

MAKHRO PARAQUAT

Reg no L 7906 Wet / Act 36 / 1947
N-AR 0918

A soluble concentrate herbicide for the control of annual grasses and broadleaf weeds in crops as listed and for fire breaks. Inactivated on contact with the soil	'n Oplosbare konsentraat onkruidodder vir die beheer van eenjarige grasse en breëblaaronkruid in gewasse soos aangedui en vir brandbane. Geinaktiveer na aanraking met grond
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HRAC HERBICIDE GROUP CODE	D	HRAC ONKRUIDDODER GROEPKODE
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ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

Paraquat ion(bipyridyl
(as dichloride)

200 g / ℓ

parakwatioon (bipiridiel)
(as Dichloried)

NET VOLUME / NETTO VOLUME

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REGISTRATION HOLDER / REGISTRASIEHOUER

Makhro-Agro SA (Pty) LTd
Reg no: 1994/001973/07
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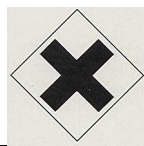
Batch number

Lotnommer

Date of manufacture

Datum van vervaardiging

UN No:
3016



**HARMFULL
SKADELIK**



WARNINGS

- KEEP LIVESTOCK OUT OF TREATED AREA FOR THREE WEEKS.
- Handle with care. Poisonous when swallowed, inhaled or absorbed through the skin.
- Irritating to skin, eyes and respiratory system
- Toxic to fish, bees and wildlife.
- **MAKHRO PARAQUAT** can kill if swallowed or inhaled – never repack from this container. Store under lock and key away from food, feedstuff, seed and fertilizers.
- Keep out of reach of children.
- **IN CASE OF POISONING, CALL A DOCTOR IMMEDIATELY AND MAKE THIS LABEL AVAILABLE TO HIM.**

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 weed 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 or registration holder in the event of any uncertainty.

PRECAUTIONS

- Avoid inhalation of spray mist and fumes.
- Wear protective clothing (overall, rubberboots, gloves and face shield).
- In case of skin contact wash thoroughly with soap and water. Wash contaminated clothing.
- Do not eat, drink or smoke whilst applying or preparing the spray mix, or before washing face and hands.
- Prevent spray drift onto other crops, grazing, rivers, dams and any area not under treatment.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Wash equipment after use, using a wetting agent.
- Dispose of wash water in a safe manner.

IMPORTANT : Invert 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 the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Destroy empty container by perforation and flattening and never use for any other purpose.

FIRST AID TREATMENT

Skin splashes : Wash off immediately. Eye splashes : Flush contamination out of eyes with clean water for 15 minutes. In all cases of more than mild irritation consult an eye specialist.

Accidental swallowing : In the case of ingestion induce vomiting immediately if not already occurring and take patient to the nearest hospital as soon as possible.

NOTE TO THE PHYSICIAN

Administer immediately up to 1 litre of a 15% aqueous suspension of Fullers Earth plus a suitable purgative eg. Mannitol (20% aqueous solution). Continue purgation until stools are seen to contain absorbent. Haemodialysis or haemoperfusion may be necessary. Further information is available in the booklet The Treatment of Paraquat Poisoning – A guide to Doctors (1979 edition) and from local distributors.

RESISTANCE WARNING

For resistance management, **MAKHRO PARAQUAT** is a group code D herbicide. Any weed population may contain individuals naturally resistant to **MAKHRO PARAQUAT** and other group code D herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **MAKHRO PARAQUAT** or any group code D herbicides. To delay herbicide resistance :

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different group codes
- Integrate control methods (chemical, cultural and biological) into weed control programs

For specific information contact the local distributor agent or the registration holder

DIRECTIONS FOR USE : USE ONLY AS DIRECTED

Mix the required amount of **MAKHRO PARAQUAT** with clean water in a spray tank. Add non-ionic wetting agent for best results at three times the rate advised on the label for fungicides. Apply by ground sprayer in 200 to 500 L water. Use a high volume and high dosage rate for spraying dense weed growth. Ensure good weed cover. Do not spray buds or green parts of any crop. **MAKHRO PARAQUAT** kills green tissue but does not harm mature bark. It is inactivated rapidly on contact with the soil and has therefore no residual action.

APPLICATION RATES

CROP	DOSAGE l/ha	REMARKS
VINEYARDS	2,5 – 5,0 L	Apply overall when weeds are 10 to 15 cm high before bud burst of the vines. Subsequently as a directed spray.
DECIDUOUS FRUIT	2,5 – 5,0 L	Spray as necessary from Spring onwards. Pome fruit only. Mix with Simazine for residual effect.
CITRUS, AVOCADOS, PECANS , PAPAYAS, etc.	1,25 – 5,0 L	In citrus only it can be mixed with a suitable residual weedkiller, e.g. diuron or simazine.
BANANAS, TEA AND COFFEE	1,25 – 5,0 L	Apply through a low pressure floodjet nozzle.
SUGARCANE	1,5 –3,0 L	Directed post-emergence in plant and ratoon cane. Should the spray come into contact with green cane leaves scorching will occur but this is only a temporary effect. Other suitable herbicides may be added for residual effect.
LUCERNE (over 6 months old)	2,5 – 5,5 L	Apply just before dormancy breaks or after cutting before regrowth of lucerne occurs.

VEGETABLES grown in rows	1,25 – 2,5 L	Use a knapsack sprayer with suitable shield to protect all parts of the crops from spray mist.
ALL CROPS : Stale seedbed method	1,25 – 2,0 L	Prepare seedbed with fertilizer, irrigate and let the weeds emerge to cover the surface. Spray and sow within 3 days without reworking the seedbed. This method is especially useful for crops for which no other herbicide has yet been registered e.g. lettuce, chickory and cucurbits. These may, also be sown a few days before spraying.
MINIMUM CULTIVATION	1,5 – 4,0 L	Apply before or just after planting annual crops. May be mixed with a corresponding residual herbicide.
POTATOES (haulm destruction)	2,5 – 5,0 L	Use 200 litres water/ha. Do not apply if haulms show signs of wilting as tuber damage may occur. Spray ONLY when at least 5 hours of intensive sunshine are expected to follow.
INDUSTRIAL AREAS Young weeds Mature weeds	2,5 L 5,0 L	Use 500 to 1000 litres water/ha depending on density of vegetation.
FIRE BREAK	2,5 – 3,75 L	Two months before the onset of the fire season : Spray a 1 to 2 m wide band (the sparser the vegetation, the wider the band) on both sides of a 5 to 12 m wide untreated strip (or about 10 m from a road or canal). Burn the sprayed bands 3 weeks later, while the unsprayed areas are still green and unburnable. The strip between can be burned relatively safely as soon as the first frost or drought occur so that the veld cannot be burnt.
AFFORESTATION	2,5 – 3,75 L	Spray around young trees with a special appliance.

WEEDS CONTROLLED

All above ground green tissue of actively growing plants is killed off by **MAKHRO PARAQUAT**. Annual weeds are well controlled, Perennial weeds and weeds with reserves stored underground, recover e.g. sedges, bulbs, Gousblom, Oxalis, Kikuyu, etc.

WAARSKUWINGS

- HOU LEWENDE HAWE WEG VAN BEHANDELDE GEBIED VIR DRIE WEKE.
- Hanteer versigtig.
- Giftig deur inname, inaseming of wanneer deur die vel geabsorbeer.
- Indien ingesluk of ingeasem, kan **MAKHRO PARAQUAT** noodlottig wees – moet nie uit hierdie houer herverpak nie. Giftig vir vis, bye, voëls en wild.
- Stoor agter slot en grendel en weg van voedsel en voer.
- Hou buite bereik van kinders.
- **IN GEVAL VAN VERGIFTING, ONTBIED ‘N GENEESHEER EN TOON DIE ETIKET AAN HOM.**

Alhoewel hierdie middel omvattend onder ‘n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond – klimaats – en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die onkruid teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordlikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens en dier of vir ‘n gebrek aan prestasie van die betrokke middel as gevolg van die versuim deur die gebruiker om etiketaanwysings na te kom of as gevolg van die toestand wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer of registrasiehouer in geval van enige onsekerheid.

VOORSORMAATREËLS

- Voorkom inaseming van spuitmis of dampe.
- Dra beskermende klere (oorpak, rubberstewels, handskoene en gesigskerm).
- In geval van toevallige velkontak was met seep en water. Was besoedelde klere.
- Moenie eet, drink of rook tydens toediening of vermenging nie, of voordat gesig en hande gewas is nie.
- Voorkom oorwaai van spuitnewel na ander gewasse, weiding, riviere, damme en enige ander gebied wat nie behandel word nie.
- Voorkom besoedeling van voedsel, voer, drinkwater en eetgerei.
- Was toestel na gebruik met ‘n benattingsmiddel. Raak onstlae van die spoelwater op ‘n veilige manier.

BELANGRIK : keer die leë houer om oor die spuitenk of mengbak en dreineer vir minstens 30 sekondes nadat die vloei tot ‘n gedrup verminder het. Spoel die houer daarna drie keer uit met ‘n volume water gelykstaande aan ‘n minimum van 10% van die houer. Gooi die spoelwater by die inhoud van die spuitenk voordat die houer op die voorgeskrewe wyse vernietig word. Vernietig leë houer deur gate daarin te maak en plat te druk. Moet vir geen ander doel gebruik word nie.

NOODHULPBEHANDELING

Spatsels op vel : Was onmiddelik af. Spatsels op oë : Besmette oë moet vir 15 minute of langer met skoon water uitgespoel word. In alle gevalle van meer as ‘n ligte branderigheid van die oë moet ‘n oogspesialis geraadpleeg word. Toevallige inslukking : Verorsaak onmiddellik vomering indien dit nie reeds voorkom nie en neem pasiënt so gou moontlik na naaste hospitaal.

NOTA AAN DIE GENEESHEER

Dien onmiddelik tot soveel as een liter van 15% watersuspensie van 'Fullers earth' toe plus 'n geskikte purgeermiddel, bv. Mannitol (20% wateroplossing). Hou aan met purgering totdat ontlasting tekens toon van die absorbeerder. Bloeddialiese en bloedperfusie mag nodig wees. Verdere inligting is beskikbaar in die handleiding The Treatment of Paraquat Poisoning A guide to Doctors (1979 uitgawe) en die plaaslike verspreiders.

WEERSTANDSWAARSKUWING

Vir die bestuur van weerstnad word **MAKHRO PARAQUAT** as 'n groepkode D onkruidoder geklassifiseer. Enige onkruidpopulasie mag individue hê wat natuurlike weerstand teen **MAKHRO PARAQUAT** en groepkode D onkruidoders besit. Die weerstandbiedende individue kan uiteindelik die onkruidpopulasie oorheers indien hierdie onkruidoders aanhoudend gebruik word. Die weerstandbiedende onkruid mag nie deur **MAKHRO PARAQUAT** beheer word of enige groepkode D onkruidoders nie. Om onkruidweerstand te vertraag kan :

- Vermoed die uitsluitlike aanhoudende gebruik van onkruidoders van dieselfde onkruidoder groepkode. Wissel af of maak tenkmengsels met middels van ander groepkodes.
- Integreer beheermetodes (chemies, bewerking, biologies) in beheerprogramme.

Skakel vir meer spesifieke inligting die verspreider se agent of die registrasiehouer.

GEBRUIKSAANWYSINGS : GEBRUIK SLEGS SOOS AANGEDUI

Meng die aanbevole hoeveelheid **MAKHRO PARAQUAT** met skoon water in die spuittenk. Voeg 'n nie-ioniese benattingsmiddel teen drie keer die dosis wat op die etiket vir swamdoders aanbeveel word by vir beste resultate. Dien toe met 'n grondspuit in 200 tot 500 L water/ha. Gebruik die hoër toedieningshoeveelheid vir die bespuiting van digte onkruidgroei. Verseker deeglik benutting van onkruid. Moet nie knoppe of groen dele van enige gewas bespuit nie. **MAKHRO PARAQUAT** sal alle groen weefsel vernietig maar sal nie volgroeide boombas aantast nie. Dit word deur kontak met die grond vinnig geïnaktiveer en het dus geen nawerking nie.

TOEDIENINGSHOEVEELHEDE

GEWAS	HOEVEELHEID (l/ha)	OPMERKINGS
WINGERDE	2,5 – 5,0 L	Dien as 'n algehele bespuiting toe wanneer onkruid 10 tot 15 cm hoog is, maar voor die wingerde bot. Later as 'n gerigte bespuiting.
SAGTE VRUGTE	2,5 – 5,0 L	Bespuit soos nodig, vanaf lente. Allenlik vir kernvrugte : Meng met Simasien vir nawerkende effek.
SITRUS, AVOKADO, PEKANNEUTE, PAPAJA, ens.	1,25 – 5,0 L	Allenlik in sitrus kan dit met 'n geskikte nawerkende onkruidoder gemeng word.
PIESANGS, TEE EN KOFFIE	1,25 – 5,0 L	Dien toe met 'n laedruk vloedstraalspuitkop.
SUIKERRIET	1,5 – 3,0 L	Gerigte naopkom bespuiting in plant- en ratoen suikerriet. As die spuitmiddel in kontak met die groen suikerrietblare kom, sal dit skroei maar

		dit is slegs 'n tydelike effek. Ander geskikte onkruidodders mag vir nawerking bygevoeg word.
LUSERN (ouer as ses maande)	2,5 – 5,5 L	Dien toe voor die rusbreking of voordat hergroei plaasvind, nadat dit gesny is.
GROENTE in rye gekweek	1,25 – 2,5 L	Gebruik 'n rugsakspuit toegerus met 'n skerm, om alle dele van die gewas to beskerm teen sproeinewel.
ALLE GEWASSE : Ou saadbed-metode	1,25 – 2,0 L	Berei saadbed klaar voor met kunsmis uitgestrooi, besproei en lat die onkruid opkom en die grond bedek. Bespuit en saai binne 3 dae sonder om die saadbed te bewerk. Hierdie metode is veral geskik vir gewasse waarop geen onkruidodder geregistreer is nie, bv. slaai, sigorei en pampoengewasse. Hulle mag ook 'n paar dae voor bespuiting gesaai word.
MINIMUM BEWERKING	1,5 – 4,0 L	Dien toe voor of net na plant van eenjarige gewasse. Mag met 'n toepaslike nawerkende onkruidodder gemeng word.
AARTAPPELS (bogroei vernietiging)	2,5 – 5,0 L	Gebruik 200 tot 500 liter water/ha. Moet nie toedien as bogroei tekens van verwerking toon nie want knolbeskadiging mag dan voorkom. Spuit alleenlik wanneer ten minste 5 ure sonskyn verwag word.
INDUSTRIËLE GEBEIDE Jong onkruid Volgroeide onkruid	2,5 L 5,0 L	Gebruik 500 tot 1000 liter water/ha afhanklik van die plantegroei.
VOORBRANDE	2,5 – 3,75 L	Tweede maande voordat die veld begin brandbaar word : Bespuit 'n 1 tot 2 meter strook (hoe yler die gras destebreër die strook), weerskante van 'n 5 tot 12 m onbespuite baan (of omtrent 10 m vanaf 'n pad of kanaal). Brand die bespuite stroke 3 weke na spuit terwyl die onbespuite areas nog groen en onbrandbaar is. Die tussenbaan kan dan relatief veilig afgebrand word, sodra die eerste ryp of droogte dit brandbaar maak.
BOSAANPLANTINGS	2,5 – 3,75 L	Spuit rondom jong bome met 'n spesiale apparaat.

ONKRUIDDODER

Alle begroei groen weefsel van aktiefgroeiende plante word deur **MAKHRO PARAQUAT** gedood. Eenjarige onkruid word goed beheer, meerjarige onkruid en Onkruidsoorte wat reserwes ondergronds het, herstel bv. Uintjies, bolgewasse, Gousblom, Suring, Kikoejoe, ens.