



CYPERMETHRIN 200 EC

Reg. No.: L11565 Act /Wet No. 36 of/van 1947

An emulsifiable concentrate insecticide acting as a direct contact and stomach insecticide for Agricultural use on crops as listed.

GROUP	3A	INSECTICIDE
-------	----	-------------



WARNING

Hazard Statements:

Harmful if swallowed.
Causes skin irritation.
Combustible liquid.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist, vapours and spray.
Use only outdoors or in a well-ventilated area.
Avoid release into the environment.

ACTIVE INGREDIENT/AKTIEWE BESTANDEEL:

Cypermethrin (pyrethroid) / Sipermetrien (piretroïed) 200 g/l

Contents/Inhoud
1l

Registration holder / Registrasiehouer:

PROTEK, a division of / a divisie van
PE-BEE AGRI (PTY) LTD / (EDMS) BPK
Co. Reg. No./Mpy. Reg. Nr.: 2005/036308/07
P.O. Box/Posbus 72, Heidelberg, 1438
Tel: (011) 812 9800 or/of
0861 PROTEK (0861 77 68 35)
www.protek.co.za

UN number: 3082

24 HR EMERGENCY NUMBERS

Griffon Poison Information Centre: +27 82 446 8946
24 Hr Transport / Spill emergency no: (Hazcall24): +27 86 044 4411
(Client: Protek)

WARNINGS:

The following withholding periods, minimum time between last application and harvest or grazing, are required:

Cruciferae & Tomatoes:	4 days
Beans, Soybeans, Groundnuts (hay) & Peas:	7 days
Lucerne (grazing), Maize, Sweetcorn, Wheat:	14 days
Citrus, Wine & Table Grapes:	28 days
Cotton (grazing):	28 days
Macadamia nuts:	30 days

Hazard Statements:

Harmful if swallowed.
Causes skin irritation.
Combustible liquid
Very toxic to aquatic life with long lasting effects.

- Handle concentrate with care.
- Harmful by contact, swallowing or inhalation.
- Irritating to eyes, respiratory system and skin.
- Very toxic to fish. Under field conditions, fish are not at risk from normal agriculture usage.
- Highly toxic to bees. No hazard to bees under normal application conditions.
- **FLAMMABLE** - do not store near open flame.
- Keep under lock and key, out of reach of children, uninformed persons and animals.
- Store in a cool, dry place and away from food and feedstuffs.
- **Re-entry:** Do not enter treated area within 1 day after treatment, unless wearing protective clothing.
- **In case of poisoning call a doctor and make the label available to him/her.**

AERIAL APPLICATION:

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warning. Do not spray over or allow to contaminate adjacent areas, rivers, dams or citrus orchards under integrated bio-control of red scale. Allow at least a 100 metre buffer strip between cotton field and orchard.

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 soil, climatic and storage conditions; quality of dilution water, incompatibility 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:**Precautionary Statements:**

Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist, vapours and spray.
Use only outdoors or in a well-ventilated area.
Avoid release into the environment.

- Do not inhale fumes and/or spray mist.
- Avoid skin and eye contact.
- Wear protective clothing, suitable face mask or face shield, rubber gloves and rubber boots when handling and mixing the product and whilst applying the spray mixture.
- Wash with soap and water after use and accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke while mixing or applying the product or before washing hands and face and changing clothing.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean application equipment after use. Dispose of wash water where it will not contaminate crops, grazing, rivers, dams and boreholes.

- **Triple rinse empty containers in the following manner:** Invert the empty container over the spray or mixing tank and allow to drain 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 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the described manner.
- Destroy the empty container by perforation and flattening and dispose of it in a safe manner.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

Related ingredients:

Substance name (IUPAC)	CAS -No.	Concentration % By weight
Cypermethrin	52315-07-8	>20 - <22%
Hydrocarbon solvent	308067-53-0	64%

SYMPTOMS OF HUMAN POISONING:

If product is aspirated into the lungs during ingestion or vomiting, mild to severe chemical pneumonia may be caused. May cause burning, itching or tingling sensations of the skin and readily disappear within 24 hours after exposure. Inhalation causes nasal discharge and a scratchy throat. Symptoms of high-dose ingestion include nausea, prolonged vomiting, stomach pains and diarrhea, which progresses to convulsions, unconsciousness and coma.

FIRST AID TREATMENT:

Remove patient from source of poisoning and keep him quiet and reassured.

Eyes: Flush eyes with clean gentle flowing water for at least 20 minutes, occasionally lifting upper and lower lids, until no evidence of chemicals remains. If irritation occurs and persists, obtain medical attention.

Skin: Remove contaminated clothing and rinse contaminated body area thoroughly with plenty of soap and cold water, until no evidence of chemical remains. Do not rub skin. Apply olive oil to affected areas for prompt relief. Get medical attention if irritation occurs and persists.

Inhalation: Move the patient to fresh air. If breathing difficulty or irritation occurs and persists, obtain medical attention.

Ingestion: Do not induce vomiting. If the patient is alert, have the mouth thoroughly rinsed with water. Do not give anything by mouth. If vomiting occurs, prevent vomit from being inhaled. Get a medical attention.

NOTE TO PHYSICIAN:

This product contains a pyrethroid and an aromatic solvent.

If product is aspirated into the lungs during ingestion or vomiting, mild to severe chemical pneumonia may be caused. The stomach should be emptied as soon as possible by careful gastric lavage.

Antidote is not available. Treat symptomatically and supportively. In case of ingestion, consider gastric lavage with water or 5% sodium bicarbonate solution. Convulsions should be treated with anti-convulsants.

RESISTANCE WARNING:

For resistance management, **CYPERMETHRIN 200 EC** is a group code **A** insecticide. Any insect population may contain individuals naturally resistant to **CYPERMETHRIN 200 EC** and other group code **A** insecticide. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **CYPERMETHRIN 200 EC** or any other group code **A** insecticide.

To delay insecticide resistance:

i Avoid exclusive repeated use of insecticide from the same insecticide group code. Alternate or tank mix with products form different insecticide group codes.

ii Integrate other control methods (chemical, cultural, biological) into insect control programmes.

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

WARNING AGAINST RESISTANCE:

Resistance of American bollworm (*Helicoverpa armigera*) to synthetic pyrethroids has been confirmed.

Cotton:

Synthetic pyrethroids must **only** be applied to cotton during the period 1 January to 28 February.

All Other Crops:

Do not respray more than two applications per growing season. If a pyrethroid gives poor performance, **do not** respray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

DIRECTIONS FOR USE: Use only as directed.

COMPATIBILITY:

- i **CYPERMETHRIN 200 EC** is compatible with a wide range of pesticides. However, since it is not possible for Protek (Pty) Ltd to test all possible combinations, the onus lies with the user to carry out a compatibility test in the event of any uncertainty.
- i Do not mix **CYPERMETHRIN 200 EC** with seaweed extract or vamidothion, prothiophos, chinomethionate and amiraz.
- i When spraying grapes a wetting agent should not be added to **CYPERMETHRIN 200 EC**.
- i The efficacy of **CYPERMETHRIN 200 EC** can be harmed at high pH value of the spray mixture. It is more stable at a pH of around 4. Where an acidifying agent is used to lower the pH of the water, the agent must be added to the water before the **CYPERMETHRIN 200 EC**.
- i The addition of molasses has acidifying effect and reduces evaporation of the spray mist.
- i For ground application add 10% molasses by volume and 20% for aerial application.

MIXING INSTRUCTIONS:

- i Half fill the spray tank with clean water.
- i Ensure pH of water is around 4. Add a suitable buffering agent to correct pH of water if necessary.
- i Measure out the required quantity of **CYPERMETHRIN 200 EC** and premix this with at least 10 litres of already pH corrected water (pH 4). If any other product is to be added to the tank mixture, the required volume of that product must be premixed in similar fashion.
- i Agitate the water in the spray tank and add the premixed product(s) to the tank.
- i Fill the spray tank with water to the required volume, while maintaining agitation to ensure thorough mixing.
- i Maintain agitation during spraying.
- i Use the prepared mixture immediately.
- i Do not allow to stand overnight.

GROUND APPLICATION:

- i When using a conventional high volume sprayer or a mistblower, fit equipment with hollow cone nozzles that give medium to fine droplets.
- i Ensure that sprayers are calibrated before spraying and that thorough coverage is obtained.
- i A uniform distribution must be ensured.

AERIAL APPLICATION:

Aerial application of **CYPERMETHRIN 200 EC** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (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:

- i **Volume:** A spray mixture volume of 30 litre 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.
- i **Droplet coverage:** 30 to 40 droplets per cm² must be recovered at the target area.
- i **Droplet size:** A droplet spectrum with a VMD of 250 to 280 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- i **Flying height:** Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- i 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.
- i Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- i The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- i Stop spraying if the wind speed exceeds 15 km/h.
- i Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- i Spraying under temperature inversion conditions (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.
 i Ensure that the Aerial Spray Operator knows exactly which fields to spray.
 i 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.

APPLICATION RATES:

The following rates are recommended for preventive spray programme. Refer to "Resistance Warning" above. Inspect lands if it rains shortly after spraying. If necessary repeat spraying.

CROP/PEST:	DOSAGE RATE:	REMARKS:
Cotton	See <u>Warning against resistance</u> under "Resistance Warning" above. In order to comply with the principles of pest management and integrated control measures, CYPERMETHRIN 200 EC is intended to be used during the period of fruiting from peak flowering until boll split, i.e. approximately 10 to 22 weeks after plant emergence. CYPERMETHRIN 200 EC is primarily intended for use as a preventive control measure against all bollworm larvae based on weekly scouting, or a regular spray programme applied at 7 day intervals. Normally a bollworm spray programme will commence at the beginning of flowering, i.e. about 6 weeks after emergence. From then until peak flowering use registered non-pyrethroid remedies.	
All bollworms, i.e. American, Red and Spiny bollworm & Stainers	Weekly application: Preventative: Apply as determined by scouting for eggs i.e. for American bollworm a average of 0.5 eggs per plant; red bollworm 0.25 eggs per plant; spiny bollworm, when 2 or more larvae are found during scouting, after scouting 24 plants at random in lands up to 15 hectare in extent. Scouting should be done at weekly intervals from flowering until boll splits. Stainers will be controlled during applications for control of bollworm.	
	75 mL/100 l water	Ground application: With boom and nozzles. Ensure thorough coverage of the plants. For plants smaller than 60 cm apply 100 litre spray mixture per hectare. For taller plants increase the mixture to 200 litre per hectare for mature cotton. Do not use less than 150 mL CYPERMETHRIN 200 EC per hectare on mature cotton.
	75 mL or 150 mL/ha	Mistblower: Use the lower dosage on cotton less than 60 cm high and the higher dosage rate on cotton taller than 60 cm. Do not use less than 150 mL CYPERMETHRIN 200 EC per hectare on mature cotton.
	87 mL or 175 mL/ha	Aerial application: As for mistblower application by applying in 30 litre water per hectare.
American, Red and Spiny bollworm	Corrective: Apply as a corrective spray to control an established infestation, i.e. when more than 6 bollworms per 24 plants are found during scouting or when leaf eaters are found and damage to leaves is increasing. Later instar red bollworms established inside bolls may not be controlled successfully. Success of treatment can be related to application, density of crop foliage, stand and instar of caterpillars. Allow up to 4 days for CYPERMETHRIN 200 EC to achieve its full effect. A corrective application is to be considered an emergency measure and thereafter the regular programme must be resumed irrespective of the crop stage.	
	250 mL/100 l water	Ground application: With boom and nozzles. Ensure thorough coverage of the plants. For plants smaller than 60 cm apply 100 litre spray mixture per hectare. For taller plants increase the volume of spray mixture gradually to 200 litre per hectare for mature cotton. Do not use less than 500 mL CYPERMETHRIN 200 EC per hectare on mature cotton.
	250 or 500 mL/ha	Mistblower: Use the lower dosage on cotton less than 60 cm high and the higher dosage rate on cotton taller than 60 cm. Do not use less than 500 mL CYPERMETHRIN 200 EC per hectare on mature cotton.
	250 or 500 mL/ha	Aerial application: As for mistblower application, by applying in 30 litre water per hectare.

CROP/PEST:	DOSAGE RATE:	REMARKS:
Beans (including soybeans) & Groundnuts American bollworm	Commence application as soon as eggs or larvae are noticed on the plants. Repeat the application at 7 to 14 day intervals or as directed by inspection of the crop.	
	150 mℓ/ha	Ground application: Apply in not less than 200 litre per hectare water.
	150 mℓ/ha	Aerial application: Apply in 30 litre water per hectare.
Cruciferae Diamond back moth larvae	10 mℓ/100 ℓ water	Ensure good wetting of the plant by adding a wetter. Commence spraying at the first signs of the pest and repeat sprays every 10 to 14 days. This treatment will suppress aphids in a programme spray.
Grape vines Weevils (snout- beetles)	10 mℓ/100 ℓ water	Apply as a full cover application ensuring thorough coverage of all parts of the plant. Apply first spray when the first signs of movement and/or feeding of snoutbeetle are detected. Repeat within 21 to 28 days when necessary. The first occurrence of snoutbeetle varies from area to area but can be expected from mid-October to mid-November. Caution - Toxic to bees.
Lucerne Lucerne caterpillar	75 mℓ/ha	Apply as soon as pest occurs. Aerial application: Apply in 30 litre water per hectare.
	75 mℓ/ha	Ground application: Full cover spray in 300 litre water per hectare.
Maize & Sweetcorn American bollworm	1,5 mℓ/100m plant row	Apply when pest is noticed but not later than 80 % beard emergence. Ground application: If row width allows ground application, use not less than 3 litre water per 100 metre. Direct nozzles towards the heads.
	150 mℓ/ha	Aerial application: Apply in 30 litre water per hectare.
	3,5 mℓ/100m plant row	Ground application: Preventative treatment against young caterpillars based on scouting for eggs on plants. Do weekly scouting from 2 to 7 weeks after crop emergence by inspecting at least 100 plants random per field. Apply 7 days after 2,5 % or more plants are found to be infested with eggs. If eggs have hatched, spray at the first signs of infestation. Direct spray into the funnel. Repeat application when scouting shows this to be necessary later in the season. Apply in sufficient water, i.e. 3 litre water per 100 metre row.
Macadamias Stink bug	350 mℓ/ha	Aerial application: Apply in 30 litre water according to the directions above for ground application.
	20 mℓ/100 ℓ water	Apply as a high volume spray. Time of application is based on stinkbug numbers. This is determined by means of the tree shake method. Start monitoring stinkbug numbers two weeks after flowering. Apply as soon as an average of 1,8 stinkbugs per tree are counted. Two or three per season might be needed.
Wheat African bollworm	150 mℓ/ha	Apply as soon as the pest appears as a full cover spray and ensure adequate wetting of ears. Repeat every 10 to 14 days depending on the level of infestation. Ground and aerial application in not less than 200 and 30 litres water respectively.
Peas American bollworm and lesser army worm	Commence application as soon as eggs or larvae occur on the plants. Repeat at 10 to 14 day intervals depending on infestation.	
	150 mℓ/ha	Ground application: Apply in minimum 200 litre per hectare water.
	150 mℓ/ha	Aerial application: Apply in 30 litre water per hectare.

CROP/PEST:	DOSAGE RATE:	REMARKS:
Tomatoes American bollworm	15 mL/100 L water	Ground application: Apply as a full cover spray at the first signs of infestation. Repeat the application 7 to 10 day intervals. High volume: Apply up to 500 litre spray mixture per hectare to plants up to 60 cm high and 1000 litre per hectare or more to plants higher than 60 cm e.g. trellised tomatoes. Do not use more than 150 mL CYPERMETHRIN 200 EC per hectare.
	75 mL - 150 mL/ha	Mistblowers: Apply in 150 to 500 litre water. Use the lower rate and volume for plants up to 60 cm high and the higher rate and volume for plants higher than 60 cm e.g. trellised tomatoes. Do not use more than 150 mL CYPERMETHRIN 200 EC per hectare.
Ornamentals & Flowers Aphids	1 mL/10 L water	Only for home garden. Apply when the pest is noticed. Repeat when necessary. Full cover application.
Mealy bug		Only for home garden. Full cover application. Ant control will materially assist with control.
Flower beetles		Direct contact spray.
Lily borer		Apply regularly when pest is around.
White fly		Only for home garden. Full cover application. Pay particular attention to the underside of the leaves.
Lawns Crickets	5 mL/10 L water	Apply at the rate of 500 mL mixture per m ² and/or pour 50 mL of the mixture into each hole. Repeat when necessary.
Lawn caterpillar	5 mL/10 L water	Apply when damage is noticed. Light full cover application. A damp sack left on the lawn overnight will reveal infestation when removed early in the morning.
Northern harvester termite and Ant	5 mL/10 L water	Apply onto lawns at 5 litre spray mixture per 100 square meter. Repeat application when activity is noticed again. Home garden only. In the case of the Northern harvester termite up to 30 days control may be expected.
Citrus Thrips		Not to be used in orchards where red scale is under biological control.
(a) Reinfestation 4 to 9 weeks after petal fall following use of any other registered treatment	15 - 20 mL/100 L water	Use progressively lower dosage the later the reinfestation occurs during the designated time period. Apply as a light cover spray to wet foliage canopy to the point of run-off.
OR (b) Reinfestation mid November to 20 December following use of any other registered treatment.	5 - 7 mL/100 L water	Use progressively lower dosage the later the reinfestation occurs during the designated time period. Apply as a light cover spray to wet foliage canopy to the point of run-off. NOTE: See use restrictions for citrus at the end of the label.

USE RESTRICTIONS FOR CITRUS:

- i Restrict usage to a single application per season and preferable to the period 4 to 9 weeks after petal drop, for thrip control or 5 to 4 weeks before harvest for false codling moth control. Therefore, use **CYPERMETHRIN 200 EC** only **once** per season, either for thrip control or false codling moth control.
- i Restrict usage to orchards in which the red scale (*Aonidiella aurantii* Mask) is under commercial chemical control. The use of this product may lead to the build-up of red scale.
- i Where there is any intention to use **CYPERMETHRIN 200 EC** if thrips reinfestation occurs during the designated time periods, apply a registered preventive treatment for red scale control in the early spring and a second treatment 7 to 11 weeks after petal fall.
- i Do not use on trees with a history of Tetranychid mite infestations.