



BITRAD METHAMIDOPHOS

Reg. No. L7015 Act no. 36 of 1947

Reg. Nr. L7015 Wet Nr. 36 van 1947

A water soluble liquid concentrate insecticide for agricultural use. A systemic and contact insecticide for the control of insects as indicated.

'n Wateroplosbare vloeistof konsentraat insekdoder vir landbougebruik. 'n Sistemiese en kontak insekdoder vir die beheer van insekte soos aangedui.

INSECTICIDE GROUP

1B

INSEKDODER GROEP

ACTIVE INGREDIENT:

Methamidophos (organo phosphate) 585 g/l

AKTIEWE BESTANDDEEL:

Metamidofos (organofosfaat)

NET VOLUME

NETTO VOLUME

GEREGISTREER DEUR: /

REGISTERED BY:

BITRAD CONSULTING (PTY) LTD

Co. Reg. No. 2002/025636/07

PO Box 51454

Wierda Park, 0149

DISTRIBUTED BY: /

VERSPREI DEUR:

BATCH NUMBER

DATE MANUFACTURED

LOTNOMMER

DATUM VERVAARDIG



**GIFTIG
TOXIC**



WARNINGS:

- WITHHOLDING PERIODS: NUMBER OF DAYS WHICH SHOULD BE ALLOWED BETWEEN THE LAST APPLICATION AND HARVESTING OR GRAZING:

Cruciferae & Citrus.....	21 days
Potatoes.....	14 days
Peaches.....	28 days
Tomatoes.....	3 days

- Handle with extreme care
- Poisonous by swallowing, inhalation or skin contact.
- Eye irritant.
- Toxic to fish, bees and wildlife.
- Store under lock and key away from food and feed.
- Re-entry: Do not enter treated area within 6 hours after application.
- FLAMMABLE – Store and keep away from open flame and sparks.
- Keep out of the reach of children, uninformed persons and animals.
- In case of poisoning **CALL A DOCTOR IMMEDIATELY** and make the label available to him.

AERIAL APPLICATION: Warn all inhabitants in the immediate area to be sprayed and issue the necessary warnings. Avoid spray drift to contaminate adjacent areas or water.

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 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 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:

- Do not inhale vapours and spray mist.
- Wear protective clothing (overalls, rubber boots, gloves and mask) when handling the product and during application.
- Wash with soap and water after accidental skin contact.
- Wash contaminated clothing immediately after use.
- Do not eat, drink or smoke whilst applying, mixing or before washing hands and face and changing clothes.
- Rinse empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner
- Destroy empty container by perforation and flattening and bury away from watercourses.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean applicator after use and dispose of wash water where it will not contaminate grazing or drinking water.

SYMPTOMS OF HUMAN POISONING:

Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pain, vomiting, blurred vision, muscle twitching, unusually small pupils, respiratory distress, coma.

ANTIDOTE:

Atropine sulphate.

FIRST AID TREATMENT:

- Remove patient from source of poisoning to a well-ventilated or cool area.
- Keep him quiet and reassured.
- Remove contaminated clothing and rinse contaminated body area thoroughly with plenty of soap and water.
- Do not rub skin
- Flush contamination out of eyes with clean water for at least 15 minutes.
- If the concentrate was swallowed first give large amounts of either beaten egg white, starch solution or Milk of Magnesia to drink before vomiting is induced.
- If swallowed induce vomiting by tickling the back part of the throat.
- Repeat until vomit is clear and free from the smell of poison.
- Administer artificial respiration or closed chest cardiac massage if necessary.
- Do not apply direct 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 sulphate intravenously (1 - 4 mg) every 5 - 10 minutes until first signs of atropinization (dry flushed skin and tachycardea) appears. 2-PAM 50 mg/kg up to a total dosage of 1 - 2 g or Protopam at $\frac{2}{3}$ of this dosage. Repeat administration of oximes if necessary. Do not administer morphine.

RESISTANCE WARNING:

For resistance management METHAMIDOPHOS is group code 1B insecticide. Any insect population may contain individuals naturally resistant to METHAMIDOPHOS and 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 METHAMIDOPHOS or any other group code 1B insecticide.

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

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

AERIAL APPLICATION:

Aerial application of METHAMIDOPHOS may only be done by a registered Aerial Application Operator using correctly calibrated, registered aircraft according to the instructions of SANS 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 ha 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 effect if this product is applied aerially at a lower volume rate than recommended above.

Droplet coverage:

30 to 40 droplets per cm² must be recovered at the target area.

Droplet size:

A droplet spectrum with a VMD of 250 to 280 micron is recommended. Limit the delivery 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 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 being sucked into the **wingtip vortices**.

The difference in **temperature** between the wet and dry bulb thermometers of the whirling hygrometer, should not exceed 8° C. Stop spraying if the **wind** 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 area.

Ensure that the Aerial Spray Operator knows exactly which fields to spray.

Obtain assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be recorded in the logbook for future reference.

DIRECTIONS FOR USE:**USE ONLY AS DIRECTED****COMPATIBILITY:**

BITRAD METHAMIDOPHOS is compatible with most commercialised agrochemicals except for alkaline materials such as lime sulphur and bordeaux mixtures.

MIXING INSTRUCTIONS:

Add the proper volume of **BITRAD METHAMIDOPHOS** to the water in the spray tank and agitate properly. Preferably spray on dry, windless days.

APPLICATION TABLE:

CROP/PEST	DOSAGE	DIRECTIONS FOR APPLICATION
CRUCIFERAE: (Broccoli, Brussels sprouts, Cauliflower, Cabbage) Aphids Diamond-back moth and Greater cabbage moth larvae	100 m/100 litres water	Use 500 litres spray mixture per ha when pests first appear. Repeat application weekly. Apply as a full cover spray and add a wetter according to the suggested dosage.
CITRUS Aphids	40 m/100 litres water	Apply at first sign of infestation as a light cover spray directed at terminal growth/flush.
PEACHES: Aphids	100 m/100 litres water	Apply as a full cover high-pressure spray when necessary. Apply only twice per season and do not apply sprays within 14 days of each other.
POTATOES: Potato tuber-moth and Aphids Cutworm (Western Cape) Aphids only	100 m/100 litres water (500 m/ha) Aerial application: 500 m/ per ha. 50 m/100 litres water (250 m/ha)	Preventative treatment: Use 500 litres spray mixture per ha and apply as a full cover spray with 10 - 14 day intervals. Start applying as soon as the plants emerge. Preventative treatment: Apply in 30 litres water as soon as plants emerge and repeat with weekly intervals. Use 500 litres spray mixture per ha and apply as a full cover spray with 10 - 14 day intervals to decrease the possibility of re-infestation.
TOMATOES: American bollworm Semi looper (<i>Plusia</i>) Leaf miner	100 m/100 litres water 500 m/ha 1 /ha	Apply as soon as pest is noticed. Repeat with weekly intervals. Regular administrations will also control infestation of the Red spider mite. High volume: Plants up to 60 cm high Apply up to 500 litres spray mixture per ha. Plants higher than 60 cm Depending on the size of the plant apply 1 000 litres or more spray mixture per ha. Mistblowers and low volume: Plants up to 60 cm high Plants higher than 60 cm Apply in 250 - 500 litres water per ha.

WAARSKUWINGS:

- ONTHOUDINGSPERIODES: AANTAL DAE WAT MOET VERSTRYK TUSSEN DIE LAASTE TOEDIENING EN OES OF BEWEIDING

Aartappels.....	14 dae
Koolgewasse & Sitrus.....	21 dae
Perskes.....	28 dae
Tamaties.....	3 dae

- Hanteer uiters versigtig.
- Giftig deur velkontak, indien ingesluk of ingeasem word.
- Oog irritant.
- Giftig vir visse, bye en wild.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Stoor agter slot en grendel weg van voedsel en voer.
- VLAMBAAR - Stoor en hou weg van oop vlam en vonke.
- Herbetreding: Moet nie behandelde areas betree binne 6 uur na toediening nie.
- **ONTBIED 'N GENEESHEER ONMIDDELLIK IN GEVAL VAN VERGIFTIGING** en stel hierdie etiket aan hom beskikbaar.

LUGTOEDIENING - Waarsku inwoners in die lugbespuitsingsarea en reik die nodige waarskuwings uit. Voorkom dat spuitstof aangrensende gebiede of waterbronne besoedel.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is waarborg die registrasiehouer nie dat dit onder all toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond-, klimaats- en bergingstoestand; kwaliteit van verdunningswater; verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, en omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie.

Raadpleeg die verskaffer in geval van enige onsekerheid.

VOORSORGMATREËLS:

- Moenie die dampe en sproeinewel inasem nie.
- Dra altyd beskermende klere (oorpak, rubberstewels, rubberhandskoene en masker) wanneer die produk hanteer en toegedien word.
- Was met seep en water na toevallige velkontak.
- Was besoedelde klere onmiddellik na gebruik.
- Moenie eet, drink of rook gedurende toediening of vermenging, of voordat hande en gesig gewas is en ander klere aangetrek is nie.
- Spoel die leë houër ten minste driemaal met 'n volume water gelyk aan ten minste 10% van die houër en voeg die spoelwater by die mengsel in die spuittenk.
- Vernietig leë houër deur gate daarin te maak en plat te slaan en begrawe weg van waterbronne.

- Voorkom kontaminasie van voedsel, voer, drinkwater en eetgerei.
- Verhoed wegdrywing van sproeinewel na ander gewasse, weidings, riviere, damme en ander gebiede wat nie behandel word nie.
- Was alle spuitapparaat deeglik na gebruik en maak seker dat die spoelwater nie weiding of drinkwater besoedel nie.

SIMPTOME VAN MENSLIKE VERGIFTIGING:

Hoofpyn, vermoedheid, flouheid, duiseligheid, oormatige sweet, mislikheid, buikpyn, braking, belemmerde gesigsvermoë, spiertrekkings, ongewoon verkleinde pupille, asemhalingsnood, bewusteloosheid.

TEENMIDDEL:

Antropiensulfaat

NOODHULPBEHANDELING:

- Verwyder persoon van die bron van vergiftiging na 'n koel en goed geventileerde omgewing.
- Stel hom gerus en hou hom stil.
- Verwyder besoedelde klere en spoel die besmette liggaamsdele met baie seep en water af.
- Moet nie die vel vryf nie.
- Besmette oë moet vir minstens 15 minute met skoon water uitgespoel word.
- Indien die konsentraat gedrink is, gee dan eers groot hoeveelhede van of geklitste eierwit, styselpossing of Melk van Magnesia om te drink voordat braking veroorsaak word.
- Indien per mond ingeneem, veroorsaak braking deur die agterste gedeelte van die keel te prikkel met vinger.
- Herhaal totdat braaksel helder is en nie meer na gif ruik nie.
- Pas kunsmatige asemhaling of geslote hartmassering toe indien nodig.
- Moet nie direkte mond tot mond asemhaling toepas nie.
- Moet nooit iets per mond aan 'n bewustelose persoon toedien nie.
- Neem pasiënt onmiddellik na die naaste geneesheer.

INLIGTING AAN GENEESHEER:

Dien Atropien-sulfaat binneears (1 - 4 mg) elke 5 - 10 minute toe totdat pasiënt eerste tekens van antropiniasie toon (droë gloeiende vel en tachycardea).

2-PAM 50 mg/kg tot 'n totale dosis van 1 - 2 g of Protopam teen $\frac{2}{3}$ van hierdie dosis. Herhaal toediening van oksieme indien nodig. Moet geen morfin toedien nie.

WEERSTANDWAARSKUWING:

METHAMIDOPHOS is 'n groepkode 1B insekdoder. Enige populasie van 'n spesifieke insek mag individue insluit wat 'n natuurlike weerstand teen **METHAMIDOPHOS**, of enige ander groepkode 1B insekdoder het. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **METHAMIDOPHOS** of enige ander groepkode 1B insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:

- Vermoë eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode. Wissel af met, of gebruik tenkingsels van insekdoders uit ander groepkodes.
- Integreer ander beheermaatreëls (chemies, wisselbou, biologies) in insekdoder programme.

Vir spesifieke inligting oor weerstandbestuur, kontak die Verspreider van hierdie produk.

LUGTOEDIENING:

METHAMIDOPHOS kan slegs deur 'n geregistreerde Lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS 10118 (Aerial Application of Agricultural Pesticides) uit die lug bespuit word. Verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

Volume:

'n Spuitmengsel van 30 liter per ha word aanbeveel. Hierdie produk is nie teen 'n verlaagde volume getoets nie. Die Registrasiehouer kan nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen 'n laer volume, as hier bo aanbeveel, toegedien word nie.

Druppelbedekking:

30 tot 40 druppels per cm² moet op die teikenarea herwin word.

Druppelgrootte:

'n Druppelspektrum met 'n VMD van 250 tot 280 mikron word aanbeveel. Beperk die lewering van druppels kleiner as 150 mikron. (hoë drywing en verdampingspotensiaal) tot 'n minimum.

Vlieghoogte:

Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. Moet nie spuit wanneer die vliegtuig duik, uitklim of draai nie.

Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal lewer, maar die minste verlies aan produk verseker.

Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike relatiewe span produseer. Plaas al die atomiseerders in die binneste 60 tot 75% van die vlerkspan om te verhoed dat druppels ingetrek word in die **vlerkpunt vortekse**. Die verskil in **temperatuur** tussen die nat- en droëbol termometer van 'n swaaihgrometer, moet nie 8° C oorskry nie. Staak bespuiting indien die **windspoed** 15 km/h oorskry. Staak bespuiting tydens **turbulente**, onstabiele en droë toestande gedurende die hitte van die dag. Bespuiting onder temperatuur **inversie toestande** (deur bo of binne die inversielaag te spuit) en/of **hoë lugvogtoestande** (relatiewe humiditeit 80% en meer) mag tot volgende probleme aanleiding gee:

- verlaagde effektiwiteit, deurdat die druppels as 'n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken).
- skade aan nie-teiken gewasse of sensitiewe areas agv wegdrywing van die spuitnewel na nie-teiken gebiede.

Verseker dat die spuitoperateur presies weet watter lande bespuit moet word.

Verkry versekering van die Lugbespuitingsoperateur, dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in die logboek aangeteken sal word vir latere verwysing.

GEBRUIKSAANWYSINGS:

Sien "WAARSKUWINGS" aangaande onthoudingsperiode, die tydperk wat moet verstryk tussen laaste toediening en oes van gewas.

VERENIGBAARHEID:

- Die doeltreffendheid van **BITRAD METHAMIDOPHOS** mag verlaag word deur hoë pH spuitmiddels. Moet dus nie **BITRAD METHAMIDOPHOS** meng met alkaliese stowwe nie.
- **BITRAD METHAMIDOPHOS** is nie verenigbaar met spuitolies, verskeie bevorderingsmiddels en sommige plaagdoders nie. Die verenigbaarheid van **BITRAD METHAMIDOPHOS** met ander produkte moet dus vooraf getoets word.

GEBRUIK SLEGS SOOS AANGEDUI

- BITRAD METHAMIDOPHOS is mees stabiel by ongeveer pH4. Indien versuringsmiddel gebruik word om pH te verlaag moet dit eers met spuitwater gemeng word. Melasse versuur ook spuitmengsel en verhoed verdamping van spuitdruppels. Indien melasse bygevoeg word, word 10 % vir grondtoediening, en 20 % vir lugtoediening, aanbeveel.

GEBRUIKSAANWYSINGS:

GEBRUIK SLEGS SOOS AANGEDUI

VERENIGBAARHEID:

BITRAD METHAMIDOPHOS is verenigbaar met meeste kommersiële landbouchemikalië behalwe alkaliese stowwe soos kalkswael en bordeauxmengsel.

MENGINSTRUKSIES:

Voeg die voorgeskrewe hoeveelheid **BITRAD METHAMIDOPHOS** by die water in die spuittenk en roer deeglik. Bespuiting moet verkieslik op windstil dae geskied.

TOEDIENINGSTABEL:

GEWAS/PLAAG	DOSIS	GEBRUIKSAANWYSINGS
AARTAPPELS: Aartappelmot en plantluise Snywurm (Wes-Kaap)	100 m/100 liter water (500 m/ha)	Voorkomende toediening: Gebruik 500 /spuitmengsel per ha en dien as volledige dekbespuiting toe met 10 - 14 dae tussenposes. Begin toediening sodra plante bo die grond verskyn.
Slegs plantluise	Lugtoediening: 500 m/ha.	Voorkomende toediening: Begin toediening sodra plante bo die grond verskyn en herhaal met weeklikse tussenposes. Dien toe in 30 liter water.
Slegs plantluise	50 m/100 liter water (250 ml/ha)	Gebruik 500 /spuitmengsel per ha en dien as volledige dekbespuiting toe met 10 - 14 dae tussenposes totdat die moontlikheid van herinfestasië verminder.
KOOLGEWASSE: (Brokkoli, Spruitkool, Blomkool, Kopkool) Larwes van die Ruitrugmot en Grootkoolmot Plantluise	100 m/100 liter water	Gebruik 500 liter spuitmengsel per ha en dien toe sodra infestasië opgemerk word. Herhaal weekliks. Dien toe as 'n volledige dekbespuiting en voeg 'n benatter by teen die aanbevole dosis.
SITRUS Plantluise	40 m/100 liter water	Dien toe met eerste tekens van besmetting as ligte dekbespuiting, gerig na terminale groeipunte.

PERSKES: Plantuise	100 m/100 liter water	Dien toe as 'n volle hoë druk dekbespuiting wanneer nodig. Dien slegs twee keer per seisoen toe en moet nie die twee bespuitings binne 14 dae na mekaar toedien nie.
TAMATIES: Amerikaanse bolwurm (Vals <i>Plusia</i>) Landmeter Blaarmyner	100 m/100 liter water 500 m/ha 1 /ha	Dien toe sodra eerste besmettings waargeneem word en herhaal met weeklikse tussenposes. Gereelde toedienings sal ook Rooispinmyt infestasies onderdruk. Hoë volume toediening: Plante tot 60 cm hoog Dien tot 500 /sputmengsel per ha toe. Plante hoër as 60 cm Afhangende van plantgrootte dien 1 000 /of meer spuitmengsel per ha toe Newelblasers en lae volume: Plante tot 60 cm hoog Plante hoër as 60 cm Dien in 250 –500 /water per ha toe.