

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



Insecticide

DIMETHOATE 400 EC

Reg. No. L 8455 Act No. 36 of 1947
W 130132 / N-AR 1878

6: 29/2/2024 – Oct2024

An emulsifiable concentrate systemic and contact insecticide for the control of insects as indicated. DIMETHOATE 400 EC will assist in controlling Codling moth in apples and pears and non-organophosphate resistant Mealybugs in grape vines.

ACTIVE INGREDIENT

dimethoate (organophosphate) 400 g/l

GROUP

1B

INSECTICIDE



DANGER



Hazard Statements:

Highly flammable liquid and vapour.
Harmful if swallowed.
Harmful if inhaled.
Causes damage to organs.

Precautionary Statements:

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Do not breathe dust, fume, gas, mist, vapours, or spray.
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.



villa



UN Number: 1993

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1983/008184/07
65 Botes Road, Glen Marais, Kempton Park, 1619
Tel. (011) 396 2233
Website: www.villacrop.co.za

IN CASE OF POISONING / 24 HR EMERGENCY NUMBERS:
Griffon Poison Information Centre (National): +27 82 446 8946
Poison Information Helpline (National): +27 861 555 777
24 Hr Transport / Spill emergency no: (Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED
Batch Number: _____
Expiry Date: _____
Date of Manufacture: _____

DIMETHOATE 400 EC

Reg. No. L 8455 Act No. 36 of 1947

N-AR 1878 / W 130132

IRAC INSECTICIDE GROUP CODE: 1B

ACTIVE INGREDIENT:

dimethoate (organophosphate) 400 g/l

Registration holder:

UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07

65 Botes Road, KEMPTON PARK, 1619

Tel. (011) 396 2233

WARNINGS**Withholding periods:**

The following minimum number of days must be allowed between last application and harvest or grazing:	
Tobacco, Legumes, Lucerne and Mixed pastures	7 days
Bait spraying (Apples, Pears, Peaches and Plums)	10 days
Citrus (foliar application)	14 days
Citrus (soil application)	42 days
Grain sorghum, Groundnuts, Cotton, Cabbages, Cauliflower, Beans, Strawberries and Cucurbits	14 days
Wheat	21 days
Peaches, Plums, Grape vines and Pineapples	28 days
Barley	50 days
All other crops mentioned	14 days
Canola	50 days

NOTE

WITHHOLDING PERIODS ARE BASED ON GOOD AGRICULTURAL PRACTICE AND WHEN FOLLOWED LOCAL (SA) MRL'S WILL BE MET. FOR PRODUCE DESTINED FOR EXPORT, CONSULT YOUR EXPORT AGENT OR SUPPLIER FOR THE LATEST WITHHOLDING PERIODS RELEVANT TO YOUR EXPORT MARKET.

Hazard statements:

Highly flammable liquid and vapour.
Harmful if swallowed.
Harmful if inhaled.
Causes damage to organs.

- Do not apply to apricots, rough skin lemon, Seville oranges and ornamental plants as indicated.
- Soil application (citrus) should not be performed where **Bromacil** has been used for weed control in previous years, and **Bromacil** applications should not follow a **DIMETHOATE 400 EC** soil application within twelve (12) months.
- Handle with extreme care.
- Poisonous when absorbed through the skin or Harmful if swallowed and inhaled.
- Toxic to fish, bees and wildlife.
- Causes damage to organs.
- **To protect Bees, do not spray into open blossoms or when Bees are active.**
- Do not use on warm-blooded animals or in houses.
- **Flammable** – highly flammable liquid and vapours. Do not store or spray near open flames.
- Store under lock and key in a cool place at temperatures not exceeding 40 °C, away from food, feeds, seed, fertilizers and other agricultural remedies.
- Store in a cool, dry well-ventilated place in the original container, tightly closed and secured.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within two (2) days after treatment, unless wearing protective clothing.
- Do not graze adjacent fields within four (4) days.
- **In case of poisoning call a doctor and make this label available to him/her.**

Aerial application:

Notify all inhabitants of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

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, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests 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:**

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Do not breathe dust, fume, gas, mist, vapours, or spray.
Wash hands and face thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Use only outdoors or in a well-ventilated area
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.
IF SWALLOWED: Get medical help.
Rinse mouth.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
IF exposed or concerned: Get emergency help immediately.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of content/container to suitable landfill in accordance with local regulations.

- Avoid inhalation of spray mist or fumes.
- Avoid contact with skin and eyes.
- Wear full protective clothing i.e. a face shield and rubber gloves and boots, when handling the concentrated and diluted product. Wear suitable protective clothing when the product is handled, the spray mixture prepared and during application.
- Wash with soap and water after use and/ after accidental skin contact or in case of accidental contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
- Do not clear choked spray equipment by blowing with the mouth.
- Prevent drift through the use of a suitable drift retardant (i.e., **Interlock®**) so as to limit off target exposure to other crops, grazing areas, rivers, dams or water sources
- Clean applicator after use and dispose of wash water where it will not contaminate crops, rivers, dams and grazing.
- **TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.**

- Soak spillage of concentrate with a strong washing soda solution and wash thoroughly with plenty of water.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feed, drinking water and eating utensils.

Relevant hazardous components	
Dimethoate	400 g/ℓ
Methanol	< 550 g/ℓ
Dye Blue-Solvent Base	< 70 g/ℓ

NOTE: The ingredients listed above contribute to the overall GHS classification, the remaining ingredients do not have to be listed according to the South African Regulations for Hazardous Chemical Agents 2021, Regulation 14(b).

In case of poisoning, call the following number: +27 82 446 8946 (Griffon Poison Information Centre) or +27 861 555 777 (Poison Information Helpline).

In case of a chemical spill call the following 24 Hr Transport / Spill emergency number: +27 86 044 4411 (Hazcall24 / Client: Villa Crop Protection).

SYMPTOMS OF HUMAN POISONING

Nausea, headache, tiredness, giddiness, blurred vision and pupillary constriction, vomiting, abdominal pain, diarrhoea, sweating and salivation. Confusion, ataxia, slurred speech, loss of reflexes is some of the central nervous system effects which may lead to misdiagnosis as acute alcoholism. After inhalation of vapours effects appear within minutes: ocular and respiratory effects. This includes marked miosis, ocular pain, conjunctival congestion, diminish vision, ciliary spasm and brow ache. With acute systemic absorption: rhinorrhea, hyperemia of upper respiratory tract, tightness in the chest and wheezing respiration. Severe intoxication: salivation, involuntary defecation and urination, sweating, lacrimation, penile erection, bradycardia and hypotension.

FIRST AID TREATMENT

- Remove patient from source of poisoning to a well-ventilated area and keep him/her calm and reassured.
- **Skin contact:** Remove contaminated clothing and rinse contaminated body area thoroughly with plenty of soap and cold water. Do not rub the skin.
- **Eye contact:** Flush contamination out of eyes with clean running water for at least 15 to 20 minutes, holding the eyelid(s) open.
- **If swallowed:** If water diluted mixture has been swallowed, rinse mouth thoroughly with water. Do not induce vomiting due to aromatic solvent. **Seek medical attention immediately.** Administer artificial respiration or closed chest cardiac massage if necessary. **Do not** apply mouth-to-mouth respiration. **Never** give anything by mouth to an unconscious person.
- Take the patient to the nearest physician immediately.

NOTE TO PHYSICIAN

Administer atropine as early as possible in an adequate dosage until signs of atropinisation (dry, flushed skin, tachycardia and pulse rate over 120 per minute) occur. To prevent gastrointestinal absorption in the unconscious that have swallowed this product, perform stomach lavage using bicarbonate solution and activated charcoal. In less severe cases begin with 2 mg atropine intravenously for adults or 0.05 mg atropine/kg body weight for children under 12 years of age and repeat administration of the drug at 15 to 30 minutes intervals. Morphine and similar drugs are contra-indicated. Avoid aminoglycosides and succinylcholine, which have a blocking effect on the neuromuscular junction. Phenothiazines, reserpine and theophylline are contra-indicated.

RESISTANCE WARNING

DIMETHOATE 400 EC is a group code 1B insecticide. Any insect population may contain individuals naturally resistant to **DIMETHOATE 400 EC** and any other group code 1B insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **DIMETHOATE 400 EC** or any other group code 1B insecticide. To delay insecticide resistance:

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

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

Mode of Action:

DIMETHOATE 400 EC is an organophosphate compound and belongs to IRAC mode of action group 1B. It is a cholinesterase inhibitor with contact and stomach action.

DIRECTIONS FOR USE: Use only as directed.

NOTICE TO USER:

Read the entire label before application. This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under the Act to use this agricultural remedy for any purpose in a manner contrary with the directions on the label.

Compatibility:

- **DIMETHOATE 400 EC** is compatible with **PARATHION 500 EC** (L 4297), **Villa 51**, **INTERLOCK®** (L 10254 / W 130875 / N-AR 1856) and most neutral pesticides.
- **DIMETHOATE 400 EC** is not compatible with alkaline compounds.
- To avoid leaf damage, it should not be mixed with **Captab**, nor applied to peaches or nectarines together with, **Maneb** or fixed **Copper fungicides**.
- The compatibility of **DIMETHOATE 400 EC** may be influenced by several factors. As factors influencing compatibility may vary, a physical compatibility test must always be performed before such tank mixture is sprayed.
- When **DIMETHOATE 400 EC** is used in conjunction with any other agricultural remedy, all **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label, must be adhered to.

APPLICATION

Ground application:

- Pour the required amount of concentrate into the water and mix thoroughly - no further agitation is needed.
- Do not use if an emulsion is not formed or if free oil appears on the surface of the emulsion.
- Spray plants and trees when growing well and not when they are, or have been recently wilted drought stricken, diseased or showing signs of any other physiological abnormality. If peaches are not sprayed under these conditions, leaf drop may occur.
- **DIMETHOATE 400 EC** should not be applied under conditions of high temperature.
- On plants and pests that are difficult to wet, e.g., Cabbage- or Woolly aphids on apples, add a wetting agent to the spray.

Citrus only:

- Estimate the drip zone area of the trees and calculate the quantity of **DIMETHOATE 400 EC** required for each tree.
- Dilute this amount with 5 to 10 liters water and spread evenly over the drip zone area with suitable equipment, e.g., watering can.
- In cases of flood irrigation, **DIMETHOATE 400 EC** should be added to the filled flood basins.

Aerial application:

Aerial application of **DIMETHOATE 400 EC** may only be performed 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:

- Volume: A spray mixture volume of 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 aurally at a lower volume rate than recommended above.
- Droplet coverage: 25 to 35 droplets per cm² must be recovered at the target area.

- Droplet size: A droplet spectrum with a VMD of 280 to 300 micron is recommended. Limit the production of fine droplets, less than 150 micron (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 the 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 per hour.
- 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:
 - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - b) 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.

APPLICATION RATES

Use in not less than 30 litres of water per hectare for aerial spraying and not less than 100 litres per hectare for low volume tractor spraying. On potatoes and cotton 200 litres per hectare should however be used.

Crop / Pest	Dosage Rate	Remarks
Apples, Pears, Peaches and Plums <i>Bryobia</i> mite, Woolly aphid and other Aphids	75 ml / 100 ℓ water	Apply as a full cover spray when pest appears. Use as a high-pressure application against Woolly aphid. Repeat when necessary. <u>Do not use on apricots.</u>
Apples and Pears Mealy bug	120 ml / 100 ℓ water	Apply as a full cover spray. Apply 2 to 3 times from the end of November to early January.
Barley Russian aphid	750 ml / ha	<u>Aerial or Low Volume Ground application.</u> Will also control Brown and Green aphids.
Green and Brown aphids	500 to 750 ml / ha	<u>Aerial or Low Volume Ground application.</u> Use the higher dosage under dry conditions. Best results will be obtained if barley is growing actively.
Canola Red-legged sand/earth mites (<i>Halotydeus destructor</i>)	150 to 250 ml / ha PLUS 0.05 % Villa 51 PLUS 300 ml / ha INTERLOCK®	Apply when pest appears in a minimum of 200 to 250 litres water per hectare. DO NOT spray on bare ground. Apply as soon as pest appears, usually from crop emergence up until the 3 rd true leaf has formed. Apply only if crop is growing actively. Apply ONLY once. Add a suitable drift retardant for increased deposition on to the target and limit any off-target drift"
Cotton Aphids	800 ml / ha	Apply as a full cover spray. The dosage depends on the plant size and plant density.
Citrus Foliar Spray: (Do not apply to Rough Lemons or Seville Oranges) Red scale	100 ml PLUS 1.0 to 1.4 ℓ narrow range mineral oil / 100 ℓ water	Corrective treatment: Apply when 25 to 40 % of the fruits are infested with 1 or more live nymphs or adult scales. Use the higher spray oil dosage in the warm, low-lying areas. Will control Circular purple scale and Soft brown scale.
Soft brown scale	100 ml / 100 ℓ water	Corrective treatment: Apply as a full cover spray when infestation is noticed. If possible, apply on a spot spray basis.
Aphid and Psylla	40 ml / 100 ℓ water	Apply as a full cover spray.

Crop / Pest	Dosage Rate	Remarks
<u>Citrus (Continued)</u> Soil application: (Only on Rough lemon or Empress mandarin rootstocks) Aphids and Psylla	7.5 to 10 ml for every m ² of root zone area. Apply in a minimum of 25 mm irrigation water	Apply at the beginning of a flush when the very first signs of Psylla and/or aphid activity are noticed. Use the lower rate, if mild infestations of Aphids occur and the higher rate, if more severe infestations of Aphids and Psylla occur. In the case of Psylla, a second treatment may be necessary after 6 weeks.
Mealy bugs	15 ml for every m ² of root zone area. Apply in a minimum of 25 mm irrigation water	Apply during flowering or when crawlers start moving. Will also suppress Red scale if applied during this period.
<u>Cruciferae</u> Aphids	75 ml / 100 l water	Apply as a full cover spray on cabbage and cauliflower only.
<u>Grape Vines</u> Mealy bugs	125 ml / 100 l water	Apply when pest is first noticed and repeat at 21-day intervals.
<u>Groundnuts</u> Aphids	800 ml / ha	<u>Apply as a Low Volume Ground application.</u> <u>Apply as a full cover spray.</u>
<u>Lucerne</u> Black sand mite and Earth flea	600 ml per 100 kg seed	Seed treatment: Dilute in 4 litres of water and mix with seed and dry. Do not inoculate treated seed within 8 days after treatment. Do not sow seed later than 8 weeks after treatment. Will only provide control during period of establishment.
	150 ml / ha	Spray application: Apply when pest appears in a minimum of 250 litres water per hectare.
<u>Peaches and Plums</u> (For canning only) Fruit flies (Various spp.)	75 ml / 100 l water	Apply as a high volume, full cover spray, which must be directed towards the fruit. Apply at 6 and 4 weeks before harvest. Follow up with remedies, which have a shorter withholding period.
<u>Pineapples</u> Mealy bugs	125 ml / 100 l water	Apply 2000 litres spray mixture per hectare for mature plants. Repeat if necessary. Dip plant material in mixture for 2 minutes before planting.
<u>Plums</u> Mealy bugs	120 ml / 100 l water (1.8 to 4.2 l / ha)	Apply as a high volume, full cover spray and repeat 2 to 3 times.
<u>Potatoes</u> Aphids	800 ml / ha	<u>Aerial and Low Volume Ground application.</u> Will not control Leaf roll virus.
<u>Proteas</u> Black moth	120 ml / 100 l water	Apply as a full cover spray directed towards growth points and flower buds.
<u>Roses, Flowers and Ornamentals</u> Aphids	75 ml / 100 l water	Apply as a full cover spray. Do not apply on Chrysanthemum, Zinnia, Begonia, Ficus, Jacobinia or Pride of India.
<u>Sorghum</u> Aphids	560 to 660 ml / ha	<u>Aerial application or Low Volume Ground application by means of a mistblower.</u> Dosage depends on plant density and plant size.
<u>Strawberries, Beans and Cucurbits</u> Aphids	75 ml / 100 l water	Apply as a full cover spray. Apply when pest is noticed and repeat when necessary.

Crop / Pest	Dosage Rate	Remarks
<u>Tobacco</u> Aphids	800 ml / ha	<u>Aerial or Low Volume Ground application.</u> Apply as a full cover spray. Ensure thorough coverage.
<u>Wheat</u> Russian aphid	750 ml / ha	Winter rainfall region only and only if crop is growing actively.
	960 ml PLUS 640 ml Parathion 500 EC per ha	<u>Aerial or Low Volume Ground application.</u> Will also control Brown and Green aphids.
Green and Brown aphids	500 to 750 ml / ha OR	<u>Aerial or Low Volume Ground application.</u> Use the higher dosage under dry conditions. Best results obtained if wheat is growing actively.
	300 to 500 ml PLUS 200 to 300 ml Parathion 500 EC per ha	<u>Aerial or Low Volume Ground application.</u> Use the higher dosage on wheat under irrigation and on dryland wheat, after the early piping stage.

Consult the **Villa 51**, **Interlock®** and **Parathion 500 EC** labels for **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE**.

The following product mentioned in this label may be replaced with an equivalent product:

- **VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315).

PARATHION 500 EC is a registered product of
UNIVERSAL CROP PROTECTION (PTY) LTD.

VILLA 51 and **WEN 51** are registered products of
VILLA CROP PROTECTION (PTY) LTD.

INTERLOCK® is a registered trademark of
WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD.