

AURORA® 40 WG



SOUTH AFRICA Reg. No. L6794 Act No 36 of 1947

SUID AFRIKA Reg. Nr. L6794 Wet Nr. 36 of 1947

NAMIBIA Reg. No. N-AR2069 Act No 36 of 1947

NAMIBIë Reg. Nr. N-AR2069 Wet Nr. 36 of 1947

A water dispersible granule herbicide for post-emergent control of broadleaved weeds in wheat and barley in the Western, Southern and Eastern Cape and as directed in orchards, vineyards and other crops as listed.

'n Water disperseerbare korrel onkruidodder vir na-opkoms beheer van breë blaaronkruid in koring en gars in die Wes-, Suid- en Oos Kaap en soos aangedui in boorde, wingerde en ander genoemde gewasse.

HERBICIDE GROUP CODE	E	ONKRUIDDODER GROEPKODE
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Active ingredient:

Carfentrazone – ethyl (Triazolinone) 400g / kg Karfentrasoon-etiel (triasolinoon)

Aktiewe bestanddeel:

Net Contents

100g

Netto volume

**REGISTERED BY /
GEREGISTREER DEUR:**

FMC Chemicals (Pty) Ltd
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**For any emergency or poisoning
contact:
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Centre (24 hrs)
+27-(0)-82-446-8946**

UN No. / VN Nr. 3077

BATCH NUMBER

DATE MANUFACTURED

LOTNOMMER

DATUM VERVAARDIG

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WARNINGS:

- Keep out of reach of children, uninformed persons and animals.
- Avoid skin and eye contact.
- Store in a cool, dry place, in the original container, tightly closed.
- Store away from foods and feeds.
- Extremely toxic to fish.

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 or 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 in the event of any uncertainty.

PRECAUTIONS:

- Extremely toxic to fish or aquatic life. Do not contaminate surface waters or rivers and streams with chemical or used container. Keep in original container only, away from food, drink and animal feeding stuffs.
- Wash concentrate from skin and eye immediately with plenty of clean water.
- Avoid contact by mouth.
- Wear suitable protective clothing (coveralls), face shield and suitable protective gloves when handling the concentrate.
- Do not smoke, drink or eat while using the product.
- Prevent spray from drifting to adjacent crops, grazing, rivers or dams.
- **Serious localized or translocated damage may occur if spray or spray drift comes into contact with leaves, fruit and/or immature bark of trees, vines or adjacent non-target crops that are not under treatment.**
- Wash spray equipment thoroughly after use. (see sprayer clean-out)
- Do not use the same application equipment for foliar applications
- Product and Container disposal
- Containers and packages must be completely emptied before being destroyed.
- Never re-use container for any purpose.

USE RESTRICTIONS:

- Only use AURORA 40 WG in tank mixture with the recommended products listed on this label
- Do not apply by air.
- Do not apply AURORA 40 WG to crops under stress from drought, water logging, cold, pests or diseases, nutrient or lime deficiency or other factors reducing plant growth.
- Do not spray AURORA 40 WG to cereals under sown with legumes, clovers or pastures.
- Under no circumstances should unused spray mixtures be kept overnight.
- Do not apply AURORA 40 WG + MCPA 400 SL to a sparse crop stand. In a crop planted with a planter **always** apply AURORA 40 WG in combination with MCPA 400SL + approved formulations of metsulfuron-methyl (eg ALLY® 20 DF, BRUSH-OFF®) or GLEAN® 75 DF. Crop competition is essential for optimal weed control with AURORA 40 WG + MCPA 400 SL.
- Full consideration should be given to the use restrictions of ALLY® 20 DF, BRUSH-OFF®, GLEAN® 75 DF, MCPA 400 SL, ROUNDUP® 360SL, MAMBA® 360g/l SL and MAMBA MAX 480SL.

MINIMUM RE-CROPPING INTERVALS AND CROP ROTATION GUIDELINES:

There is no restriction on the planting of any succeeding or rotational crop after the application of AURORA 40 WG. All crops can be sown 1 month after such application. Full consideration should be given to the minimum re-cropping intervals and crop rotation guidelines for MCPA 400 SL, ALLY® 20 DF, GLEAN®75 DF.

ADJACENT CROPS:

BECAUSE SOME NON-TARGET CROPS ARE SENSITIVE TO AURORA 40 WG, AVOID DRIFT OF SPRAY MIXTURE ONTO BROAD-LEAVED PLANTS OUTSIDE THE TARGET AREA. REFER TO THE PRECAUTIONS AND FOLLOW ALL INSTRUCTIONS AND DIRECTIONS FOR USE ON THE ROUNDUP®/MAMBA® LABEL WHEN USING THIS TANK MIXTURE.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

GENERAL INFORMATION:

Wheat and barley

- For optimum results, apply AURORA 40 WG when weeds are young and actively growing under moist conditions.
- Weeds growing under stress conditions may be less susceptible to AURORA 40 WG.
- AURORA 40 WG rapidly burns down the leaves of the targeted weeds. Final die-back of weeds may vary according to the weed species and prevailing conditions.
- Apply only when the crop is in the correct stage of development as indicated.
- Apply only to an even crop stand and avoid areas with little or no crop competition effect.
- Application by windsock applicator could enhance symptoms of chlorotic leaf scorch.
- Use a suitable buffer according to label directions where the water is known to be alkaline / hard to obtain an ideal pH of 5 to 7.

Orchard and vineyard (perennial) crops (for example: deciduous fruit, table and wine grapes, citrus, coffee, olives, macadamia nuts, pecan nuts, avocado, mango, banana, papaya, guava, litchi, kiwi fruit, almond nuts, granadilla, hops, Aloe, tea, quince).

- Apply AURORA 40WG + ROUNDUP®/MAMBA® to actively growing weeds and ensure good coverage especially of larger, more mature weeds.
- Difficult to control annual weeds should be treated in early spring as a pre blossom application
- Use a suitable buffer according to label directions where the water is known to be alkaline / hard to obtain an ideal pH of 5.
- **Serious localized or translocated damage may occur if spray or spray drift comes into contact with leaves, fruit and/or immature bark of trees, vines bushes or adjacent non-target crops that are not under treatment.**

WEED RESISTANCE MANAGEMENT

AURORA 40 WG is a member of the triazolinone of herbicides group code E which controls weeds through the process of membrane disruption initiated by PPO (protoporphyrin oxygenase) inhibition. Resistant weeds naturally propagate when herbicides with the same mode of action are used on the same weed species for several consecutive years. The resistant weed biotypes to a specific mode of action become dominant and herbicides with the same mode of action are no longer effective in controlling that resistant weed biotype. Development of resistant biotypes can be avoided by alternating the use of products with different modes of action or by using tank mixtures of herbicides effective on the specific weed but with different modes of action. Due to the difficulty in forecasting the appearance or presence of resistant weed biotypes to AURORA 40 WG at the time of treatment, it is essential that all lands must be inspected regularly to identify the development of resistance early. Unless the above measures are not strictly adhered to FMC can not assume any responsibility for any losses that may result from the failure of AURORA 40 WG to control these resistant weed biotypes.

COMPATIBILITY

AURORA 40 WG should only be used in mixture with the recommended products listed on the label.

AURORA should not be mixed with grass herbicides when used in cereals

Grass herbicides must not be applied within 7 days after an AURORA 40 WG application.

Compatibility of AURORA 40 WG has not been fully checked. Do not attempt mixing with other insecticides, herbicides or fungicides without prior consultation of the supplier. Do not mix AURORA 40 WG with wetters or oils (relevant to cereals).

Only tank mixtures with single chemicals (except where indicated otherwise) are advised, as multiple mixtures will reduce weed control efficacy.

If spraying AURORA 40 WG + MCPA 400 SL: only tank mix with the insecticides Dimet® or Folimat®, the fungicides Punch C® or Practis®, the foliar feeds Mantrac® or Mancozin® SC.

AURORA 40 WG + MCPA 400 SL + ALLY® 20 DF or BRUSH-OFF® or GLEAN® 75 DF: do not tank mix with other chemicals.

AURORA 40WG + ROUNDUP®/MAMBA® 360 g/l SL/ MAMBA MAX 480SL: only for use as directed in orchard and vineyard crops as listed: refer to ROUNDUP®/MAMBA® and MAMBA MAX 480SL labels.

MIXING INSTRUCTIONS

Half fill the spray tank with clean water. Commence agitating. Steadily add the recommended quantity of AURORA 40 WG into the tank (pre-mix is not necessary). Complete filling up with clean water to the required volume of spray mixture while agitating continuously and wait until product is thoroughly mixed before application. Ensure proper agitation of the spray mixture at all times until spray tank is empty. Prepare only sufficient quantity of spray mixture for immediate use. Full consideration should be given to the mixing instructions of the recommended products tank mixed with AURORA 40 WG.

Where AURORA is used in tank mix with ROUNDUP®/MAMBA® 360g/l SL / MAMBA MAX 480SL the order of mixing should be as follows;- buffer agent, AURORA 40WG, ROUNDUP®/MAMBA®, Surfactant (Penetrex or NPX Humectant), drift control agent.

APPLICATION TECHNIQUES

Ground application only:

AURORA 40 WG works only by contact. It is therefore necessary to achieve a good overall coverage of the targeted plant.

Wheat and barley

- Apply by means of tractor mounted boom sprayer which is correctly calibrated to deliver at least 200 liters per hectare of spray mixture and a maximum of 400 litres per hectare at a constant speed and pressure (100- 200 kPa) to ensure an even distribution.
- Avoid overlapping of swaths and close the nozzles while starting, slow movement, turning and stopping to prevent over-spraying.

Orchard and vineyard (perennial) crops

- Apply by knapsack sprayer or suitable motorized applicator with covered (shielded) nozzles or using low pressures (100 – 200kPa) and/or low-drift nozzles to minimize the risk of drift.
- Use of larger orifice nozzles produces larger droplets that improve coverage and effectiveness and minimize potential to drift
- Do not exceed a speed of 5 kph when applying by tractor/ground rig
- Do not apply when wind speed exceeds 10 kph
- Avoid application during temperature inversion conditions
- Apply approximately 200 liters spray mixture per hectare to ensure thorough coverage of the weeds.
- A repeat application may be necessary. In this case spot spraying is recommended.
- **It is the responsibility of the spray applicator to ensure that the spray/spray drift does not come into contact with non-target plants or crops.**

APPLICATION RATES - wheat and barley

crops	Dosage/ha	Remarks
<p>Wheat (<i>Triticum aestivum</i>)</p> <p>Barley (<i>Hordeum vulgare</i>)</p>	<p>25 g AURORA 40 WG + 500 ml MCPA 400 SL or 25 g AURORA 40 WG + 500 ml MCPA 400 SL + 12.5 g ALLY® 20 DF or 25 g AURORA 40 WG + 500 ml MCPA 400 SL + 3.5 g BRUSH-OFF® WG or 25 g AURORA 40 WG + 500 ml MCPA 400 SL + 15 g GLEAN® 75 DF</p>	<p>Post-emergence spray when wheat and barley are between stages 7 and 13 according to the list of growth stages of the ARC Small Grain Institute, Bethlehem. Application should not be later than 6 weeks after weed emergence. Apply to barley in the 5 to 6 leaf stage.</p>

WEEDS CONTROLLED

The following weed species are normally controlled by AURORA 40 WG + MCPA 400 SL, or AURORA 40 WG + MCPA 400 SL + ALLY® 20 DF or AURORA 40 WG + MCPA 400 SL + BRUSH-OFF® WG or AURORA 40 WG + MCPA 400 SL + GLEAN® 75 DF used at the recommended rate.

Botanical Name

Anagalis arvensis
Emex australis
Erodium moschatum
Fumaria muralis
Galium spurium
Malva parviflora
Pentzia suffruticosa
Polycarpon tetraphyllum
Raphanus raphanistrum

Common Name

Pimpernel
Spiny Emex
Musk Heron's Bill
Fumitory
Small cleaver
Small mallow
Small stinkweed
Four-leaved all seed
Wild radish

IMPORTANT NOTE:

weeds germinating after the application of AURORA 40 WG + MCPA 400 SL tank mixture will not be controlled.

APPLICATION RATES – Orchard and vineyard (perennial) crops

crops	Dosage/ha	Remarks
Deciduous fruit (Apples, pears, peaches, plums, nectarines) vines (table and wine grapes) citrus, coffee, olives, macadamia nuts, pecan nuts, avocado, mango, banana, papaya, guava, litchi, kiwi fruit, almond nuts, granadilla, hops, Aloe, tea, quince	25 g AURORA 40 WG + 3 l ROUNDUP®/MAMBA® 360 SL / MAMBA MAX 480SL + surfactant (the addition of a suitable surfactant (Penetrex 0.5% or NPX Humectant 0.25%) will enhance the cosmetic effect and rapidity of action)	Apply as a directed interrow spray for the control of difficult weeds such as <i>Malva parviflora</i> , <i>Coryza bonariensis</i> , <i>Urtica dioica</i> when actively growing (ideal stage when weeds are 10 – 20cm in height). Shield young vines/trees/bushes with immature bark during application or use a covered sprayer. Ensure that contact is avoided on leaves, fruit and bark. Follow directions on the ROUNDUP®/MAMBA®/MAMBA MAX labels.

SPRAYER CLEAN-OUT

- Immediately after spraying drain tank completely and flush tank, as well as boom and hoses with clean water. Drain tank again.
- Fill the tank with clean water and add household ammonia (containing 3% active ammonia) at a rate of 1 litre for every 100 litres of water. Circulate the ammonia solution through the tank, boom and hoses for at least 10 minutes. Drain completely. Rinse tank with clean water and flush through boom and hoses to remove traces of ammonia. Use at least one tenth of the spray volume. Drain completely.
- Repeat rinsing as above.

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