# Cyper 100 SC

Reg. No. L8473 Act No. 36 of 1947

**READ LABEL BEFORE USE** KEEP OUT OF REACH OF CHILDREN AND ANIMALS

**IRAC INSECTICIDE GROUP CODE 3** 

Ag-Alpha Cyper 100 SC is a suspension concentrate stomach and contact insecticide for the control of various pests on crops as listed.







**DANGER** 

# **ACTIVE INGREDIENT**

Alpha-cypermethrin 100 g/l (Pyrethroid)

# **HAZARD STATEMENTS:**

Harmful if swallowed. May cause cancer. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

# PRECAUTIONARY STATEMENTS:

Wash hands and affected area thoroughly after handling. Avoid release to the environment.



INSECTICIDE

Spill Tech. Oil and chemical pollution control. Tel: +27 (86) 100 0366 / +27 (83) 253 6618 www.spilltech.co.za





# WARNINGS:

 Withholding periods: Minimum number of days between last application and harvest or grazing

Cotton (grazing)	28 days	Potatoes	21 days
Cruciferae	4 days	Sorghum	28 days
Macadamia	30 days	Wine and Table grapes	28 days

- Please note that if this product is used according to the recommendations set herein, the local maximum residue limits (MRL) will not be exceeded.
- However, MRL's for foreign countries may differ from local MRL's. It is of utmost importance that the producer ascertains himself of the MRL's for the specific country exporting to, so that the MRL's are not exceeded. For further information contact local export marketing bodies, i.e. CAPESPAN.
- Handle with care.
- Poisonous when swallowed and moderately toxic by skin contact. May irritate the skin.
- Toxic to fish and wildlife.
- To limit risk towards bees, beneficial pest parasites and fishes, use the product as
  directed.
- Do NOT apply during peak bee activity. Do NOT direct spray towards bee-hives and do NOT allow spray to drift there.
- Store in a cool, dry place away from food and feeds.
- Keep out of reach of children, uninformed persons and animals.
- <u>Re-entry interval</u>: Do NOT enter treated area within 1 day after treatment unless wearing protective clothing.
- In case of poisoning call a doctor and make this label available to him/her.
- AERIAL APPLICATION: Notify all inhabitants of the immediate area to be sprayed
  and issue the necessary warnings. Do NOT spray over or allow drift to contaminate
  adiacent areas or water bodies.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pest against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

# PRECAUTIONS:

- Obtain, read and follow all safety instructions before use.
- Do **NOT** breathe fumes/gas/mist/vapours/spray.
- Wash hands and affected area thoroughly after handling.
- Do NOT eat, drink or smoke when using this product.

- Avoid release to the environment.
- Wear protective gloves/face protection.
- If SWALLOWED: Get medical help.
- IF exposed or concerned, get medical advice.
- Get medical help if you feel unwell.
- Rinse mouth.
- Collect spillage.
- Store locked up.
- Empty all contents from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.
- Wear suitable protective clothing when handling or applying the product: cotton overalls, rubber boots and gloves, as well as a respirator and face shield.
  - Avoid eye and skin contact and inhalation of spray mist.
  - Wash contaminated clothing daily.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Avoid spray drift onto other edible crops, grazing and areas not under treatment.
- Do NOT spray over or allow drift to contaminate water bodies such as dams, ponds, rivers, streams or fish hatcheries.
- Clean applicator thoroughly after use.
- Do **NOT** dispose of wash water where it can contaminate other crops, grazing, rivers or dams.
- Do **NOT** re-use the empty container for any other purpose.

# SYMPTOMS OF HUMAN POISONING:

Skin exposure can cause itching, burning or tingling sensations, especially in the face. Inhalation can cause nasal discharge and a scratchy throat. Hypersensitivity, ataxia, muscular fibrillation, salivation, convulsions, tremors, rapid and/or irregular respiration, urinary incontinence, and nervous irritability may appear. Systemic symptoms in mild cases include headache, dizziness, nausea, vomiting, diarrhoea and fatigue.

# FIRST AID TREATMENT

**Inhalation:** Remove from exposure to fresh air and keep him/her quiet and reassured. Keep patient under observation. Get medical attention if necessary.

Ingestion: Do NOT induce vomiting. Provided the patient is conscious, wash out mouth by water. Never give anything by mouth to an unconscious person. Get medical attention if necessary. Oral application of activated charcoal and cathartic represents optimal management.

**Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if redness, irritation persists or a burning sensation develops.

**Skin contact:** Remove contaminated clothing, shoes and leather goods. Gently wash skin with plenty of water and non-abrasive soap for at least 15 minutes. Do **NOT** rub skin. Should skin irritation persists, seek medical advice.

# NOTE TO PHYSICIAN:

No specific antidote available. Treat symptomatically and supportively. Administer gastric aspiration and lavage with water or 5 % sodium bicarbonate solution if ingested. In case of severe poisoning, use anti-convulsive treatment (e.g. diazepam) for convulsions. Vomiting may be induced by using Ipecac Syrup. Overexposure may cause burning sensation of the skin and irritation of the respiratory tract, causing tightness of the chest or dyspnoea, and rhinorrhea. Keep rested until symptoms disappear.

# RESISTANCE WARNING:

For resistance management, AG-ALPHA CYPER 100 SC is a group code 3 insecticide. Any insect population may contain individuals naturally resistant to AG-ALPHA CYPER 100 SC and other group code 3 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by AG-ALPHA CYPER 100 SC or any other group code 3 insecticide.

# To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate
  or tank mix with registered products from different insecticide group codes.
- Integrate other control methods (chemical, cultural, biological) into insect programs.

Resistance to alpha-cypermethrin containing products has been observed in the following instances:

- 1. African bollworm (*Helicoverpa armigera*) is resistant to all synthetic pyrethroids.
- For use on cotton: ONLY apply AG-ALPHA CYPER 100 SC during the period of 1 January to 28 February.
- For all other crops: Do NOT apply more than 2 (two) AG-ALPHA CYPER 100 SC applications
  per growing season. If more sprays are necessary, use a product from a different insecticide
  group code.
- In general if a synthetic pyrethroid gives poor performance, do NOT re-spray with ANY synthetic pyrethroid, even at a corrective dosage rate. Spray with a product from a different insecticide group code.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE: Use only as indicated.

# GENERAL GUIDELINES

Use suitable equipment in good working condition that is correctly calibrated to ensure thorough coverage and penetration especially when applying to dense row crops. The efficacy of **AG-ALPHA CYPER 100 SC** may be adversely affected if thorough coverage is not obtained. Monitor efficacy within 3 days after application. If unacceptable control has been obtained, a follow-up application may be necessary.

The efficacy of AG-ALPHA CYPER 100 SC against cutworms will be influenced by soil moisture. Because cutworms tend to feed sub-surface when the soil surface is dry, the pest will not come into contact with the product applied to the soil surface. Thus poor control of cutworms can be expected when planting in dry soil or if soil desiccates rapidly after planting.

Bollworm moths are repelled to a certain degree by **AG-ALPHA CYPER 100 SC** and therefore will lay fewer eggs on sprayed plants.

# COMPATIBILITY

Do NOT mix AG-ALPHA CYPER 100 SC with seaweed extracts, spray oils, amitraz, chinomethionate, prothiophos, dodine or vamidothion. If spraying deciduous fruit do NOT add wetting/sticking agents or oils to AG-ALPHA CYPER 100 SC. It is advisable to do a miscibility test before mixing with other agricultural remedies due to the influence of spray water quality that may differ from farm to farm. A particular product formulation can also change and may also influence compatibility.

# MIXING INSTRUCTIONS:

Half fill the spray tank with clean water. Shake the container well before use. Premix the required amount of **AG-ALPHA CYPER 100 SC** with a minimum of  $10 \,\ell$  water. Add the dilution to the spray

tank whilst agitating. Premix any other product to be tank mixed with AG-ALPHA CYPER 100 SC in the same way. Fill the tank and maintain agitation until spraying is completed. Do NOT leave the mixture in the soray tank for any length of time, e.g. overnight.

# WATER QUALITY

# Water pH:

For optimum efficacy of AC-ALPHA CYPER 100 SC the pH of the spray mixture should be around 4. Spray mixture with a high pH can reduce the efficacy of AG-ALPHA CYPER 100 SC. If the spray water pH must be adjusted with a buffer, add the buffer, e.g. Aqua-Right 5 to the spray water first.

# Application through irrigation systems:

If applying AG-ALPHA CYPER 100 SC through an irrigation system, assure that the irrigation water used is as clean as possible, i.e., free of silt, clay and organic material, which are particularly abundant in river water when in flood. The presence of these particles will reduce the efficacy of AG-ALPHA CYPER 100 SC, because synthetic pyrethroids tend to adhere to it.

# AERIAL APPLICATION:

Aerial application of **AG-ALPHA CYPER 100 SC** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SABS Code 0118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- Volume: A spray mixture volume of 30 ℓ per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 25 35 droplets per cm<sup>2</sup> must be recovered at the target area.
- <u>Droplet size</u>: A droplet spectrum with a VMD of 280 300 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- <u>Flying height</u>: Maintain the height of the spray boom at 3 4 metres above the target. Do **NOT** spray when aircraft dives, is in a climb or when banking.
   Use suitable atomising equipment that will produce the desired droplet size and coverage, but
- which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.

  Position all the atomisers within the inner 60 75 % of the wingspan to prevent droplets from
- Position all the atomisers within the inner 60 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature <u>inversion conditions</u> (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
  - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray. Obtain an
  assurance from the Aerial Spray Operator that the above requirements will be met and
  that relevant data will be compiled in a logbook and kept for future reference.

CROP / PEST	DOSAGE RATE	REMARKS			
ALL ROW CROPS Cutworm	For either preventative (pre-emergence) or corrective (post-emergence) treatment. Apply to a well prepared seedbed, free of clods and excessive trash. See directions for "Reduced tillage practices" below. For satisfactory cutworm control it is important that the soil surface is moist. See notes under "GENERAL GUIDELINES" above.				
(Agrotis spp.)	A. PREVENTIVE TREATMENT (pre-emergent): Recommended for fields with a history of cutworm infestation or where the pest is expected.				
	0,2 mℓ / 100 meter row	Ground application: Row treatment: Apply in a minimum of 3 £ water / 100 meter row length and in at least a 300 mm wide band over the row. If the application is made in a wider band, increase the dosage rate proportionally.			
	65 m <b>ℓ</b> / ha	Overall ground treatment: Apply in a minimum of 300 ℓ water / ha.			
	65 mℓ / ha	<b>Aerial application:</b> Apply in 30 ℓ water / ha.			
	B. CORRECTIVE TREATMENT (post-emergent): Recommended when 5 % (or more) seedlings show signs of wilting caused by cutworms.				
	0,15 mℓ / 100 meter row	Ground application: Row treatment: See REMARKS under pre-emergent row treatment.			
	50 m <b>ℓ</b> /ha	Overall ground treatment: See REMARKS under pre-emergent overall treatment.			
	65 m <b>ℓ</b> /ha	<b>Aerial application:</b> Apply in 30 ℓ water/ha			
	Reduced tillage practices: Monitor the cutworm population carefully after the initial application on farms where reduced tillage practices are being used. This is because the fields usually have high cutworm populations under these conditions. A follow-up application may be necessary. Apply as an overall ground treatment at the recommended corrective dosage rate. Also refer to "GENERAL GUIDELINES" for conditions under which poor control of cutworms can be expected.				
CITRUS Ants (Anoplolepis custodiens; Pheidole spp.)	250 mℓ / 1,0 ℓ water	Use only in conjunction with Sper Ant Barrier. Attach the Sper to the tree trunk as directed. Use an adapted knapsack sprayer to apply the AG-ALPHA CYPER 100 SC spray mixture to the fibrous part of the Sper. Apply as soon as the ants become active in the orchard (usually from August to September). Apply to the point of run-off. Repeat if necessary. Suitable for use in orchards under biological control.			
COTTON All bollworms, i.e., African (H. armigera), Red bollworm (Diparopsis castanea) and Spiny bollworm larvae (Earias spp.) and Stainers (Dysdercus spp.)	Warning against bollworm resistance: See RESISTANCE WARNING above. AG-ALPHA CYPER 100 SC should only be used from peak flowering until boll split (weeks 10 – 22 after plant emergence) as a preventive control measure against bollworm larvae. The application of AG-ALPHA CYPER 100 SC is based on weekly scouting or a regular spray programme with 7 day intervals. Start with a bollworm spray programme about 6 weeks after emergence at the beginning of flowering. For the period from beginning of flowering until peak flowering use only registered non-pyrethroid insecticides to ensure proper pest management. See notes under "GENERAL GUIDELINES" above.				
	PREVENTIVE: Application is based on weekly scouting for eggs from flowering stage until boll-split. Scout 24 randomly selected plants in fields up to 15 ha in size. If the following counts of separate species per 24 plants are made, start with AG-ALPHA CYPER 100 SC applications:  African bollworm: average 0,5 eggs per plant;  Red bollworm: 0,25 eggs per plant;  Spiny bollworm: 2 or more larvae per plant.  Regular applications will also control stainers.				
	50 mℓ / 100 ℓ water	Ground application: Apply with a boom and hydraulic nozzles. It is important to ensure thorough coverage of the plants. Apply 100 \( \) spray mixture / ha for plants less than 600 mm high. Increase the volume of spray mixture gradually as plants grow to 200 \( \) / ha for mature cotton. Apply a minimum of 100 m\( \) AG-ALPHA CYPER 100 SC / ha on mature cotton.			
	50 mℓ / 100 ℓ water (0,5 – 1 mℓ / 100 meter row)	"Tramline treatment": Apply $50-100 \ \ell$ spray mixture per hectare depending on plant size. Use a minimum of five suitable hollow-cone nozzles over the "tramlines". Mount the nozzles so that one nozzle sprays directly over the top of each row, one sprays between the two rows and one each on either side of the rows. The two outside nozzles should be mounted on drop arms pointing $45\ ^{\circ}\text{C}$ upwards to ensure thorough wetting.			
Cotton (cont.) All bollworms, i.e., African (Heficoverpa), red and	50 — 100 m <b>ℓ</b> / ha	Mistblower: Apply the lower dosage rate on cotton less than 600 mm high and the higher dosage rate on cotton taller than 600 mm. Use a minimum of 100 mt AG-ALPHA CYPER 100 SC / ha on mature cotton.			
spiny bollworm larvae and stainers	62,5 — 125 mℓ / ha	Aerial application: Apply in 30 & water / ha, as for mistblower application. Use a minimum of 125 m& AG-ALPHA CYPER 100 SC / ha on mature cotton.			

CROP / PEST	DOSAGE RATE	REMARKS		
All bollworms and leaf eaters i.e. semi-looper ( <i>Plusia</i> ) and <i>Spodoptera</i>	CORRECTIVE EMERGENCY TREATMENT: AG-ALPHA CYPER 100 SC can be applied as a corrective application if an emergency situation arises, e.g. if weather conditions prevents applications or in case of high infestation pressure. This recommendation is only an emergency measure. After AG-ALPHA CYPER 100 SC has been applied, continue with an integrated control spray program.			
	The success of this treatment depends on foliage density, plant population, quality of application and development stage of the larvae. Later instar red bollworm larvae established inside bolls may not be controlled successfully.  To achieve maximum effect of AG-ALPHA CYPER 100 SC, allow up to 4 days after application. Resume with the regular programme soon thereafter, irrespective of the crop stage. Warning against bollworm resistance: See RESISTANCE WARNING above.			
	150 mℓ / 100 ℓ water	Ground application: Apply with a boom and hydraulic nozzles. It is important to ensure thorough coverage of the plants. Apply 100 \( \frac{1}{2}\) spray mixture / ha for plants less than 600 mm high. Increase the volume of spray mixture gradually as plants grow to 200 \( \frac{1}{2}\) / ha for mature cotton. Apply a minimum of 300 m\( \frac{2}\) AG-ALPHA CYPER 100 SC / ha on mature cotton.		
	150 m <b>ℓ</b> - 300 m <b>ℓ</b> / ha	Mistblower: Apply the lower dosage rate on cotton less than 600 mm high and the higher dosage rate on cotton taller than 600 mm. Use a minimum of 300 m <b>č AG-ALPHA CYPER 100 SC</b> / ha on mature cotton.		
	175 m <b>ℓ</b> - 350 m <b>ℓ</b> / ha	<b>Aerial application</b> : Apply in 30 <b>ℓ</b> water / ha, as for mistblower application. Use a minimum of 350 m <b>ℓ AG-ALPHA CYPER 100 SC</b> / ha on mature cotton.		
Cutworm (Agrotis spp.)	Refer to directions and dosage rate under All Row Crops.			
COTTON (ONLY IRRIGATED) African bollworm larvae (Helicoverpa armigera)	LARVAL INSPECTION TECHNIQUE: Scout 24 randomly selected plants in fields up to 15 ha. Scout weekly from the onset of flowering until boll split for the presence of young African (Helicoverpa) bollworm larvae. Pay special attention to the presence of African bollworm larvae in terminal buds and developing fruit (squares). Apply at the recommended rate as soon as the threshold value of five larvae per 24 plants is reached or exceeded, regardless of the growth stage of the crop. Warning against bollworm resistance: See RESISTANCE WARNING above. Ensure thorough penetration and coverage (see notes under "GENERAL GUIDELINES" above).			
	100 mℓ / ha	Ground application: Apply as for Cotton: PREVENTIVE; Ground application.		
	125 mℓ / ha	Aerial Application: Apply in 30 & water/ha.		
CRUCIFERAE African bollworm (Helicoverpa armigera), Diamond back moth larvae (Plutella xylostella), Thrips (Thripidae spp.)	7 mℓ / 100 ℓ water	It is important to ensure throughout wetting of the plant (see notes under "GENERAL GUIDELINES" above). Start application as soon as the first signs of the pest are noticed. Repeat every $10-14$ days. This treatment will suppress aphids if sprayed in a programme. Warning against bollworm resistance: See RESISTANCE WARNING above.		
Cutworm (Agrotis spp.)	Refer to directions and dosage rate under All Row Crops.			
GRAPE VINES Banded fruit weevils (snout beetles) (Phlyctinus callosus, Eremnus setulosus)	10 mℓ / 100 ℓ water	Apply as a full cover application to ensure thorough coverage of all plant parts. Start application when the first signs of movement or feeding weevils (snout beetles) is noticed. Repeat 21 – 28 days later if necessary. The first occurrence of weevils (snout beetles) can be expected from m October to mid November.		
Argentine ants ( <i>Linepithema humile</i> )	100 mℓ / 10 ℓ water	Only for use in trellised vineyards. Start application at the beginning of the season when ants start foraging in the vineyards canopy. Apply to point of run-off as a coarse spray directly to the bottom 30 cm of vine stems. Use a ring-spray attachment fitted to the lance of a knapsack sprayer.		
Pugnacious ants (Anoplolepis custodiens and A. steingroeveri)	200 m <b>l</b> / 10 <b>l</b> water	Also treat the trellis poles and all other structures that ants may climb to reach the vines. One application should be sufficient for the entire season, but repeat under conditions of severe ant infestation. It is also important to control weeds. Monitor vineyards regularly for the presence of ants.		

CROP / PEST	DOSAGE RATE	REMARKS	
MACADAMIA Stink bug ( <i>Nezara viridula</i> )	10 m <b>l</b> / 100 <b>l</b> water	Apply as a high volume full cover spray. Start application when the nuts are marble size (October/November). Repeat four weeks later. A possible third application may be applied four weeks after the second application if required.	
POTATOES Potato tuber moth (Phthorimaea opercu-	<b>PREVENTIVE:</b> Start application if the plants are 1 month old. Apply as a full cover spray. Repeat every 8 – 14 days. The potato plants must be ridged at least twice during the growing season to ensure that tubers are covered with soil at all times. If the tubers are to be left in the ground for a period of time before harvest, make sure that there are no cracks in the soil covering the tubers. Potato tuber moths can gain direct access to the tubers through these cracks.		
lella) and Lesser army worm (Spodoptera exigua)	100 mℓ / ha	<b>Ground application:</b> Apply in 300 – 500 ℓ water / ha, depending on the plant size. Ensure thorough penetration and coverage of plants (also see notes under " <b>GENERAL GUIDELINES</b> " above).	
SORGHUM African bollworm (Helicoverpa armigera)	Start application as soon as pest is noticed. Unacceptable control will be obtained if the bollworm larvae are concealed in the ears. Warning against bollworm resistance: See <b>RESISTANCE WARNING</b> above. Ensure thorough penetration and coverage (see notes under "GENERAL GUIDELINES" above).		
	1,0 mℓ / 100 meter row	Ground application: Apply directly onto ears in a minimum of 2 ℓ water / 100 meter row.	
	100 mℓ / ha	<b>Aerial application:</b> Apply in 30 ℓ water / ha.	
Cutworms (Agrotis spp.)	Refer to directions and dosage rate under All Row Crops.		
Stalkborer ( <i>Busseola fusca</i> )	1,25 mℓ / 100 meter row	Ground application: Refer to instructions for Maize.	
	125 mℓ / ha	Aerial application: Refer to instructions for Maize.	

Aqua-Right 5, Reg. No. L6205, Act No. 36 of 19947