

UNIVERSAL SABER 360 SC

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: SABER 360 SC
 Insecticide, acaricide
UN No.: 2902
Company: 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

Emergency telephone numbers:

24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918
 (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

Villa Crop Protection Emergency number:

National Safety, Health and Environmental Manager:
 +27 63 698 0668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: CHLORFENAPYR
Chemical Name: 4-bromo-2-(4-chlorophenyl)-1-ethoxymethyl-5-trifluoromethylpyrrole-3-carbonitrile (IUPAC)
CAS No.: [122453-73-0]
Chemical Family: arylpyrrole
Chemical Formula: C₁₅H₁₁BrClF₃N₂O
Molecular weight: 407.6

Use: Insecticide and acaricide with mainly stomach and some contact action. Exhibits good translaminar but limited systemic activity in plants. Control of many species of insects and mites, including those resistant to carbamate, organophosphate and pyrethroid insecticides and also chitin-synthesis inhibitors, in cotton, vegetables, citrus, top fruit, vines and soybeans.

Formulation: CHLORFENAPYR 360 g/l
 Suspension concentrate

Hazardous ingredients of toxicological concern:

Inert:	concern:	% present:
Chlorfenapyr	Very toxic if swallowed	36.0 %

Symbol: Very toxic to aquatic organisms
 Xn, N, Xi

Indication of danger: Harmful, Irritating & Environmentally dangerous
Risk-Phrases: R28, R50, R53, R55, R57.

3. HAZARD IDENTIFICATION

Likely routes of exposure: In case of inhalation, skin and eye contact, **Chlorfenapyr** may cause mild irritation, tearing, nausea, and headache, irritation to mucous membranes and respiratory tract and difficulty breathing.

Skin: Repeated or prolonged skin contact may lead to irritation.

Eye: A mild irritant.

Inhalation: May cause irritation of the mucous membranes, respiratory tract, headache and nausea.

Swallowed: Toxic if swallowed. It may cause headache, vomiting and nausea.

Other Health Hazard Information: Keep out of reach of children, animals and uninformed persons. Have the product container or label with you when calling a poison control centre or doctor.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Remove the source of contamination or move person to fresh air. If cough or other respiratory symptoms develop, consult medical personnel. If breathing stops, administer artificial respiration and immediately seek medical attention.

Skin contact: Remove contaminated clothing, shoes and leather goods and do not re-use until thoroughly cleaned or laundered. Wash skin with non-abrasive soap and plenty of water for 15 to 20 minutes. Obtain medical attention if irritation persists.

Eye contact: Immediately flush eyes with a stream of clean water for at least 20 minutes, holding the eyelid(s) open. Obtain medical attention.

Ingestion: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control centre or doctor. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

Advice on treatment: There is no specific antidote available. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazardous products of combustion: Non-combustible. However, following evaporation of aqueous component residual material can burn if ignited. On burning may emit toxic fumes.

Extinguishing agents: Extinguish fires with carbon dioxide, foam, dry chemical and water fog. Water spray can be used for cooling of unaffected stock. Use as little

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water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Firefighting: Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Use as little water as possible.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways. Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment: Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus in the positive-pressure mode with a full-face mask when there is a possibility of exposure. Decontaminate emergency personnel with soap and water before leaving the fire area.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

Environmental precautions: Do not allow entering into drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs. Considered as Marine Pollutant.

Occupational spill: Do not touch-spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Recover free liquid with explosion proof pumps, absorb residue with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. If fire potential exists, blanket spill with foam as a precaution. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose of it in accordance with local regulations.

Open burning or dumping of this material is prohibited.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Harmful if inhaled or swallowed. Irritating to eyes and skin. Avoid contact with eyes and skin, and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. **Chlorfenapyr** becomes unstable on prolonged storage above 37 °C and is rapidly decomposed by u.v. Not to be stored close to foodstuffs, animal feeds and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

Respirator: An approved respirator suitable for protection from mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed. For maximum protection, wear a supplied air, full-face piece respirator, airlined hood, or full-face piece self-contained breathing apparatus.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves: Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

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Eye protection: The use of safety goggles is recommended when respirator does not provide eye protection.

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: Suspension concentrated liquid.

Colour: Tan coloured.

Odour: Mild sweet smelling.

Flammability: Non-flammable.

Flash point: Not applicable.

Explosion properties: Not explosive

Solubility: Soluble in water

Density: 1.16 g/ml

pH of a 1 % aqueous dilution: 6.0 to 9.0.

10. STABILITY AND REACTIVITY

Stability: Active ingredient content immediately before start of test: 365.0 g/kg.

Active ingredient content after 14 days at 54 °C ± 1 °C: 355.0 g/kg.

Chemically and thermally stable.

Storage stability: Do not store below 12 °C. Stable for a period of 2 years under normal warehouse conditions.

Conditions and Materials to Avoid: Keep the product in a cool, dry place, at below 30 °C. Protect from sunlight, open flame and sources of heat. Does not polymerize.

Hazardous decomposition products: Does not occur.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀ rats: **Chlorfenapyr** Technical: Acute oral LD₅₀ for male rats 441, female rats 1152 mg tech/kg

Acute dermal LD₅₀ rats: **Chlorfenapyr** Technical: Acute percutaneous LD₅₀ for rabbits >2000 mg/kg.

Acute skin irritation: **Chlorfenapyr** Technical: Non-irritating to skin (rabbits).

Acute eye irritation: **Chlorfenapyr** Technical: Moderate eye irritant.

Dermal sensitisation: Not a skin sensitizer.

Inhalation: LC₅₀ for rats 1.9 mg /l air. May cause irritation of the mucous membranes, respiratory tract, headache and nausea.

Mutagenicity: Non-mutagenic in the Ames, CHO/HGPRT, Mouse micronucleus and unscheduled DNA synthesis tests.

Reproductivity: Not available.

Teratogenicity: Not available.

Carcinogenicity: Not available.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation:

Animals In rats, >60 % of orally administered **Chlorfenapyr** was excreted primarily through faeces within 24 hours. The absorbed residues were metabolised via N-dealkylation, dehalogenation, hydroxylation and conjugation. Parent and less polar metabolites were found in egg, milk and tissues such as fat and liver. Metabolism in hens and goats is similar to that in rats, however in these species, 80 % of orally administered **Chlorfenapyr** was rapidly excreted. Un-excreted residues were present in kidney and liver. At the potential maximum dietary burden, all residues are <0.01 ppm. **Chlorfenapyr** is the only significant residue component.

Plants In cotton, citrus, tomato, lettuce and potato, **Chlorfenapyr** is dealkylated to the insecticidally active component (AC 303268) or debrominated to less toxic metabolites. **Chlorfenapyr** does not translocate out of treated plant parts. Parent compound is the prominent residue.

Soil/Environment In soil, **Chlorfenapyr** is the major residue. Debromination to a less toxic metabolite is the primary route; dealkylation is not a primary route of degradation in soil. Koc >10 000 ml/g, indicating **Chlorfenapyr** is likely to be strongly bound in soils. In water DT₅₀ (direct photodegradation) 4.8-7.5 d; stable to hydrolysis at pH 4, 7 and 9.

ECOTOXICOLOGY:

Birds:

Chlorfenapyr Technical:

Acute oral LD₅₀ for mallard ducks 10, bobwhite quail 34 mg/kg. LC₅₀ (8 d) for mallard ducks 9.4, bobwhite quail 132 ppm.

Fish: Chlorfenapyr Technical: Very toxic to aquatic organisms.

LC₅₀ (48 h) for carp 500 µg/l. LC₅₀ (96 h) for rainbow trout 7.44, bluegill sunfish 11.6 µg/l.

Bees: Chlorfenapyr Technical:

LD₅₀ 0.2 µg/bee.

Earthworm: NOEC (14 d) for *Eisenia foetida* 8.4 mg/kg.

Daphnia: LC₅₀ (96 h) 6.11 µg/l.

Algae: EC₅₀ for *Selenastrum capricornutum* 132 ppb.

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 reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water

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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.

Container disposal: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 2902

Road Transport ADR/RID:

Class: 6.1
 Packaging group: III
 Shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S.
 Environmentally Hazardous
 Substance, N.O.S. (**Chlorfenapyr**
 360 g/l)

Maritime Transport IMDG/IMO: MARINE POLLUTANT

Class: 6.1
 Packaging group: III
 Shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S.
 Environmentally Hazardous
 Substance, N.O.S. (**Chlorfenapyr**
 360 g/l)

Considered a marine pollutant.

15. REGULATORY INFORMATION

Symbol: Xn, N, Xi
Indication of danger: Harmful, Irritating &
 Environmentally dangerous
 substance.

Risk phrase(s):

R 28 Very toxic if swallowed.
R36/38 Irritating to eyes and skin.
R 50 Very toxic to aquatic organisms.
R 53 May cause long-term adverse effects in
 the aquatic environment.
R55 Toxic to fauna.
R57 Toxic to bees.

Safety phrases:

S 1/2 Keep locked up and out of reach children.
S 13 Keep away from food, drink and animal
 feeding stuffs.
S 20/21 When using do not eat, drink or smoke.
S 24/25 Avoid contact with skin and eyes.
S 36/37/39 Wear suitable protective clothing, gloves
 and eye/face protection.
S45 In case of accident or if you feel unwell,
 seek medical advice immediately (show
 the label where possible).
S 60 This material and its container must be
 disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer
 to special instructions/safety data sheets.

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 20 and 25 litres plastic
 containers and labelled according to South African
 regulations and guidelines.

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 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.

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