



syngenta

Reg. No. L8517 Act No. 36 of 1947 N-AR 1424 (Namibia)

An emulsifiable concentrate herbicide for the selective post-emergence control of annual grasses in wheat and barley in the Western and Southern Cape and in dry land and irrigated areas of the summer rainfall region.

GROUP	1	HERBICIDE
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Active Ingredients:
pinoxaden (phenylpyrazolin)..... 50 g/l

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WARNING

Hazard statements:

May cause an allergic skin reaction. Harmful if inhaled. Suspected of damaging the unborn child. Toxic to aquatic life with long-lasting effects.

Precautionary statements:

Prevention: Obtain special instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If inhaled, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell. If exposed or concerned, get medical advice/attention. Collect spillage.

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1. WARNINGS:

Hazard statements: May cause an allergic skin reaction. Harmful if inhaled. Suspected of damaging the unborn child. Toxic to aquatic life with long-lasting effects.

Withholding period: Minimum number of days between last application and harvest or grazing.

WHEAT AND BARLEY (grazing/forage)..... 28 days

- Poisonous if swallowed.
- Avoid skin contact.
- Toxic to fish.
- **Flammable:** Keep away from flames.
- Store in a cool place.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow the drift to contaminate water or adjacent areas.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.

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 disease 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 and the environment, or harm to people 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: Prevention: Obtain special

instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If inhaled, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell. If exposed or concerned get medical advice/attention. Collect spillage.

- Do not breathe vapour or spray mist.
- Avoid any contact of skin, eyes, or clothing with concentrate or spray mixture.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while handling the product, wash hands and face before doing so.
- Avoid drift of spray onto other crops especially oats, grazing, rivers, dams and areas not under treatment.
- Spray strictly with the wind to prevent prolonged or repeated exposure to the spray mist.
- Wear protective clothing, i.e., for preparation: impermeable gloves, overalls, and eye/face protection; for application: overalls, hat or cap, and solid footwear.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Thoroughly wash protective equipment and clothing after use.
- Rinse the empty container three (3) times with a volume of clean water equal to a minimum of 10% of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.
- Do not use the empty container for any other purpose.

3. RELEVANT SUBSTANCES:

Chemical name	
pinoxaden (ISO)	
Classification	Concentration (%w/w)
Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319	≥ 3 - < 10

Chemical name	
pinoxaden (ISO) cont.	
Classification	Concentration (%w/w)
Skin Sens. 1A; H317 Repr. 2; H361d STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 3; H412	≥ 3 - < 10
M-Factor (Acute aquatic toxicity): 1	
Chemical name	
cloquintocet-mexyl	
Classification	Concentration (%w/w)
Acute Tox. 4; H332 Skin Sens. 1; H317 STOT RE 2; H373 (Urinary system, liver) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	≥ 1 - < 2,5
M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	

4. RESISTANCE MANAGEMENT:

AXIAL is a group 1 herbicide. Any weed population may contain individuals naturally resistant to **AXIAL** and other group code 1 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **AXIAL** or any other group code 1 herbicides which inhibit acetyl-Coenzyme A (acetyl-CoA) carboxylase.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes.
- Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into weed control programs.
- Maintain herbicide use records for each field.
- Prevent movement of resistant weed seeds and vegetative material to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Inspect each land annually in order to identify the development of resistance early.

The occurrence of resistant weeds is difficult to detect prior to use. If the above measures are not strictly adhered to Syngenta cannot accept responsibility for any losses that may result from the failure of **AXIAL** to control resistant weeds.

- **AXIAL** should only be used once a year per field. If it becomes necessary to spray escapee target plants, use as first choice products from another chemical class or if not available use other products from the same group

but do not use **AXIAL** again on the same field.

- Resistance to the piridinyl-oxyphenoxygroup of herbicides may exist in some of these populations. Do not apply **AXIAL** to these populations.

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

5. USE RESTRICTIONS:

- Do not apply **AXIAL** to wheat fields where confirmed or suspected herbicide resistance against group 1 exist; weeds under drought or nutrient stress conditions; weeds on waterlogged soils; weeds under cold stress; and any other small grain e.g., oats.
- Do not use **AXIAL** in a tank mixture with any of the phenoxy-carboxylic acids e.g., 2,4-D, MCPA or dicamba containing products as this could lead to antagonism.
- Do not use **AXIAL** over or allow spray drift to come in contact with neighbouring oats fields.
- **AXIAL** does not control volunteer maize.

5.1 Minimum Re-cropping Intervals and Crop Rotation Guidelines

AXIAL is quickly inactivated in the soil and offers full rotational flexibility for crops. There are no re-cropping restrictions.

6. WEEDS CONTROLLED:

The following weed species are normally controlled by **AXIAL** at the dosage rates indicated below:

- Avena* spp. - **wild oats**
- Lolium* spp. - **ryegrass**
- Phalaris minor* - **little seeded canary grass**

7. DIRECTIONS FOR USE: Use only as indicated.

7.1 Compatibility

The compatibility of **AXIAL** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

Compatibility studies have been conducted in wheat with **AXIAL** in single combinations of the products listed below. Multiple combinations of the compounds listed below have not been tested.

As variations may exist between formulations of products containing the same active ingredients, the trade names and registration numbers of the approved products are shown.

Do not mix **AXIAL** with any other product than those listed below. **AXIAL** is compatible with one of the following products at a time:

HERBICIDES	BUCTRIL DS (L3350) CAMPATOP 225 EC (L5320) LOGRAN (L3600) PEAK (L5705)
FUNGICIDES	ALTO COMBI (L7393)

FUNGICIDES	ARTEA (L6820) TILT (L6668)
INSECTICIDES	dimethoate FOLIMAT 800 SL (L2316) KARATE EC (L3752) METASYSTOX R 250 EC (L5584)
ADJUVANTS	COMPLEMENT SUPER (L8169)

Do not add COMPLEMENT SUPER or any other adjuvant when applying **AXIAL** with Buctril-DS or Campatop 225 EC.

When **AXIAL** is applied with LOGRAN or PEAK add COMPLEMENT SUPER at 100 ml/ha.

Inferior control may result where **AXIAL** is mixed with any product other than those mentioned above.

7.2 Mixing Instructions

- Half-fill the spray tank with water, and pour the required amount of **AXIAL** into the spray tank while the water is being stirred. Top up with water to the final volume required.
- When **AXIAL** is tank mixed with other herbicides, insecticides and fungicides these must be added first, well mixed and in suspension before **AXIAL** is added.
- Ensure thorough agitation of the mixture in the tank during mixing and spraying.
- Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank.

7.3 Application Technique

Apply **AXIAL** only to young actively growing weeds, i.e., weeds growing in moist soil. It is essential that all parts of the weeds are thoroughly covered by the herbicide spray to ensure effective control. **AXIAL** should be applied prior to crop growth reaching a density, which would inhibit effective coverage of the weeds. In order to achieve this the following application instructions must be adhered to:

7.3.1 Tractor application

AXIAL alone, or in mixtures with other herbicides may be applied with any medium or high volume sprayer equipped with an efficient agitation mechanism, provided that adequate coverage and even distribution is obtained. Ensure thorough coverage of the weeds. For optimal control a water volume of at least 200 l/ha should be used.

7.3.2 Aerial application

Avoid chemical drift at all times.

Aerial application of **AXIAL** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to 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. Drift should be avoided at all times. It is therefore essential that the following criteria are met:

a) Application parameters:

- **Volume:** A volume of 30 - 35 l/ha is recommended. As **AXIAL** has not been evaluated at a reduced volume

rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.

- **Droplet coverage:** A droplet coverage of 20 - 30 droplets per cm² must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 350 - 400 microns is recommended. Ensure that the production of fine droplets (less than 150 microns) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a set up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- 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/h or reduces to less than 5km/h.
- Aerial application of **AXIAL** must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of **AXIAL** under temperature inversion conditions (spraying in or above the inversion layer) 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 the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions it can cause serious damage as far as 3 - 5 km from the nearest spray path of the aircraft:
 - Cloudy weather with relative humidity above 80% and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out where sensitive crops, crop seedlings, deciduous fruit trees and grape vines in budding or early development stages are present within 5 km of the nearest spray path of the aircraft.
- Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives, or water sources that could be affected by the pesticide.

Obtain 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.

Important: Weeds that are overshadowed by other weeds or the crop may result in variable control due to insufficient coverage. When timing the application of **AXIAL** this aspect must be considered.

7.4 Application Rates

Weed	Weed stage	AXIAL ml/ha	Dosage
Little seeded canary grass (<i>P. minor</i>)	2 - 4-leaf	700 - 1 000	Ground application > 200 ℓ spray mixture/ha
Wild oats (<i>Avena fatua</i>)			
Italian ryegrass (<i>Lolium multiflorum</i>)	2 - 4-leaf	1 000	Aerial application 30 - 35 ℓ spray mixture/ha
<ul style="list-style-type: none"> Use the higher rate to control difficult-to-control weed populations. Do not use the higher rate to control weeds larger than the indicated leaf stage. 			

Remarks

- AXIAL** has no soil residual action. Applications of **AXIAL** under adverse conditions might result in regrowth.
- A delay in application of **AXIAL** beyond the 4-leaf weed stage may result in severe yield losses due to weed competition.
- Inferior control of the target weeds may be expected when the weed stage exceeds the 4-leaf stage at the time of application.
- AXIAL** should only be applied once in a given season on a given crop. If necessary under certain conditions TOPIK can be applied not earlier than 21 days later.
- An **AXIAL** application could be followed by a single SU application and only for broadleaf weed control.
- The use of SU's for grass control during the same crop cycle **AXIAL** is **not** recommended.

General

- Weeds which have not germinated at the time of application will not be controlled.
- Apply only during favourable climatic conditions when the weeds are actively growing.
- AXIAL** rapidly inhibits growth of susceptible weeds. However, visible symptoms of dying weeds may not be noticeable for 1 - 3 weeks after application depending on growing conditions and weed susceptibility.
- AXIAL** is selective in wheat and barley and can be applied to any cultivar.

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