

AURORA® 40 WG



SOUTH AFRICA Registration Number/Registrasie Nommer L6794, Act No. 36 of 1947/Wet
36 van 1947

NAMIBIA Registration Number/Registrasie Nommer N-AR 2069

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

GROUP/GROEP	14	HERBICIDES	ONKRUIDDODERS
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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 onkruidoder 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.
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HAZARD STATEMENTS:

Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

Prevention:

Avoid release to the environment.

Response:

Collect spillage.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

WARNING

Active ingredient

Carfentrazone – ethyl (Triazolinone) - 400 g/kg

Aktiewe bestanddeel

Karfentrasoon-etiel (triasolinoon) – 400 g/kg

Net Volume

100g

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

Telephone number: +27 (76) 875 4432

www.ag.fmc.com/za/en

Batch Number

Date of Manufacture

Expiry Date

Printed on Container

Printed on Container

**2 Years from date of
Manufacture**

Lot Nummer

Datum van Vervaardiging

Vervaldatum

UN Number/VN Nommer

3077

**For any emergency or poisoning contact: Griffon Poison Information
Centre (24 hrs)
Vir enige noodgeval of vergiftiging kontak Griffon vergiftiging
Inligtingsentrum (24 hr)**

+27-(0)-82-446-8946

WARNINGS:

HAZARD STATEMENTS:

Very toxic to aquatic life with long lasting effects.

- 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:

PRECAUTIONARY STATEMENTS:

Prevention:

- Avoid release to the environment.

Response:

- Collect spillage.

Disposal:

- Dispose of contents/ container to an approved waste disposal plant.

- 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
- **TRIPLE RINSE** the empty container as follows: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water 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.

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® 40 WG** + 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® 40 WG 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® 40 WG + 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® 40 WG** 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® 40 WG**, 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
Wheat <i>(Triticum aestivum)</i>	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	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.
Barley <i>(Hordeum vulgare)</i>		

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
<p>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</p>	<p>25 g AURORA® 40 WG + 3 l ROUNDUP®/MAMBA® 360 SL / MAMBA MAX 480SL + surfactant</p> <p>(the addition of a suitable surfactant (Penetrex 0.5% or NPX Humectant 0.25%) will enhance the cosmetic effect and rapidity of action)</p>	<p>Apply as a directed interrow spray for the control of difficult weeds such as <i>Malva parviflora</i>, <i>Conyza 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.</p>

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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