

Amine 480 SL

Reg. No: L 11605 Act/Wet No. 36 of/van 1947



A selective hormone-type herbicide for the control of broadleaf weeds in crops as indicated.

ACTIVE INGREDIENT

2,4-D (phenoxy compound) 480 g/l a.e.
(as dimethyl amine salt) 580 g/l

HRAC HERBICIDE GROUP CODE 4



DANGER

HAZARD STATEMENTS: Harmful if swallowed | Harmful if inhaled | May cause allergic skin irritation | Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS: Obtain special instructions before use | Do not handle until all safety precautions have been read and understood | Wash hands thoroughly after handling | Do not eat, drink or smoke when using this product.

Registration holder: Green Island Investments (Pty) Ltd.
Co. Reg. No.: 2013/043963/07
P.O. Box 1822, Heidelberg 1438, South Africa
Tel: 078 737 9236

24 HR EMERGENCY NUMBERS

Griffon Poison Information Centre: +27 82 446 8946
24 Hr Transport / Spill emergency no:
(Hazzcal24) +27 86 044 4411 (Typhoon Plant Protection)

Distributed by: Typhoon Plant Protection (Pty) Ltd.
Co. Reg. No.: 1998/006156/07, C/O Farm Vlakfontein
Corner of the R23 Benoni Road & R550 Nigel Road
Brakpan District, Heidelberg 1438, Gauteng, South Africa
Tel: 078 737 9236

Net Volume:

ℓ

Expiry Date:
Batch No:
Date of Manufacture:
U.N. No. 3082

 **Typhoon**
PLANT PROTECTION

READ LABEL IN DETAIL BEFORE OPENING THE CONTAINER. FOR FULL PARTICULARS, SEE ENCLOSED LEAFLET.
KEEP OUT OF REACH OF CHILDREN AND ANIMALS.



WARNINGS:

HAZARD STATEMENTS:

- Harmful if swallowed.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye irritation.
- Harmful if inhaled.
- May cause an allergic skin irritation.
- Very toxic to aquatic life with long lasting effects.

WITHHOLDING PERIOD:

Allow 7 days between last application and harvesting or grazing of treated areas.

- Handle with care.
- Harmful by swallowing, inhalation and when absorbed through the skin.
- Toxic to fish and bees.
- Store in a cool place.
- Store away from food and feeds and **do not** keep in the same room with seed, fertilizer, insecticides and fungicides.
- Keep out of reach of children, uninformed persons and animals.
- **Re-entry: Do not** enter treated area within 1 day after treatment, unless wearing protective clothing.
- **In case of poisoning call a physician and make this label available to him/her.**
- **Avoid spray drift onto susceptible crops e.g. all broadleaf crops as well as all grain varieties in a susceptible stage of growth.**

AERIAL APPLICATION:

- Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings.
- **Do not** spray over or allow drift to contaminate water or adjacent areas.
- **AMINE 480 SL** is a highly active herbicide that in small quantities, when used incorrectly, can cause serious damage to crop seedlings, deciduous fruit trees and grape vines during the budding and early season growth stages.
- Under the following conditions it can cause serious damage as far as 3 to 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 crop seedlings, deciduous fruit trees and grape vines, in budding or early season growth stages, are present within 5 km of the nearest spray path of the aircraft.

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. The action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, incompatibility with other substances not indicated on the label, the occurrence of resistance of weeds 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.

PRECAUTIONARY STATEMENTS:

- Obtain special instructions before use.
- **Do not** handle until all safety precautions have been read and understood.
- Wash hands thoroughly after handling.
- **Do not** eat, drink or smoke when using this product.
- Avoid inhalation of fumes and spray mist.
- Wash with soap and water after use.
- **Do not** smoke, eat or drink while using or before washing and changing clothing.
- Avoid spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Spraying applicator and equipment must be washed thoroughly after use.
- Clean applicator with a household ammonia solution (1%) before using with other material. Let solution stand for several hours, preferably overnight. Rinse at least twice. This applicator should not be used for applying chemicals other than herbicides. Dispose of wash water where it will not contaminate food, grazing, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the 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 3 times with a volume of water equal to a minimum of 10% of that of the container. Add these rinsings to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy empty container and never re-use for any other purpose.
- Prevent contamination of food, feeds and eating utensils.

Relevant substances:

Substance/Mixture: Mixture Ingredients:

Substance name (IUPAC)	CAS – No.	Concentration % By weight
2.4D Acid Tech 96%	2008-39-1	48%
Dimethylamine	124-40-3	58%

SYMPTOMS OF HUMAN POISONING:

Harmful. In case of over-exposure to product and excessive amounts are swallowed, may cause nausea, vomiting, sweating, headaches, muscle soreness, abdominal pain and loss of coordination. May cause burns of mouth, throat and respiratory system.

FIRST AID TREATMENT:

- **Inhalation:** Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Keep the affected person warm and at rest. Treat symptomatically and supportively. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately if effects persist.
- **Skin contact:** Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with water and non-abrasive soap. Get medical attention immediately if irritation persists.
- **Eye contact:** Immediately flush eyes with gently flowing clean water for at least 15 to 20 minutes, holding the eyelids open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Get medical attention immediately if irritation persists.
- **Ingestion:** Get medical advice immediately and show the container, label, or Data Sheet. **DO NOT** induce vomiting. If the patient is alert and conscious, have the patient to rinse mouth thoroughly with water.

NOTE TO PHYSICIAN:

The product contains a phenoxy herbicide. No specific antidote is available. Treat symptomatically and supportively. If large amounts have been ingested, perform gastric lavage and administer activated charcoal. Follow up with saline cathartic. Avoid oily laxatives.

RESISTANCE WARNING:

For resistance management **AMINE 480 SL** is a **group code 4 herbicide**. Any weed population may contain individuals naturally resistant to **AMINE 480 SL** and other **group code 4 herbicides**. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **AMINE 480 SL** or any other **group 4 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 herbicide codes.
- Integrate other control methods (chemical, cultural and biological) into weed control programs.

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

USAGE RESTRICTIONS:

- Dangerous to use in the vicinity of any broadleaf crop.
- May not be used under any circumstances in the vicinity of sensitive crops.
- Aerial and tractor spraying under warm or windy conditions is extremely hazardous.
- Phytotoxicity to sensitive crops some distance away is a distinct possibility.
- Avoid drift from ground and aerial applications so that it will not come into contact with sensitive broadleaf crops.

WIND SPEED:	AERIAL APPLICATION:	GROUND APPLICATION:
1,5 to 5 km/h	800 m downwind	200 m downwind
	800 m crosswind	200 m crosswind
	15 m upwind	6 m upwind
5 to 10 km/h	1 600 m downwind	400 m downwind
	800 m crosswind	200 m crosswind
	15 m upwind	1,5 m upwind
10 to 15 km/h	3,2 km downwind	800 m downwind
	800 m crosswind	400 m crosswind
	15 m upwind	1,5 m upwind
Above 15 km/h	Prohibited	Prohibited

DIRECTIONS FOR USE: (Use only as directed).

Pre-emergence Spraying:

- To ensure a high percentage of weed germination immediately after planting, plant the crop in a well tilled, moist and weed free seedbed.
- Soil clods will affect weed control adversely.
- **Do not** apply under dry soil conditions nor under cold conditions with or without frost.
- For control of annual grass weeds, apply herbicide before grass seedlings emerge.
- 3 to 6 weeks control is usually obtained.

Post-emergence Spraying:

- Spray when crop is at a suitable stage and soil is moist.
- **Do not** spray under cold conditions.
- Calibrate spray apparatus accurately to determine the exact quantities of spray being delivered per hectare.

Ground Application:

- Avoid fine droplet size – use low pressure flat fan nozzles of 80° or equivalent ant-drift type, and **do not** exceed spray pressure of 200 kPa.
- Spray volume must exceed 150 litre per hectare.
- **Do not** exceed spray height of 50 cm above target and ground speed of 10 km/h.
- **Do not** apply if wind velocity exceeds 15 km/h (as measured by handheld wind recorder approved by the Registrar: Act 36 of 1947).
- The difference between the wet and dry bulb readings on a whirling hygrometer must not exceed 8°C.

Aerial Application:

DO NOT APPLY THIS PRODUCT BY AIR IN KWA-ZULU NATAL.

Aerial application of **AMINE 480 SL** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 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 to 35 litres per hectare 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 effects 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 300 to 350 microns is recommended. Limit the production of fine droplets less than 150 microns (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 from entering the **wingtip vortices**.
- 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.
- 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 field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an 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.

APPLICATION RATES – CROP-SPECIFIC RECOMMENDATIONS

CROP & SOIL TYPE % CLAY	DOSAGE ℓ/ha	REMARKS
Maize (pre-emergence) < 10 % clay	2.7	Ground and Aerial application. Apply 5 to 6 days after planting. Rain before the maize emerges, especially on sandy soils, may leach the AMINE 480 SL to seed level and cause crop damage. Where grass seedlings have emerged already, harrow before application.
11 to 20 % clay	3.3	
21 to 35 % clay	4.3	
> 35 % clay	5.4	
(post-emergence) After maize reaching a height of 30 to 45 cm	2.0	Use drop arms for directional spraying, to ensure that the spray does not land in the funnel. <i>Striga asiatica</i> (Witchweed) should be sprayed when first flowers are noticed. Maize may become brittle and malformed after application, but this is usually of a temporary nature.
Grain sorghum (post-emergence)	2.0	Ground and Aerial application. Apply when (post-emergence) plants are 15 to 25 cm high, about three (3) weeks after emergence of the crop. Spray may be applied later provided directional spraying using, drop arms is practiced.
Maize Weed (all soils)	0.75	Ground application ONLY. This tank mix is recommended for broadleaf weed control, except where a Triazine herbicide has already been applied pre-emergence at full dosage rate. Spray on to actively growing weeds up to 10 cm high. If the crop is higher than 40 cm, directed spraying is recommended in order to achieve better wetting of the weeds. Do not apply under wet and cold conditions since the crop may then be adversely affected.
Grain sorghum (> 15 % clay) (post-emergence)	PLUS 2.0 Atrazine 500 SC	
Wheat (post-emergence)	1.5 to 2.6	Ground and Aerial application. Apply between growth stages 7 (center of double ridges enlarged) and 13 (awn of the top spikelets elongated), according to the list of growth stages for wheat compiled by the Small Grain Institute, Bethlehem. Use higher rate for severe weed infestation for weeds past the 4-leaf stage.

APPLICATION RATES – CROP-SPECIFIC RECOMMENDATIONS *Continued*

CROP & SOIL TYPE % CLAY	DOSAGE ℓ/ha	REMARKS
Barley and Rye (post-emergence)	1.5 to 2.6	Ground and Aerial application. Spray when the crop is in the 5-leaf stage. Use the higher rate for severe weed infestation.
Potatoes (pre-emergence) < 20 %	2.6	Ground and Aerial application. If the crop was, dry planted, harrow immediately after first rain and plant.
21 to 35 %	3.5	
> 36 % clay	4.5	
Grass Pastures and Lawns (established)	3.3 to 4.4	Ground application ONLY. For lawns, repeat applications may be necessary. Applications of nitrogenous fertilizer 2 to 3 weeks before spraying are recommended. Use the higher rate on severe weed infestations or less susceptible weed stages.
Sugarcane (pre-or post- emergence)	5.25 to 7.25	Ground and Aerial application. Pre-emergence to plant and ratoon cane: Apply before the weeds emerge. Post-emergence: The weeds should be still young. The treatment can cause cane damage and the danger of this occurring will be minimized if the applications are directed to avoid the wetting of the cane leaves as far as possible. If the cane exceeds a height of 40 cm or has unfurled more than five (5) leaves per shoot, directed spraying must be carried out or else the growth may be retarded. Use the higher rate for severe weed infestation or for less susceptible weed stages.

SOME WEED SPECIES NORMALLY CONTROLLED

Pre- and Post-emergence			
<i>Ageratum conyzoides</i>	Blue weed	<i>Commelina benghalensis</i>	Wandering Jew
<i>Amaranthus hybridus</i>	Cape pigweed	<i>Galinisoga parviflora</i>	Small-flowered quick weed
<i>Arctotis leiocarpa</i>	Karoo daisy (early rosette stage)	<i>Portulaca oleracea</i>	Purslane
<i>Arctotis venusta</i>	Free State daisy	<i>Raphanus raphanistrum</i>	Wild radish
<i>Bidens bipinnata</i>	Spanish blackjack	<i>Tagetes minuta</i>	Tall khaki weed
<i>Cosmos bipinnatus</i>	Cosmos	<i>Vicia hirsuta</i>	Tiny purple vetch
<i>Bidens pilosa</i>	Common blackjack	<i>Vicia sativa</i>	Broad-leaved purple vetch
<i>Chenopodium album</i>	White goosefoot		

Pre-emergence ONLY			
<i>Brachiaria eruciformis</i>	Sweet signal grass	<i>Setaria verticillata</i>	Bur bristle grass
<i>Eleusine indica</i>	Goose grass	<i>Sorghum verticilliflorum</i>	Common wild Sorghum
<i>Panicum schinzii</i>	Vlei Panicum (early germinating)		

Post-emergence ONLY			
<i>Datura ferox</i> *	Large thorn apple	<i>Striga asiatica</i>	Witchweed
<i>Datura stramonium</i> *	Thorn apple	<i>Tribulus terrestris</i>	Common dubbeltjie
<i>Polygonum aviculare</i>	Prostrate knotweed	<i>Xanthium strumarium</i>	Cocklebur

* In the 2 to 3 leaf stage.

NOTE: AMINE 480 SL controls some annual broadleaf weeds. Other weeds that were not present during the development trials with these products, may possibly also be controlled to a certain degree. The registration holder does not accept any responsibility for unlisted weeds.

Acknowledgment:

COMBI 600 SC, Reg. no.: L10475, Act no. 36 of 1947, Green Island Investments (Pty) Ltd.

Atrazine 500 SC, Reg. no.: L10074, Act no. 36 of 1947, Green Island Investments (Pty) Ltd.