

5. FIRE FIGHTING MEASURES

Fire Hazard:

Flammable.

Fire Extinguishing Media:

Extinguish small fires with carbon dioxide, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Fire fighting:

Cool containers affected by the fire with plenty of spray water. In the event of larger fires, close off the area in the wind direction. Contain fire control agents for later disposal. Avoid run-off to sewer. Avoid inhaling hazardous fumes. Keep upwind.

Personal Protective Equipment:

Fire may produce irritating or poisonous vapours of combustion, such as carbon monoxide (CO), nitrogen oxides (NOx) and hydrogen chloride (HCl). Fire-fighters and others that may be exposed should wear full chemical protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid contact with skin, eyes and clothing. Ventilate area of spill or leak, especially confined areas. Use personal protection - see Section 8 for full details. Wash hands before eating, drinking, chewing gum, smoking or using the toilet.

Environmental Precautions:

Do not allow entering drains or watercourses. When the product contaminates any water bodies, inform appropriate authorities immediately in accordance with local regulations.

Small spills:

Sweep up with damp earth, sand, sawdust, or liquid binding material. Place in a clean, dry container for disposal. All contaminated cleaning materials should be placed in closable receptacles.

Large spills:

Dike far ahead for later disposal. Ventilate closed space. Contain spillage and contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away and upwind.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, prolonged contact with the skin, and inhalation of fumes and spray. Wear personal protective clothing as specified under Section 8. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Keep away from sources of ignition – do not smoke.

Remove clothing immediately after accidental spill. Wash skin immediately with a mild soap and put on clean clothing.

Do not apply directly to areas where surface water is present. Dispose of water used to clean the equipment in accordance with local regulations. Do not contaminate water bodies.

7. HANDLING AND STORAGE (CONT.)

Storage:

Keep out of reach of uninformed persons, children and animals. Store in tightly closed container, with original label, in a shaded, well-ventilated area, away from sources of ignition. Observe all warnings and precautions listed for the product. Do not contaminate water, fertilizer, food or feed in storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation system:

It is essential to provide adequate ventilation especially at floor level, because the fumes are heavier than air. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Respirator:

An approved full-face respirator with an A2 filter for organic vapours and particles is recommended. Limitations of respirator use specified by the approving agency and the manufacturer must be observed. Do not inhale gases or fumes.

Skin Protection:

Wear appropriate protective clothing, rubber boots with socks and chemical resistant protective gloves to prevent repeated or prolonged skin contact with this product. Immediately take off all contaminated clothing.

Eye Protection:

The use of safety goggles and/or full face shield where splashing is possible. Maintain an eye wash fountain and quick-drench facilities in work area for emergency use. Avoid contact with eyes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light amber liquid
Odour:	Strong characteristic
Solubility:	Emulsifiable
pH (1 % solution):	6,5
Density:	1,066 g/m ℓ
Boiling Point:	Not determined
Flash Point:	52 °C

10. STABILITY AND REACTIVITY

Stability:	If stored in a cool (between 5 and 35 °C) and dry place, in unopened packages the product is stable for 2 years.
Conditions to avoid:	Heat and open flames.
Incompatibilities:	Avoid contact with strong oxidizing agents, and strong alkalis.
Thermal Decomposition:	Carbon oxides, nitrogen oxides, nitric decomposition products, and hydrogen chloride. When handled properly, no hazardous decomposition products will develop.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD ₅₀	3 160 mg/kg (rat)
Dermal LD ₅₀	> 5 000 mg/kg (rat)
Inhalation LC ₅₀	> 5,85 mg/ℓ (4 h) (rat)

Skin irritation: Not irritating to the skin.

Eye irritation: Slight eye irritation.

Dermal sensitization: No sensitizing effect known.

Subchronic toxicity: NOEL (90 days) of prochloraz for dogs 2,5 mg/kg/day; target organ was the liver.

Chronic toxicity: NOEL (2 years) of prochloraz for dogs 0,9 mg/kg/day; target organ was the liver.

12. ECOLOGICAL INFORMATION

For Prochloraz (active ingredient):

Birds:

Oral LD ₅₀ (Mallard duck):	> 1 954 mg/kg
Oral LD ₅₀ (Bobwhite quail):	662 mg/kg

Fish:

LC ₅₀ (96 h) (Rainbow trout):	1,5 mg/ℓ
LC ₅₀ (96 h) (Bluegill sunfish):	2,2 mg/ℓ

Bees:

Low toxicity to bees when used as directed.

Oral LD₅₀: 60 µg/bee.

Daphnia:

EC₅₀ (48 h): 4,3 mg/ℓ

Degradation in soil:

DT₅₀ under field conditions is 5 – 37 days. Prochloraz degrades in the soil to a range of mainly volatile metabolites (degradation is not pH dependent). Prochloraz is well adsorbed onto soil particles, and is not readily leached; K_d 152 (sandy loam) 256 (silty clay loam). Possesses low toxicity to a wide range of soil microflora and microfauna, but has inhibitory effects on soil fungi.

13. DISPOSAL CONSIDERATIONS

Product disposal:

Contaminated absorbents, surplus product (in diluted form), used containers, etc., should be burnt in an incinerator at > 1 000 °C or buried in an approved landfill. The incinerator should have effluent gas scrubbing. Comply with local legislation applying to waste disposal. Do not allow the product to contaminate ground or surface water.

Packaging disposal:

Do not re-use empty containers for any other purpose. Do not contaminate dams, rivers, drinking water and boreholes with chemical or used container. Incinerate the packaging material at a facility that complies with local regulations, or bury it in an approved landfill.

14. TRANSPORT INFORMATION

Proper shipping name: Flammable liquid, n.o.s.
Class: 3.0
UN Number: 1993
Packing Group: III
Marine Pollutant: Yes

15. REGULATORY INFORMATION

EC Classification: Harmful, Dangerous for the environment.
Symbol: Xn, N

Risk – Phrase: R 22 – Harmful if swallowed.
R 65 – Harmful: may cause lung damage if swallowed
R 50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety – Phrase: S 23 – Do not breathe vapour.
S 36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S 60 – This material and its container must be disposed of as hazardous waste.
S 62 – If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

National legislation: National Road Traffic Act, 1996 (Act 93 of 1996).
Fire Brigade Service Act, 1987 (Act 99 of 1987).
Occupational Health and Safety Act, 1993 (Act 85 of 1993)

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

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