

EXIREL® 100 SE

Insecticide

SOUTH AFRICA Registration Number/Registrasie Nommer L10447, Act No. 36 of 1947/Wet 36 van 1947
NAMIBIA Registration Number/Registrasie Nommer N-AR2221

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

GROUP/GROEP	28	INSECTICIDES	INSEKDODERS
A Suspo-emulsion ingestion insecticide for the control of various insect pests on crops as listed.		'n Suspo-emulsie inname insekdoder vir die beheer van verskeie insekplae op gewasse soos gelys.	



HAZARD STATEMENTS:

Causes skin irritation.
May cause an allergic skin reaction.
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

Prevention:

Avoid breathing mist or vapors.
Wash skin thoroughly after handling.
Avoid release to the environment.
Wear protective gloves.

Response:

If skin irritation or rash occurs: Get medical advice/ attention.
Collect spillage.

WARNING

Active ingredient

cyantraniliprole
(anthranilic diamide) – 100 g/L

Aktiewe bestanddeel

cyantraniliprool
(antraniliese diamied) – 100 g/L

Net Volume

1L

Netto Volume

REGISTRATION HOLDER/REGISTRASIEHOUER

FMC Chemicals (Pty) Ltd
Company Registration Number: 1988/001451/07
West End Office Park
Building C, Cnr West Ave & Hall Street
Centurion, 0014
www.ag.fmc.com/za/en

Batch Number

Date of Manufacture

Expiry Date

Printed on Container

Printed on Container

3 Years from date of
manufacture

Lot Nommer

Datum van Vervaardiging

Verval datum

UN Number/VN Nommer	3082
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For any emergency or poisoning contact: Griffon Poison Information Centre (24 hrs) Vir enige noodgeval of vergiftiging kontak Griffon vergiftiging Inligtingsentrum (24 hr) Poison Center Helpline	+27-(0)-82-446-8946
	0861 555 777

WARNINGS:

HAZARD STATEMENTS:

- Causes skin irritation.
- May cause an allergic skin reaction.
- Very toxic to aquatic life with long lasting effects

WITHHOLDING PERIODS:

- The following minimum number of days (withholding periods) between last application and harvest must be adhered to:

Apples and Pears	7 days
Citrus, Thrips and fruit fly foliar application	7 days
Citrus, Fruitfly bait application	1 day
Grapes (Wine & Table)	10 days
Stone Fruit	7 days
Tobacco	56 days
Tree Nuts	14 days

- Handle with care.
- This product is not likely to be hazardous by inhalation or skin contact.
- This product is toxic to aquatic invertebrates.
- **DO NOT APPLY EXIREL® 100 SE INSECTICIDE WHEN CROPS LISTED ON THIS LABEL ARE AT FLOWERING STAGE OR WHEN BEES AND OTHER POLLINATORS ARE ACTIVE.**
- Keep out of the reach of children, uninformed persons and animals.
- Store in the closed labelled original container at temperatures not exceeding 25°C away from food and feed. Do not subject to temperatures of 54°C or higher for periods much longer than 2 weeks or below 0°C.
- Use of this material in a manner or at a time other than in accordance with the directions may cause excessive residues.
- **RE-ENTRY:** Do not enter treated area until spray deposit has dried.
- The withholding period or pre-harvest interval (PHI), i.e. number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying **EXIREL® 100 SE insecticide** consult your local FMC representative, as well as the latest Hortgro lists with MRL information and recommended PHI as published on the Hortgro web site for updated detail on produce intended for export.

DISCLAIMER:

Although this product 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 and the environment or harm to man or animal or for lack of performance of the product 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 immediately in the event of any uncertainty.

PRECAUTIONS:

PRECAUTIONARY STATEMENTS:

Prevention:

- Avoid breathing mist or vapors.
- Wash skin thoroughly after handling.
- Avoid release to the environment.
- Wear protective gloves.

Response:

- If skin irritation or rash occurs: Get medical advice/ attention.
- Collect spillage.

HAZARDOUS INGREDIENTS:

- 1,2-benzisothiazol-3(2H)-one
- Do not inhale spray mist.
- Do not enter treated areas until the sprayed solution has dried.
- Persons in contact with the insecticide should wear protective clothing, (long-sleeved shirts and long pants, shoes with socks and gloves).
- Wash yourself after application of the product.
- Wash contaminated clothing after working with the product.
- In case of eye contact wash immediately with plenty of water.
- In case of ingestion call a physician or poison centre.
- Do not eat, drink or smoke whilst applying or mixing, or before washing hands and face.
- Prevent contamination of feed, food, eating utensils and drinking water.
- **DO NOT APPLY DIRECTLY TO AND PREVENT DRIFT ONTO OTHER EDIBLE CROPS THAN INDICATED ON THE LABEL, GRAZING, RIVERS, DAMS OR OTHER AREAS WHERE SURFACE WATER IS PRESENT AND AREAS NOT UNDER TREATMENT.**
- Clean applicator after use and dispose of wash water where it will not contaminate crops, grazing, food or water.

DISPOSAL OF EMPTY CONTAINER:

- Drain the last of the pesticide from the container by holding it over the spraytank for 30 seconds. Rotate the container around the spout to ensure all the pesticide runs out into the spraytank.
- Pour one quarter of the container volume clean water into the container. Put the lid on, agitate for 30 seconds and decant this rinsewater into the spraytank. Hold the container for 30 seconds over the spraytank to allow total draining of the rinsate.
- Repeat step 2 two more times; the container has now been triple rinsed successfully.
- Puncture the container with a sharp object so that it cannot be used as a container.
- Dry the container in full sunlight with the cap off.
- Store the triple rinsed empty containers in a secure place until they are handed over to, or collected by one of the CropLife South Africa approved collectors or recyclers.
- Store the caps separately in a plastic bag or drum to be collected by the recycler or collector.

FIRST AID MEASURES:

General advice:

- Never give anything by mouth to an unconscious person.

Inhalation:

- No specific intervention is indicated as the compound is not likely to be hazardous. If inhaled, remove to fresh air.
- Consult a physician after significant exposure.

Skin contact:

- Take off all contaminated clothing immediately.

- Wash off immediately with soap and plenty of water.
- Wash contaminated clothing before re-use.
- In the case of skin irritation or allergic reactions see a physician.

Eye contact:

- If easy to do, remove contact lens, if worn.
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- If eye irritation persists, consult a specialist.

Ingestion:

- No specific intervention is indicated as the compound is not likely to be hazardous.
- Not a probable route of exposure.
- However, in case of accidental ingestion, call a physician.
- DO NOT induce vomiting unless directed to do so by a physician or poison control center.
- If victim is conscious: Rinse mouth with water.

Most important symptoms and effects, both acute and delayed:

Symptoms:

- No cases of human intoxication are known and the symptoms of experimental intoxication are not known.

Skin contact may provoke the following symptoms:;

- Local irritation, sensitising effects

Indication of any immediate medical attention and special treatment needed:

Treatment:

- Treat symptomatically.

RESISTANCE WARNING:

When insecticides with the same mode of action are used repeatedly over several years in the same field, naturally occurring less sensitive strains may survive, propagate and become dominant in that field. An insect is considered resistant to an insecticide if it survives a correctly applied treatment at the recommended dose and timing under normal weather conditions and a validation test with a suitable bioassay confirms the lack of activity. When resistance occurs, recommended rates fail to suppress the pest population below economic thresholds. Development of resistance can be avoided or delayed by alternating or mixing products having different modes of action. For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at (<http://www.irac-online.org>).

EXIREL® 100 SE insecticide is an IRAC Group 28 Insecticide (ryanodine receptor modulator - diamide).

Repeated and exclusive use of **EXIREL® 100 SE insecticide**, may lead to the build-up of resistant strains of insects in some crops. Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, this product may be used as part of resistant management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or area agricultural authorities for details, and follow the recommended IRAC guidance for use of ryanodine receptor modulator – diamide insecticides (<http://www.irac-online.org>).

Best practices for resistance management of Group 28 insecticides include:

- Avoid using the same mode of action (same IRAC group number) on consecutive generations of insect pests.
- **Make no more than 2 applications of EXIREL® 100 SE insecticide, or any other product containing a Group 28 insecticide within a “treatment window”.** The following application to the target pest(s) in the next “treatment window” must be with an effective product with a different mode of action (non-Group 28 insecticide).

A “Treatment Window” is the period of residual activity provided by a single or sequence of product applications with the same mode of action within an approximate 30 day period (15 - 40 days depending on local developmental time from egg to adult). Ideally the “Treatment Window” should approximate the length of a generation of the target pest.

- Avoid using less than the labelled rates of **EXIREL® 100 SE insecticide**.
- Monitor insect populations for product effectiveness. If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control.
- If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control for your area.

For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) website (<http://www.irac-online.org>).

GENERAL INFORMATION:

EXIREL® 100 SE insecticide has a novel mode of action and acts by binding to and activating insect ryanodine receptors. This activation stimulates release and depletion of calcium from the internal stores of muscles, resulting in impaired muscle regulation, paralysis and ultimately insect death. Death of the pest occurs within 2-3 days, but inhibition of insect movement and feeding occurs rapidly.

EXIREL® 100 SE insecticide is active through ingestion (stomach action).

IPM AND BENEFICIAL AND OTHER NON-TARGET INSECTS:

FMC supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds.

Cyantraniliprole is a product that is highly effective in the control of insects and may cause adverse effects to non-target organisms and aquatic invertebrates. To avoid harm, caution must be used in areas where desirable non-target species may be present.

To comply with Good Agricultural Practices: Do not apply near or directly to water. Do not allow product to drift.

Read and follow the label in its entirety for directions for use and additional precautionary information. Understand and implement Good Agricultural Practices when using this product. Consult your local Extension Agent, Crop Consultant or FMC representative for additional information on Good Agricultural Practices.

DO NOT APPLY EXIREL® 100 SE INSECTICIDE WHEN CROPS LISTED ON THIS LABEL ARE AT FLOWERING STAGE OR WHEN BEES AND OTHER POLLINATORS ARE ACTIVE.

This product is toxic to silkworms. Do not allow product to drift to silkworms production areas or mulberry orchards. To avoid harm, caution must be used in areas where desirable non-target species may be present.

DIRECTIONS FOR USE:**USE ONLY AS DIRECTED****SHAKE THE BOTTLE (CONTAINER) THOROUGHLY BEFORE USE**

Monitor insect populations and apply **EXIREL® 100 SE insecticide** according to the label instructions when locally determined economic thresholds are reached. Follow the label recommendations precisely for dosage rates, spray intervals and the optimum timing for application,

COMPATIBILITY:

EXIREL® 100 SE insecticide should not be mixed with other agrochemicals unless such chemicals are listed on this label.

TANK MIXING:

Spray equipment must be clean and free of previous pesticide deposits before applying **EXIREL® 100 SE insecticide**. Fill spray tank $\frac{1}{4}$ to $\frac{1}{2}$ full of clean water. Pre-mix **EXIREL® 100 SE insecticide** with some clean water before adding to spray tank. Mix thoroughly so as to fully mix the **EXIREL® 100 SE insecticide**. Once mixed, continuous agitation by mechanical or hydraulic means is required. The ideal pH for the **EXIREL® 100 SE insecticide** spray mixture must be pH 7 or less. Use the spray mixture within a 4-hour period after preparation. It is not recommended to store the spray mixture overnight in the spray tank.

APPLICATION:

Apply **EXIREL® 100 SE insecticide** as a medium to full cover application with conventional orchard spray equipment which is correctly calibrated to provide thorough coverage of the target crop and correct dosage rate per hectare or as bait application as per Directions of use tables.

AERIAL APPLICATION:

Aerial application of **EXIREL® 100 SE insecticide** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118:2009 (Aerial Application of 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 at least 30 litres 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: 30 to 40 droplets per cm^2 must be recovered at the target area.
- 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.
- 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.
- 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 to 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 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.
 - 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.

DECIDUOUS FRUIT:

The dosage of **EXIREL® 100 SE insecticide** per hectare should be calculated according to the tree-row-volume (TRV) of the orchard, irrespective of the actual volume of water applied. The TRV is the water volume required when the trees are in full leaf and is calculated according to the formula:

$$\text{TRV} = \frac{\text{Tree Height* (m)} \times \text{Tree Diameter* (m)} \times 937}{\text{Row width (m)}}$$

*(Tree height and tree diameter should be measured during summer when trees are in full flush)

EXIREL® 100 SE insecticide can be applied as either a high-volume application (water volume/ha equal to TRV) or concentrated, low volume application, where the actual water volume is lower than TRV. In either case, the amount of **EXIREL® 100 SE insecticide** per hectare remains constant (according to TRV). Do not apply **EXIREL® 100 SE insecticide** in a water volume of less than ¼ of TRV (i.e., not higher than 4x concentration).

Application (water) volumes recommended at different growth stages of the tree.

APPLES (Apples & Pears)

Growth Stage	% of TRV requirement/ha
From green tip to ± 30 % blossom	60 %
From ± full blossom to ± mid November	80 %
From ± beginning of December	100 %

STONE FRUIT (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)

Growth Stage	% of TRV requirement/ha
Bud Break to Full Bloom	60 %
75% Petal Drop to 1 month later (Mid Season)	80 %
Mid Season to Post Harvest	100 %

APPLICATION DOSAGE RATES:

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
POME FRUIT APPLES Codling moth <i>Cydia pomonella</i>	35 ml/100 l spray mixture	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and developing fruit.</p> <p>EXIREL® 100 SE insecticide and other Group 28 insecticides must only be applied against one of the first, second or third generations of the pest. In order to prevent the development of resistance, apply products with a different mode of action against different generations of codling moth. In apples, because of its efficacy against Banded Fruit Weevil (<i>Phlyctinus callosus</i>) it is advised that EXIREL® 100 SE insecticide applications be targeted to control both of these insect pests.</p> <p>Always apply EXIREL® 100 SE insecticide in a block spray programme, not exceeding 10–14-day intervals between applications.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications per season in total. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>IMPORTANT NOTE: The withholding period or pre-harvest interval (PHI), i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying EXIREL® 100 SE insecticide consult your local FMC representative, as well as the latest Hortgro lists with MRL information and recommended PHI as published on the Hortgro web site for updated detail on produce intended for export.</p>
POME FRUIT (continue) APPLES Banded Fruit Weevil <i>Phlyctinus callosus</i>	35 ml/100 l spray mixture	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and developing fruit.</p> <p>Commence spraying when weevils are first caught in corrugated cardboard traps attached to the tree trunks or when feeding damage is first noted on the leaves of the lower shoots. A follow-up EXIREL® 100 SE insecticide application may be necessary 10-14 days later depending on re-infestation of the pest.</p> <p>Do not exceed the 2 EXIREL® 100 SE insecticide applications per season, including applications of these products against Codling moth (refer to recommendations above). EXIREL® 100 SE insecticide applications should only be applied to one generation of this pest. An effective insecticide with a different mode of action such as Steward® 150 EC insecticide should be used for control of the other generation in those seasons or areas where 2 generations of this pest occur.</p>

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
		<p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>The withholding period, i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Refer to IMPORTANT NOTE above.</p>
POME FRUIT (continue) APPLES Mediterranean Fruit Fly <i>Ceratitis capitata</i>	75 ml/100 l spray mixture (Minimum rate of 1.2 L EXIREL® 100 SE/ha)	<p>Apply as a full cover application at early stages of pest infestation, typically when adults are trapped and when the crop starts to be attractive for the adults.</p> <p>Apply in 1500 – 2000 L water per hectare.</p> <p>Make no more than one application per season.</p> <p>The minimum recommended application rate is 1.2 L product per hectare, irrespective of the water volume used.</p> <p>Allow 7 days between last application and harvest.</p>
BAIT APPLICATION RATES:		
POME FRUIT (continue) APPLES & PEARS Mediterranean Fruit fly <i>Ceratitis capitata</i>	Ground Application 100 ml/ha + 400 - 1000 ml/ha Hymlure 425 RTU In 50 – 100 litres of water per hectare	<p>Application of fruit fly baits. Where possible use custom made rigs or specially adapted equipment for ground applications of Fruit fly bait. These should be made as scattered coarse droplet applications, aimed at the inside leaves of the canopy on the underside of the leaves as this is where fruit flies tend to congregate. The following guidelines can be used to obtain this.</p> <p>Use Spraying Systems D2 to D4 nozzles without whirler plates that provide a thin solid stream aimed into the inside of the tree canopy.</p> <p>This ensures that the thin solid stream will break up into the desired scattered coarse droplets inside the tree canopy when striking leaves, fruit and branches. The size, number and placement of nozzles, spray pressure, ground speed etc. will depend on the water volume needed for the specific orchard.</p> <p>Make the bait applications to at least one side of each tree in a row (When bait applications are made to rows on both sides of the interrow at the same time, the following interrow can be skipped) The other side(s) of the row(s) should be treated at the next application.</p> <p>Do not apply any other products including adjuvants surfactants and wetters with bait applications of EXIREL® 100 SE insecticide.</p>
	Aerial Application 100 ml/ha + 900 ml/ha Hymlure 425 RTU + 1 litre of water/ha (Total of 2 L spray mixture per hectare)	<p>Applications should be repeated at 7-day intervals. Do not apply more than a total of 5 bait applications of EXIREL® 100 SE insecticide for control of fruit fly per season.</p> <p>Do not apply more than 3 consecutive applications of EXIREL® 100 SE insecticide at a time. Follow this with a "window" of 60 days with applications of an effective registered product with a different mode of action after which 2 consecutive bait applications of EXIREL® 100 SE insecticide can be applied again. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between the last EXIREL® 100 SE insecticide application and harvest.</p>

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
		<p>The withholding period, i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Refer to IMPORTANT NOTE above.</p> <p>HYMLURE: User must ensure that all recommendations are adhered to.</p>
CITRUS Citrus thrips <i>Scirtothrips aurantii</i> Light-Medium Foliar Cover Spray	100 ml + 300 ml light or medium grade narrow distillation mineral spray oil/ 100 l spray mixture	<p>EXIREL® 100 SE insecticide applications should commence before closure of the calyx at the end of flowering or when thrip activity is first noticed. These applications should be made as a light – medium foliar cover spray, avoiding run-off (2 - 10 litres per tree depending on tree size), ensuring even coverage.</p> <p>A second application can be made 14 days later depending on re-infestation of thrips.</p> <p>Do not apply more than 2 consecutive applications of EXIREL® 100 SE insecticide. Consult the recommendations in the Resistance Warning section on this label.</p> <p>N.B. No other surfactants/adjuvants/wetters other than a light to medium grade mineral oil as indicated under Application Rate for Citrus should be added to foliar applications of EXIREL® 100 SE insecticide as these combinations can sometimes cause damage (marking) of citrus fruit.</p>
CITRUS (continue) Citrus thrips <i>Scirtothrips aurantii</i> Low Volume Coarse Droplet Bait Application	75 ml + 200 g white sugar/100 l spray mixture	<p>Apply EXIREL® 100 SE insecticide before closure of the calyx or when thrip activity is first noticed. Applications should be made as a low volume (1 - 5 litres per tree, depending on tree size), coarse droplet, bait application to the trees ensuring even coverage. A second application can be made 14 days later depending on re-infestation.</p> <p>Do not apply more than 2 consecutive applications of EXIREL® 100 SE insecticide. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>IMPORTANT NOTE: The withholding period or pre-harvest interval (PHI), i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying EXIREL® 100 SE insecticide consult your local FMC representative, as well as the latest CGA lists with MRL information and recommended PHI's for updated detail on citrus intended for export.</p>

CITRUS Mediterranean Fruit fly <i>Ceratitis capitata</i>	75 ml/100 l spray mixture (Minimum rate of 750 ml EXIREL® 100 SE insecticide /ha)	Apply as a high volume, full cover application at early stages of pest infestation, typically when adults are trapped and when the crop starts to be attractive for the adults. Make no more than two applications per season at a 7-day interval. Allow 7 days between last application and harvest.
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BAIT APPLICATION RATES:

CITRUS (Continue) Mediterranean Fruit fly <i>Ceratitis capitata</i> Natal Fruit fly <i>Ceratitis rosa</i>	Ground Application 100 ml/ha + 400 - 1000 ml/l Hymlure 425 RTU In 50 – 100 litres of water per hectare (Please note section under Use Restrictions on the Hymlure 425 RTU label with regard to rates for use on soft citrus or mandarin type cultivars eg. Nova and Minneola)	Application of fruit fly baits. Where possible use custom made rigs or specially adapted equipment for ground applications of Fruit fly bait. These should be made as scattered coarse droplet applications, aimed at the inside leaves of the canopy on the underside of the leaves as this is where fruit flies tend to congregate. The following guidelines can be used to obtain this. Use Spraying Systems D2 to D4 nozzles without whirler plates that provide a thin solid stream aimed into the inside of the tree canopy. This ensures that the thin solid stream will break up into the desired scattered coarse droplets inside the tree canopy when striking leaves, fruit and branches. The size, number and placement of nozzles, spray pressure, ground speed etc. will depend on the water volume needed for the specific orchard. Make the bait applications to at least one side of each tree in a row (When bait applications are made to rows on both sides of the interrow at the same time, the following interrow can be skipped) The other side(s) of the row(s) should be treated at the next application. Do not apply any other products including adjuvants surfactants and wetters with bait applications of EXIREL® 100 SE insecticide. Aerial Application 100 ml/ha + 900 ml/ha Hymlure 425 RTU + 1 litre of water/ha (Total of 2 L spray mixture per hectare)
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BAIT APPLICATION RATES:

<p>GRAPES</p> <p>WINE & TABLE</p> <p>Mediterranean Fruit Fly <i>Ceratitis capitata</i></p>	<p>Ground Application</p> <p>100 ml/ha + 400 - 1000 ml/ha Hymlure 425 RTU In 50 – 100 litres of water per hectare</p> <p>Aerial Application</p> <p>100 ml/ha + 900 ml/ha Hymlure 425 RTU + 1 litre of water/ha (total of 2 L spray mixture per hectare)</p>	<p>Application of fruit fly baits. Apply EXIREL® 100 SE insecticide in a total volume of 50 litres bait mixture per planted ha as coarse droplets of approximately 1 – 6 mm. Use only calibrated equipment adapted to comply with application requirements.</p> <p>Table Grapes: Do not apply directly onto the grape bunches. Spray at least every second to third row, applying the bait to the underside of the trellis roof. In order to avoid droplets on the berries, direct the application above the bunch line to the leaf canopy for slanting trellises and between bunch lines for overhead trellises.</p> <p>Wine Grapes: The solid stream method should be used and applied directly into the leaf canopy in order to break up the solid stream into coarse droplets. Treat both sides of every second or third interrow depending on fruit fly pressure. Alternate rows with each consecutive application.</p> <p>Do not apply any other products including adjuvants surfactants and wetters with bait applications of EXIREL® 100 SE insecticide.</p> <p>Applications should be repeated at 7 day intervals. Do not apply more than a total of 5 EXIREL® 100 SE insecticide bait applications for control of fruit fly per season. Do not apply more than 3 consecutive applications of EXIREL® 100 SE insecticide at a time. Follow this with a “window” of 60 days with applications of an effective registered product with a different mode of action after which 2 consecutive bait applications of EXIREL® 100 SE insecticide can be applied again. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 10 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>HYMLURE: User must ensure that all recommendations are adhered to.</p>
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<p>STONE FRUIT (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>False Codling moth <i>Thaumatotibia leucotreta</i></p>	<p>50 ml/100 l spray mixture</p>	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and fruit.</p> <p>Apply EXIREL® 100 SE insecticide when moth catches in pheromone traps indicate an infestation of False Codling moth or at the onset of ripening. Further applications should be made at 10-14 day intervals if necessary.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications in total per season on the crop, including applications made against Banded Fruit Weevil (<i>Phlyctinus callosus</i>)</p> <p>Should any further control of the pest be required apply a registered insecticide that is not from chemical group code 28. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>IMPORTANT NOTE: The withholding period or pre-harvest interval (PHI), i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying EXIREL® 100 SE insecticide consult your local FMC representative, as well as the latest Hortgro lists with MRL information and recommended PHI as published on the Hortgro web site for updated detail on produce intended for export.</p>
<p>STONE FRUIT (Continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>Banded Fruit Weevil <i>Phlyctinus callosus</i></p>	<p>35 ml/100 l spray mixture</p>	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and developing fruit.</p> <p>Commence spraying when weevils are first caught in corrugated cardboard traps attached to the tree trunks or when feeding damage is first noted on the leaves of the lower shoots. A follow-up EXIREL® 100 SE insecticide application may be necessary 10-14 days later depending on re-infestation of the pest. Thorough coverage of the foliage and developing fruit is essential.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications per season, including applications of these products against False Codling Moth (refer to recommendations above)</p> <p>Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>The withholding period, i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Refer to IMPORTANT NOTE above.</p>

<p>STONE FRUIT (continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>Western Flower Thrips <i>Frankliniella occidentalis</i></p> <p>Early damage ("Brown russetting")</p>	<p>100 ml/100 l spray mixture</p>	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and developing fruit.</p> <p>Early damage caused by Western Flower Thrips feeding over the flowering period up to 75% petal fall leads to "brown russetting" symptoms.</p> <p>EXIREL® 100 SE insecticide applications should commence as a full cover spray ensuring good coverage when scouting indicates that infestation thresholds have been reached, generally between early and full blossom. Depending on infestation pressure and the length of the flowering period 1-2 follow-up insecticide applications may be necessary at 7-10 days intervals.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications per season, including applications of these products against late Western Flower Thrips infestations causing "silvering" (note the warning in the section on Resistance Warning on this label against application on consecutive generations of the same pest), Oriental Fruit Moth (<i>Grapholita molesta</i>) and Banded Fruit Weevil (<i>Phylctinus callosus</i>) If any further applications are needed for control of early WFT use a registered insecticide that does not belong to Group Code 28. Consult the recommendations in the Resistance Warning section on this label.</p>
<p>STONE FRUIT (continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>Western Flower Thrips <i>Frankliniella occidentalis</i></p> <p>Late damage ("Silvering")</p>	<p>100 ml/100 l spray mixture</p>	<p>Late damage called "silvering" is caused by thrips feeding on ripening fruit shortly before harvesting.</p> <p>EXIREL® 100 SE insecticide applications should commence as a full cover spray ensuring good coverage of the tree and especially the fruit when scouting indicates the very first signs of thrip activity at this stage. A further application may be necessary depending on severity of the infestation.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications per season, including applications of these products against early Western Flower Thrips infestations (brown russet) – note the warning in the section on Resistance Management against application on consecutive generations of the same pest, Oriental Fruit Moth (<i>Grapholita molesta</i>) and Banded Fruit Weevil (<i>Phylctinus callosus</i>) Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>IMPORTANT NOTE: The withholding period or pre-harvest interval (PHI), i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's), but may not necessarily meet all those for export crops. Before applying EXIREL® 100 SE insecticide consult your local FMC representative, as well as the latest Hortgro lists with MRL information and recommended PHI as published on the Hortgro web site for updated detail on produce intended for export.</p>

<p>STONE FRUIT (Continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>Oriental Fruit Moth <i>Grapholita molesta</i></p>	<p>50 ml/100 l spray mixture</p>	<p>Apply EXIREL® 100 SE insecticide as a full cover application at spray volumes calculated according to the Tree Row Volume (TRV) of the crop as set out in the section under Deciduous Fruit above. Ensure thorough coverage of the foliage and developing fruit.</p> <p>Monitor pheromone trap catches and apply according to the day-degree model. Establish the first biofix date and apply first application when about 500° day degrees have accumulated. Apply second application when 420-510° day degrees have accumulated after the second biofix date. Applications must be carefully timed and applied before newly hatched larvae tunnel into shoots or fruit.</p> <p>Do not exceed 2 EXIREL® 100 SE insecticide applications per season, including applications of these products against Western Flower Thrips (<i>Frankliniella occidentalis</i>), and Banded Fruit Weevil (<i>Phylctinus callosus</i>). Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>The withholding period, i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Refer to IMPORTANT NOTE above.</p>
<p>STONE FRUIT (Continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes)</p> <p>Mediterranean Fruit fly <i>Ceratitis capitata</i></p>	<p>75 ml/100 l spray mixture (Minimum rate of 750 ml EXIREL® 100 SE/ha)</p>	<p>Apply as a full cover application at early stages of pest infestation, typically when adults are trapped and when the crop starts to be attractive for the adults.</p> <p>Apply in 1000 – 1800 L water per hectare.</p> <p>Make no more than two applications per season at a 7-day interval.</p> <p>The minimum recommended application rate is 750 ml product per hectare, irrespective of the water volume used.</p> <p>Allow 7 days between last application and harvest.</p>

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
BAIT APPLICATION RATES:		
STONE FRUIT (Continue) (Apricots, Cherries (sweet & sour), Nectarines, Peaches, Plums & Prunes) Mediterranean Fruit fly <i>Ceratitis capitata</i>	Ground Application 100 ml/ha + 400 - 1000 ml/ha Hymlure 425 RTU In 50 – 100 litres of water per hectare Aerial Application 100 ml/ha + 900 ml/ha Hymlure 425 RTU + 1 litre of water/ha (Total of 2 L spray mixture per hectare)	<p>Application of fruit fly baits. Where possible use custom made rigs or specially adapted equipment for ground applications of Fruit fly bait. These should be made as scattered coarse droplet applications, aimed at the inside leaves of the canopy on the underside of the leaves as this is where fruit flies tend to congregate. The following guidelines can be used to obtain this.</p> <p>Use Spraying Systems D2 to D4 nozzles without whirler plates that provide a thin solid stream aimed into the inside of the tree canopy.</p> <p>This ensures that the thin solid stream will break up into the desired scattered coarse droplets inside the tree canopy when striking leaves, fruit and branches. The size, number and placement of nozzles, spray pressure, ground speed etc. will depend on the water volume needed for the specific orchard.</p> <p>Make the bait applications to at least one side of each tree in a row (When bait applications are made to rows on both sides of the interrow at the same time, the following interrow can be skipped) The other side(s) of the row(s) should be treated at the next application.</p> <p>Do not apply any other products including adjuvants surfactants and wetters with bait applications of EXIREL® 100 SE insecticide.</p> <p>Applications should be repeated at 7-day intervals. Do not apply more than a total of 5 EXIREL® 100 SE insecticide bait applications for control of fruit fly per season.</p> <p>Do not apply more than 3 consecutive applications of EXIREL® 100 SE insecticide at a time. Follow this with a “window” of 60 days with applications of an effective registered product with a different mode of action after which 2 consecutive bait applications of EXIREL® 100 SE insecticide can be applied again. Consult the recommendations in the Resistance Warning section on this label.</p> <p>Allow 7 days between last EXIREL® 100 SE insecticide application and harvest.</p> <p>The withholding period, i.e., number of days between last application and harvest, meets local maximum residue limits (MRL's) but may not necessarily meet all those for export crops. Refer to IMPORTANT NOTE above.</p> <p>HYMLURE: User must ensure that all recommendations are adhered to.</p>

CROP/PEST	APPLICATION RATE	RECOMMENDATIONS/REMARKS
TOBACCO White Fly (<i>Bemisia tabaci</i> , <i>Trialeurodes vaporariorum</i>)	600 ml/ha	<p>PREVENTIVE/EARLY CORRECTIVE APPLICATION</p> <ul style="list-style-type: none"> • Apply EXIREL® 100 SE insecticide in 250 - 400 l of water per hectare. Good coverage of all foliage is essential. • Commence EXIREL® 100 SE insecticide applications when the first signs of infestation are observed on the leaves. • A second application of EXIREL® 100 SE insecticide should be made 7 days later. • A maximum of 2 consecutive applications of EXIREL® 100 SE insecticide should be made to the crop. Further application(s) must be with an effective product with a different mode of action (non-Group 28 insecticide). • See Best practices for resistance management of Group 28 insecticides in the RESISTANCE WARNING section on this label.
TREE NUTS (including almonds, cashew, chestnut, hazelnut, macadamia, pecan, pistachio, walnut): Thrips (Thrips sp.)	FOLIAR APPLICATION: 50 ml/100 Liter	<p>Apply EXIREL® 100 SE insecticide as a medium to high volume application to obtain full coverage of the foliage.</p> <p>Apply in 600 – 3000 L water per hectare.</p> <p>Apply EXIREL® 100 SE insecticide when pest usually occur. Use recognized monitoring practises to determine presence of pest. A further application should be made at a 10-day interval if necessary.</p> <p>Do not apply more than 2 consecutive applications of EXIREL® 100 SE insecticide at a time.</p>
TREE NUTS (including almonds, cashew, chestnut, hazelnut, macadamia, pecan, pistachio, walnut): Macadamia Nut Borer (<i>Thaumatomibia batrachopa</i>)	FOLIAR APPLICATION: 500-750 ml/ha	<p>Apply EXIREL® 100 SE insecticide as a medium to high volume application to obtain full coverage of the foliage.</p> <p>Apply in 600 – 3000 L water per hectare.</p> <p>Apply EXIREL® 100 SE insecticide when pest usually occur. Use recognized monitoring practises to determine presence of pest. A further application should be made at a 10-day interval if necessary.</p> <p>Do not apply more than 2 consecutive applications of EXIREL® 100 SE insecticide at a time.</p>

ACKNOWLEDGEMENT OF REGISTERED PRODUCTS:

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