For further information see attached pamphlet
Vir verdere inligting sien aangehegte pamflet

Read the label carefully before opening

TERBUZINE 600 SC

Botswana: Reg. No. W130312, Act No. / Wet Nr. 18 of / van 1999

Herbicide Group Code C1 Onkruiddodergroepkode

'n Suspensie konsentraat onkruiddoder vir selektiewe beheer van die meeste eenjarige breëblaaronkruide asook jongosgras in mielies en graansorghum.

A suspension concentrate herbicide for selective control of most annual broadleaf weeds as well as goose grass in maize and grain sorghum.

AKTIEWE BESTANDDELE: **ACTIVE INGREDIENTS:**

Atrasien (triasien)…………………...…. 300 g/ℓ ………… …………..Atrazine (triazine)
Terbutielasien (triasien)……………..….300 g/ℓ……………... Terbuthylazine (triazine)

Net Volume ℓ **Netto Volume**

NULANDIS®

REGISTRATION HOLDER / REGISTRASIEHOUER:

Nulandis® (A division of AECI Limited) / Nulandis® ('n Afdeling van AECI Beperk)
Reg. No. / Nr. 1924/002590/06
P.O. Box / Posbus 14418
Witfield, 1467
Tel : (011) 823 8000
www.nulandis.com

IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL 0861 555777/ 0824468946

UN No./VN Nr.: 3082 – Environmentally hazardous substance, liquid, n.o.s

PAMPHLET

TERBUZINE 600 SC

Botswana: Reg. No. W130312, Act No. 18 of 1999

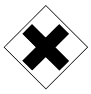
Herbicide Group Code C_1

A suspension concentrate herbicide for selective control of most annual broadleaf weeds as well as goose grass in maize and grain sorghum.

ACTIVE INGREDIENTS:
Atrazine (triazine)…………………300 g/ℓ
Terbuthylazine (triazine)…………300 g/ℓ

REGISTRATION HOLDER:

Nulandis® (A division of AECI Limited)
Reg. No. 1924/002590/06
P.O. Box 14418
Witfield, 1467
Tel : (011) 823 8000
www.nulandis.com



HARMFUL

WARNINGS:
Poisonous when swallowed.
May cause serious eye irritation and allergic skin reaction.
Very toxic to aquatic organisms.
Store in a cool place.
Store away from food, feeds, seed and other agricultural remedies.
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 DOCTOR AND MAKE THIS LABEL AVAILABLE TO HIM.
Aerial application: Notify all the inhabitants of the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

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 CLIMATIC AND STORAGE CONDITIONS; QUALITY OF DILUTION WATER; COMPATIBILITY WITH OTHER SUBSTANCES NOT INDICATED ON THE LABEL AND 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.

PRECAUTIONS:
Do not inhale spray mist.
Avoid contact with skin and eyes.
Wear protective clothing (rubber gloves, boots and faceshield) when handling and preparing spray mixture.
Wash contaminated clothing after use.
Wash with soap and water after use.
Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and changing clothes.
Prevent contamination of food, feed, drinking water and eating utensils. Prevent spray drift onto other crops, grazing, rivers, dams and other areas not under treatment.
Clean applicator thoroughly with **FLUSHSOL** before re-using and dispose of wash water where it will not contaminate crops, grazing, rivers and dams. Refer to the **FLUSHSOL** label for directions of use.
When empty, invert the container over the spray tank or mixing tank and allow it 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 at least one tenth of that of the container and add the rinsings to the contents of the spray tank. Destroy the container by perforation and flattening and do not re-use for any other purpose.

SYMPTOMS OF POISONING :

Acute toxicity is expected to be low and no adverse effects known. Symptoms may include abdominal pain, diarrhoea and vomiting, eye, skin and mucous membrane irritation.

FIRST AID TREATMENT:

Inhaled: Remove the patient to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothes and shoes. Wash clothing before re-use. Thoroughly clean shoes before re-use. Get medical attention immediately.
Eye contact: Check or and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Ingested: In case of ingestion, immediately transfer patient to nearest hospital or medical centre, warning by telephone of the estimated arrival time so that the start of treatment is not delayed. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband.

NOTE TO PHYSICIAN:
No specific treatment. Treat symptomatically.

RESISTANCE WARNING:
For resistance management, **TERBUZINE 600 SC** is a group code C1 herbicide. Any weed population may contain individuals naturally resistant to **TERBUZINE 600 SC** and other group code C1 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. The resistant weeds may not be controlled by **TERBUZINE 600 SC** or any other group code C1 herbicides.

To delay herbicide resistance:

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

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

ENVIRONMENTAL PRECAUTIONARY MEASURES:
Do not mix and load within at least 15 m from boreholes, streams, rivers and dams.
Do not apply within at least 15 m from boreholes, streams and rivers.
Do not apply within 60 m from dams.
Ensure that no back-siphoning to boreholes or dams takes place when product is applied through the irrigation system.

USE RESTRICTIONS:

1. To avoid damage to follow-up crops the following waiting periods should be observed:

(a) **MAIZE AND SUGARCANE**	**NONE**
(b) **GRAIN SORGHUM**	**12 MONTHS**
(c) **SUNFLOWERS, GROUNDNUTS, SOYABEANS, POTATOES, DRY BEANS, FORAGE, SORGHUM AND SMALL GRAINS**	**18 MONTHS**
(d) **ALL OTHER CROPS** (A TEST PLANTING IS RECOMMENDED)	**24 MONTHS**

(e) Where the rate of **TERBUZINE 600 SC** applied does not exceed 1,7 ℓ/ha the waiting period mentioned under (b) and (c) above can be reduced to 9 months except on sandy soils of the North west Province and North west Free State which contain 0-10 % clay.

IMPORTANT NOTES:

1. The abovementioned waiting periods are valid only if the correct dosage rate of **TERBUZINE 600 SC** according to soil type was applied and normal or above average rainfall occurred after application.

2. When **TERBUZINE 600 SC** is applied to soils which expand on wetting and crack or crumble on drying out, such as turf soils, the **TERBUZINE 600 SC** may remain active in the soil for much longer than the above mentioned waiting periods. Thus, **TERBUZINE 600 SC** should not be used on such soils if sensitive crops might be planted in the foreseeable future. On such soils the herbicide may also give poor control of the weeds when applied pre-emergence.

3. Do not apply **TERBUZINE 600 SC** to inbred parent plants of maize and grain sorghum hybrids or experimental or newly released maize and grain sorghum cultivars without first referring to the manufacturer or seed supplier.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

COMPATIBILITY:

TERBUZINE 600 SC is compatible with **2,4-D Amine 480 SL** (Reg. No. L5233, Act No. 36 of 1947), as well as other soil insecticides. The compatibility of **TERBUZINE 600 SC** 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 the registration holder and water quality may vary from farm to farm, a physical compatibility test should always be carried out prior to application. When **TERBUZINE 600 SC** is used in conjunction with any other agricultural remedy, all **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that particular label, must be adhered to.

MIXING INSTRUCTIONS:

Shake well before use: Replace cap after pouring.

Half-fill the spray tank with water, then pour the required quantity of **TERBUZINE 600 SC** through a 300 µm sieve into the tank whilst stirring. Top up the tank with water to the final volume required. When **TERBUZINE 600 SC** is used in a tank mixture with **2,4-D Amine 480 SL** the **TERBUZINE 600 SC** should be mixed first using a tank half-filled with water and agitated well after which the spray tank should be filled almost to capacity. Only then should the **2,4-D Amine 480 SL** be added whilst the spray tank is filled to its final volume. Ensure thorough agitation during filling and spraying operations. After each spray thoroughly flush spray equipment out with water.

APPLICATION METHODS:

TERBUZINE 600 SC must be applied before or shortly after weeds emerge. The soil should preferably have a smooth surface, free of large clods.

If dry conditions prevail for a period of 7 to 14 days after application, weeds may emerge and develop. In such cases it is recommended that a light cultivation be carried out with a rotary cultivator to destroy these weeds and to mix the herbicide into the top 10 to 20 mm of soil.

GROUND APPLICATION:

TERBUZINE 600 SC can be applied with any medium or high volume sprayer equipped with efficient agitation and which is capable of adequate coverage and even distribution. Best results are obtained using fan-type spray nozzles and applying a minimum spray volume of 200 ℓ water/ha.

AERIAL APPLICATION:

Aerial application 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 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. It is therefore essential that the following criteria are met:

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 through drift.
The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span. Use a conventional boom. Nozzles must be equipped with flat fan tips eg. SS 6515 or similar.

All nozzles / atomisers should be positioned within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.

Application parameters:
A minimum volume of 30 ℓ spray mixture 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.
A droplet coverage: The following number of droplets per cm^2 must be recovered at the target area: **Pre-emergence 20 to 30 droplets; Post-emergence 35 – 45 droplets**.
A droplet size: The following droplet spectra are recommended: **Pre-emergence a VMD of 350 to 400 microns is recommended; Post-emergence a VMD of 300 to 350 micron** is recommended. Ensure that the production of fine droplets (smaller than 150 microns) is restricted to a minimum.
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.
Apply before the crop becomes too dense, thus preventing proper coverage of the weeds.

Meteorological conditions:
The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C
Do not spray under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
Do not spray under temperature inversion conditions (spraying in or above the inversion layer).
Do not spray 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.

General:
Ensure that fields are accurately marked and 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.

.

APPLICATION TABLE:

MAIZE (Pre- and early post-emergence)

Soil type	% Clay	TERBUZINE 600 SC (ℓ/ha) for overall application	REMARKS
Light sand/sand	0 - 10	2,10	**TERBUZINE 600 SC** can only be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage and grasses have not yet emerged. Where grasses have already emerged and broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by cultivation and **TERBUZINE 600 SC** then applied onto clean soil. When applied post-emergence to the weeds a suitable surfactant such as **Biodew (**Reg. No. L8120, Act No. 36 of 1947) should be added to the spray mixture.
Loamy sand/sandy loam	11 - 20	2,70	
Sandy clay loam	21 - 30	3,30	
Sandy clay loam/sandy clay	31 - 40	4,00	

MAIZE: TERBUZINE 600 SC PLUS 2,4-D AMINE 480 SL (Post-emergence)

This treatment is only recommended in cases where a grass killer has been applied prior to or at time of planting. This treatment controls all the broadleaf weeds as mentioned hereunder in addition to large cocklebur (*Xanthium strumarium*), striped wild cucumber (*Cucumis myriocarpus*), Devils thorn= dubbeltjie (*Tribulus terrestris*), common morning glory (*Ipomoea purpurea*) and *Ipomoea coscinospermum.*

Application rates:

(a) 1,70 ℓ **TERBUZINE 600 SC** + 0,5 ℓ **2,4-D Amine 480 SL**/ha or

(b) 1,25 ℓ **TERBUZINE 600 SC** + 0,75 ℓ **2,4-D Amine 480 SL**/ha

IMPORTANT

a) Under cold and wet or hot and humid conditions **2,4-D Amine 480 SL** may retard the development of prop roots in maize. For this reason treatment (a) above using the low quantity of **2,4-D Amine 480 SL** is preferred. Where Bengal wandering Jew (*Commelina benghalensis*) and Devils thorn= dubbeltjie (*Tribulus terrestris*) form an important part of the weed spectrum, treatment (b) above containing the higher quantity of **2,4-D Amine 480 SL** is preferred.

b) The weeds must be sprayed early post-emergence e.g. not larger than the 4-leaf stage or 100 mm in height. If application is made at a later stage, the yield may be reduced due to weed competition. On the other hand, weaker control may result if the weeds are allowed to grow larger. When the maize is taller than 400 mm, a directed inter row spray must be applied to ensure better coverage.

GRAIN SORGHUM (only post-emergence)

Soil type	% Clay	TERBUZINE 600 SC (ℓ/ha) for overall application	REMARKS
Loamy sand/sandy loam	0 - 20	**NOT RECOMMENDED**	**TERBUZINE 600 SC** can only be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage and grasses have not yet emerged, and the grain sorghum has 5 or more leaves. Where grasses have already emerged and broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by cultivation and **TERBUZINE 600 SC** then applied onto clean soil. Under cold and/or very wet conditions **TERBUZINE 600 SC** may damage grain sorghum.
Sandy clay loam	21 - 30	3,30	
Sandy clay loam/sandy clay	31 - 40	4,00	

GRAIN SORGHUM: TERBUZINE 600 SC + 2,4-D AMINE 480 SL (Post emergence)

A post-emergence treatment of 1,7 ℓ **TERBUZINE 600 SC** + 0,5 ℓ **2,4-D Amine 480 SL** / ha can also be used in grain sorghum.

IMPORTANT:

a) Under hot, humid conditions **2,4-D Amine 480 SL** may cause temporary damage in grain sorghum. This damage is normally outgrown and does not affect yield.
b) The correct application timing in grain sorghum is 4 - 5 weeks after planting at the 4 to 5-leaf stage and when the plants are approximately 150 mm tall.
c) The weeds must be sprayed early post-emergence before exceeding the 4-leaf stage or 100 mm in height.

IMPORTANT (maize and grain sorghum)

i) Apply **2,4-D Amine 480 SL** according to the manufacturer's label recommendations.
ii) Consult the **2,4-D Amine 480 SL** label with regard to use restrictions, withholding periods, list of weeds controlled, etc.
iii) Ensure that sufficient fertilizer is band-placed near the seed at planting to promote vigorous seedling growth.

WEEDS CONTROLLED BY TERBUZINE 600 SC:

The following weed species are normally controlled by **TERBUZINE 600 SC** at the dosage rates recommended above:

Broadleaf weeds:

Acanthospermum australe	Eight-seeded prostrate starbur
Acanthospermum glabratum	Five-seeded prostrate starbur
Acanthospermum hispidum	Upright starbur
Amaranthus deflexus	Perennial pigweed
Amaranthus hybridus	Common pigweed
Amaranthus spinosus	Thorny pigweed
Amaranthus thunbergii	Red pigweed
Bidens bipinnata	Spanish blackjack
Bidens formosa => Cosmos bipinnatus	Cosmos
Bidens pilosa	Blackjack
Chenopodium album	White goosefoot
Chenopodium carinatum	Green goosefoot
Cleome monophylla	Spindlepod
Cleome rubella	Pretty lady
Commelina benghalensis	Bengal wandering Jew
Crotalaria sphaerocarpa	Mielie Crotalaria
Datura ferox	Large thorn apple
Datura stramonium	Thorn apple
Galinsoga parviflora	Gallant soldier
Gisekia pharnaceoides	Gisekia
Hibiscus cannabinus	Kenaf
Hibiscus trionum	Bladderweed
Nicandra physaloides	Apple of Peru
Physalis angulata	Wild gooseberry
Portulaca oleracea	Purslane
Richardia brasiliensis	Tropical Richardia
Schkuhria pinnata	Dwarf marigold
Tagetes minuta	Khaki weed
Vigna vexillata	Wild cow-pea

Grasses:

Eleusine indica => Eleusine corocana Goose grass

If dry conditions prevail for a period of 7 to 14 days after pre-emergence application, the following weed species may not be adequately controlled, especially on heavy soils:

Bidens formosa => Cosmos bipinnatus	Cosmos
Commelina benghalensis	Bengal wandering Jew
Datura spp.	Thorn apple
Eleusine indica=> Eleusine corocana	Goose grass

BIODEW® is the registered trademarks of AECI Limited (Nulandis a division of AECI Ltd.)

2,4-D Amine 480 SL is the registered tradename of Nulandis (A division of AECI Ltd.)

PAMFLET

TERBUZINE 600 SC

Botswana: Reg. Nr. W130312, Wet Nr. 18 van 1999

Onkruiddodergroepkode C_1

'n Suspensie konsentraat onkruiddoder vir selektiewe beheer van die meeste eenjarige breëblaaronkruide asook jongosgras in mielies en graansorghum.

AKTIEWE BESTANDDELE:
Atrasien (triasien)…………………..…. …300 g/ℓ
Terbutielasien (triasien)…………….……300 g/ℓ

REGISTRASIEHOUER:

Nulandis® ('n Afdeling van AECI Beperk)
Reg. Nr. 1924/002590/06
Posbus 14418
Witfield, 1467
Tel : (011) 823 8000
www.nulandis.com

SKADELIK

WAARSKUWINGS:
Giftig indien ingesluk.
Mag ernstige oogirritasie en allergiese velreaksie veroorsaak.
Baie giftig vir akwatiese organismes.
Berg in 'n koel plek.
Berg weg van voedsel, voer, saad en ander landboumiddels.
Hou buite bereik van kinders, oningeligte persone en diere.
Herbetreding: Moenie behandelde gebied betree vir 1 dag na die bespuiting nie, tensy beskermende oorklere gedra word. ONTBIED 'N GENEESHEER EN STEL HIERDIE ETIKET AAN HOM BESKIKBAAR.
Lugtoediening **:** - stel alle persone in die onmiddellike omgewing van die gebied wat behandel gaan word in kennis en reik die nodige waarskuwings uit. Moenie aangrensende gebiede of waterbronne bespuit of toelaat dat die sproeinewel daarheen oorwaai nie.

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 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 ONKRUIDE TEEN DIE BETROKKE MIDDEL SOWEL AS DIE METODE, TYD EN AKKURAATHEID VAN TOEDIENING. VERDER AANVAAR DIE REGISTRASIEHOUER NIE VERANTWOORDELIKHEID VIR SKADE AAN GEWASSE, PLANTEGROEI, DIE OMGEWING OF VIR NADELIGE EFFEK OP MENS OF 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 ONTSTAAN VAN TOESTANDE WAT NIE KRAGTENS DIE REGISTRASIE VOORSIEN KON WORD NIE. RAADPLEEG DIE VERSKAFFER IN DIE GEVAL VAN ENIGE ONSEKERHEID.

VOORSORGMAATREëLS:
Moenie die sproeinewel inasem nie.
Vermy vel- en oogkontak.
Dra beskermende klere (rubberhandskoene, skoene en gesigskerm) wanneer spuitmengsel voorberei en hanteer word.
Was besoedelde klere na gebruik.
Was met seep en water na gebruik.
Moenie eet, drink of rook tydens vermenging of toediening of voordat hande en gesig gewas en skoon klere aangetrek is nie.
Verhoed besoedeling van voedsel, voer, drinkwater en eetgerei.
Verhoed die wegdrywing van sproeinewel na ander gewasse, weidings, riviere, damme of ander gebiede wat nie behandel word nie.
Maak toedieningsapparaat skoon met **FLUSHSOL** voor her-gebruik en doen weg met waswater waar dit nie gewasse, weiding, riviere en damme sal besoedel nie. Verwys na die **FLUSHSOL** etiket vir gebruiksaanwysings.
Sodra die houer leeg is keer dit om oor die spuittenk of mengbak en dreineer vir minstens 30 sekondes nadat die vloei tot 'n gedrup verminder het. Spoel die houer daarna driekeer uit met ‘n volume water gelyk aan minstens ‘n tiende van die houer en gooi die spoelwater by die inhoud van die spuittenk.
Vernietig die houer deur gate in te slaan en dan plat te slaan. Moenie die houer vir enige ander doel gebruik nie.

SIMPTOME VAN VERGIFTIGING:
‘n Geringe akkute vergiftiging word verwag. Simptome mag insluit, maagpyn, naarheid en braking, oog- vel- en slymvlies membraan irritasies.

NOODHULPBEHANDELING:
Inaseming: Verwyder die pasiënt na vars lug. Indien ophou asemhaal, pas kunsmatige asemhaling toe. Indien asemhaling bemoeilik word, gee suurstof. Verkry mediese hulp.
Velkontak: In geval van velkontak, spoel vel onmiddellik met genoegsame water af vir minstens 15 minute terwyl besoedelde klere en skoene uitgetrek word. Was klere voor hergebruik. Was skoene deeglik voor hergebruik. Verkry mediese hulp.
Oogkontak: Gaan na en verwyder enige kontaklense. In geval van oogkontak, spoel onmiddellik met genoegsame water vir minstens 15 minute uit. Koue water mag gebruik word. Verkry onmiddellik mediese hulp.
Ingesluk: Indien ingesluk moet die pasiënt onmiddellik na die naaste hospitaal of mediese sentrum vervoer word. Telefoniese waarskuwing vooraf is noodsaaklik om tyd van aankoms te bevestig om sodoende enige vertraging in die behandeling te vermy. MOENIE braking veroorsaak tensy so aanbeveel deur mediese personeel. Moet nooit iets per mond aan ’n bewustelose persoon gee nie. Maak styfpassende klere, soos bv. kraag, das of lyfgordel los.

NOTA AAN GENEESHEER:
Geen spesifieke behandeling. Behandel simptomaties.

WEERSTANDSWAARSKUWING:
TERBUZINE 600 SC is ‘n groepkode C1 onkruiddoder. Enige populasie van ‘n spesifieke onkruid spesie mag individue insluit wat ‘n natuurlike weerstand teen **TERBUZINE 600 SC** of enige ander groepkode C1 onkruiddoders het. Indien hierdie onkruiddoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die onkruidpopulasie oorheers. Hierdie weerstandbiedende onkruide sal waarskynlik nie deur **TERBUZINE 600 SC** of enige ander groepkode C1 onkruiddoders beheer word nie.
Om weerstand teen onkruiddoders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van onkruiddoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende onkruiddoder groepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in onkruidbeheerprogramme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.

OMGEWINGS-VOORSORGMAATREËLS:

Moenie binne ten minste 15 m van boorgate, strome, riviere en damme meng en laai nie.
Moenie binne ten minste 15 m van boorgate, strome en riviere toedien nie.
Moenie binne 60 m van damme toedien nie.
Verseker dat geen terugvloei na boorgate of damme plaasvind wanneer die produk toegedien word deur die besproeiingsisteem nie.

GEBRUIKSBEPERKINGE:

1. Om skade aan opvolggewasse te voorkom moet die volgende wagperiodes nagekom word.

(a) **MIELIES EN SUIKERRIET** **GEEN**
(b) **GRAANSORGHUM** **12 MAANDE**
(c) **SONNEBLOMME, GRONDBONE, SOJABONE, AARTAPPELS, DROëBONE, VOERSORGHUM EN KLEINGRAAN** **18 MAANDE**

(d) **ALLE ANDER GEWASSE** ('n toetsplanting word egter aanbeveel) **24 MAANDE**
(e) waar die hoeveelheid **TERBUZINE 600 SC** wat toegedien was, nie 1,7 ℓ/ha oorskry het nie, kan die wagperiodes onder (b) en (c) hierbo genoem tot 9 maande verkort word, uitgesonder sandgronde van die Noordwes Provinsie en Noordwes Vrystaat wat 0-10 % klei bevat.

BELANGRIKE NOTAS:

1. Bogenoemde wagperiodes geld slegs indien die korrekte hoeveelheid **TERBUZINE 600 SC** per grondsoort toegedien is en normale of bogemiddelde reënval gedurende die seisoen waarin die toediening gemaak is en daarna voorgekom het.

2. Waar **TERBUZINE 600 SC** toegedien is op gronde wat uitsit by natwording en kraak óf krummel tydens uitdroging soos byvoorbeeld turfgronde, mag die onkruiddoder veel langer in die grond aktief bly as wat deur bostaande wagperiodes aangedui word. Gevolglik moet **TERBUZINE 600 SC** nie op sulke gronde gebruik word nie indien gevoelige gewasse in die voorsienbare toekoms daarop geplant mag word. Op sulke gronde mag vooropkom behandelings met **TERBUZINE 600 SC** ook swak onkruidbeheer tot gevolg hê.

3. Moenie **TERBUZINE 600 SC** toedien op ingeteelde ouerplante van mielie- en graansorghumbasters, proef- of nuut-vrygestelde mielie- of graansorghum kultivars, sonder om eers vooraf die vervaardiger of saadverskaffer te raadpleeg nie.

GEBRUIKSAANWYSINGS: GEBRUIK SLEGS SOOS AANBEVEEL

VERENIGBAARHEID:

TERBUZINE 600 SC is verenigbaar met **2,4-D Amine 480 SL** (Reg. Nr. L5233, Wet Nr. 36 van 1947) sowel as ander grondinsektemiddels. Die verenigbaarheid van **TERBUZINE 600 SC** met ander produkte kan egter beïnvloed word deur die formulering van die betrokke produkte asook deur die kwaliteit van die verdunningswater. Aangesien die formulering van ander produkte kan verander sonder die medewete van die registrasiehouer en die kwaliteit van die water ook van plaas tot plaas kan varieër, moet 'n fisiese verenigbaarheidstoets altyd uitgevoer word voordat gespuit word.

MENGINSTRUKSIES:

Skud goed voor gebruik; Plaas deksel terug na gebruik.
Maak die tenk halfvol met water en voeg dan die benodigde hoeveelheid **TERBUZINE 600 SC** deur 'n 300 µm sif by terwyl geroer word. Vul die tenk verder met water totdat die verlangde volume verkry is. Wanneer **TERBUZINE 600 SC** in 'n tenkmengsel saam met **2,4-D Amine 480 SL** gebruik word, moet die **TERBUZINE 600 SC** eerste met 'n half-tenk water vermeng en goed geroer word waarna die spuittenk feitlik geheel en al met water gevul moet word. Daarna kan die **2,4-D Amine 480 SL** bygevoeg word terwyl die spuittenk volgemaak word tot sy verlangde volume. Verseker dat die mengsel aanhoudend deeglik geroer word tydens vulling en toediening. Na elke dag se bespuiting moet die spuittoerusting deeglik met skoon water uitgespoel word.

TOEDIENINGSMETODES:

TERBUZINE 600 SC moet toegedien word vóór of net na onkruide opgekom het. Die grond moet verkieslik 'n egalige oppervlak hê, sonder groot kluite. Indien droë weerstoestande vir 'n periode van 7 tot 14 dae na toediening voortduur, mag onkruide opkom en ontwikkel. Waar dit gebeur, word aanbeveel dat 'n ligte bewerking met 'n roltandeg uitgevoer word om hierdie onkruide te vernietig en die onkruiddoder met die boonste 10 tot 20 mm grondlaag te vermeng.

GRONDTOEDIENING:

TERBUZINE 600 SC kan met enige medium- of hoë volume spuittoerusting wat met 'n doeltreffende roermeganisme toegerus is toegedien word, mits 'n eweredige bedekking en verspreiding verkry word. Die beste resultate word verkry deur van waaiertipe-spuitpunte gebruik te maak en 'n minimum spuitvolume van 200 ℓ / water/ha toe te dien.

LUGTOEDIENING:

Lugtoediening mag slegs deur ‘n geregistreerde lugbespuitingsoperateur met ‘n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en dat die verlies aan spuitmengsel tydens toediening tot ‘n minimum beperk word. Dit is dus belangrik om aan die volgende kriteria te voldoen:

Toerusting:
Gebruik geskikte atomiseringsapparaat (hidroliese of roterende spuitkoppe) wat die vereiste druppelgrootte en bedekking sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker. Gebruik slegs 'n konvensionele spuitbalk. Spuitstukke moet met platwaaierspuitpunte, bv. SS 6515 of soortgelyke, toegerus wees.
Die operateur moet ‘n stelsel gebruik wat ‘n druppelspektrum met die kleinste moontlike relatiewe span sal produseer.
Al die spuitneuse/atomiseerders moet in die binneste 60 tot 75 % van die vlerkspan geplaas word om die beweging van druppels in die vlerkvorteks in te verhoed.

Toedieningsparameters:

‘n Minimum volume van 30 ℓ spuitmengsel per hektaar word aanbeveel. Aangesien hierdie produk nie teen ‘n verlaagde volume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen ‘n laer volume as hierbo aanbeveel, uit die lug toegedien word nie.

’n Druppelbedekking: Die volgende druppels per cm^2 moet op die teikenarea herwin word, **Voor-opkom – 20 tot 30 druppels; Na-opkom 35 tot 45 druppels.**

’n Druppelspektrum: Die volgende spektrum word aanbeveel; **Voor-opkom ‘n VMD van 350 tot 400 mikron; Na-opkom ’n VMD van 300 tot 350 mikron** word aanbeveel. Verseker dat die produksie van fyn druppels (kleiner as 150 mikron) tot ‘n minimum beperk word.

Die hoogte van die spuitbalk moet op 3-4 meter bo die teiken gehandhaaf word. Moenie spuit wanneer die vliegtuig aan die bopunt is van, of tydens ‘n duik, of terwyl dit uitklim of draai nie.

Dien toe voordat die gewas te ruig word wat sal verhoed dat onkruide behoorlik bedek word.

Meteorologiese toestande :

Die verskil tussen die nat- en droëbollesing, soos met ‘n swaaihigrometer bepaal, moet nie 8°C oorskry nie.

Moenie toedien tydens turbulente, onstabiele toestande gedurende die hitte van die dag wanneer styg en dalende konveksie windbeweging plaasvind nie.

Moenie toedien onder temperatuur inversie toestande (deur bo of binne die inversielaag te spuit) nie.

Moenie spuit indien die windspoed 15 km/uur oorskry nie.

- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die
- dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit)
- en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot volgende probleme
- aanleiding gee:

    a) verlaagde effektiwiteit aangesien die druppels as ‘n wolk in die lug bly hang (onvoldoende bedekking op teiken).

    b) skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken area.

Algemeen :

Sorg dat die lande akkuraat gemerk is en die spuitoperateur presies weet watter lande gespuit moet word.

Verkry ‘n versekering van die spuitoperateur dat aan die bogenoemde vereistes voldoen sal

<u>TOEDIENINGSTABEL</u>:

MIELIES (Voor- en vroeg na-opkom)

Grondsoort	% Klei	TERBUZINE 600 SC (ℓ/ha) vir algehele toediening	OPMERKINGS
Ligte sand/sand	0 - 10	2,10	**TERBUZINE 600 SC** kan alleenlik na-opkom toegedien word mits die breëblaaronkruide nog nie verder as die 4-blaarstadium ontwikkel het nie en grasse nog nie opgekom het nie. Waar grasse reeds opgekom het en breëblaaronkruide verder as die 4-blaarstadium ontwikkel het, moet hierdie onkruide eers deur middel van 'n bewerking vernietig word en die **TERBUZINE 600 SC** dan op skoon grond toegedien word. Wanneer **TERBUZINE 600 SC** na-opkom van onkruide toegedien word moet 'n geskikte benatter soos **Biodew** (Reg. Nr. L8120, Wet Nr. 36 van 1947) by die spuitmengsel gevoeg word.
Leemsand/sand leem	11 - 20	2,70	
Sand klei leem	21 - 30	3,30	
Sand klei leem/sand klei	31 - 40	4,00	

MIELIES: TERBUZINE 600 SC + 2,4-D AMINE 480 SL (Na-opkom)

Hierdie behandeling word slegs aanbeveel waar 'n grasdoder vóór of tydens planttyd toegedien was. Hierdie behandeling beheer al die breëblaaronkruide wat hieronder genoem word en aanvullend ook kankerroos (*Xanthium strumarium*), wildekomkommer= Agurkie (*Cucumis myriocarpus*), dubbeltjie (*Tribulus terrestris*), purperwinde (*Ipomoea purpurea*) en *Ipomoea coscinospermum*.

Toedieningshoeveelhede:

(a) 1,70 ℓ / **TERBUZINE 600 SC** + 0,5 ℓ **2,4-D Amine 480 SL** /ha **of**

(b) 1,25 ℓ / **TERBUZINE 600 SC** + 0,75 ℓ **2,4-D Amine 480 SL** /ha

BELANGRIK:

a) Onder koue en nat of warm en vogtige toestande kan **2,4-D Amine 480 SL** soms stutwortel ontwikkeling by mielies benadeel. Vir hierdie rede word behandeling (a) hierbo met die lae hoeveelheid **2,4-D Amine 480 SL** verkies. Waar Bengaalse wandelende Jood (*Commelina benghalensis*) en dubbeltjie (*Tribulus terrestris*) egter belangrik in die onkruidspektrum is word behandeling (b) hierbo met die hoër hoeveelheid **2,4-D Amine 480 SL** verkies.

b) Die onkruide moet vroeg na-opkom bespuit word d.w.s. nie groter as die 4-blaarstadium of 100 mm in lengte nie. Indien dit later bespuit word kan die onkruide met die gewas kompeteer en die oes verlaag en as die onkruide te groot word kan swakker beheer ook verkry word. Waar die mielies groter as 400 mm is, moet 'n gerigte tussenry bespuiting gedoen word ten einde goeie bedekking te verseker.

GRAANSORGHUM (slegs na-opkoms)

Grondsoort	% Klei	TERBUZINE 600 SC (ℓ/ha) vir algehele toediening	OPMERKINGS
Ligte sand/sand leem	0 - 20	**NIE AANBEVEEL NIE**	**TERBUZINE 600 SC** kan alleenlik na-opkom toegedien word mits die breëblaaronkruide nog nie verder as die 4-blaarstadium ontwikkel het nie en grasse nog nie opgekom het nie, en die graansorghum reeds 5 of meer blare het. Waar grasse reeds opgekom het en breëblaaronkruide verder as die 4-blaarstadium ontwikkel het, moet hierdie onkruide eers deur middel van 'n bewerking vernietig word en die **TERBUZINE 600 SC** dan op skoon grond toegedien word. Onder koue en/of baie nat toestande kan **TERBUZINE 600 SC** graansorghum beskadig.
Sand klei leem	21 - 30	3,30	
Sand klei leem/sand klei	31 - 40	4,00	

GRAANSORGHUM: TERBUZINE 600 SC + 2,4-D AMINE 480 SL (Na-opkoms)

'n Na-opkom behandeling van 1,70 ℓ **/ TERBUZINE 600 SC** + 0,5 ℓ **2,4-D AMINE 480 SL** /ha kan ook in graansorghum gebruik word.

BELANGRIK:

a) Onder warm, vogtige toestande kan **2,4-D AMINE 480 SL** die graansorghum tydelik beskadig. Graansorghum ontgroei hierdie beskadiging normaalweg vinnig en oesopbrengs word nie nadelig beïnvloed nie.

b) Die geskikste tyd vir aanwending in graansorghum is 4 - 5 weke na plant wanneer dit 4 - 5 blare het en ongeveer 150 mm lank is.

c) Die onkruide moet vroeg na-opkom bespuit word d.w.s. nie groter as die 4-blaarstadium óf 100 mm in lengte nie wees nie.

BELANGRIK (**mielies en graansorghum)**

i) Dien **2,4-D Amine 480 SL** volgens die vervaardiger se etiket voorskrifte toe.

ii) Raadpleeg die **2,4-D Amine 480 SL** etiket met verwysing na gebruiksbeperkinge, onthoudingsperiodes, lys van onkruide wat beheer word, ens.

iii) Maak seker dat voldoende kunsmis gedurende plant in 'n band naby die saad geplaas word om die groei van saailinge te bevorder.

ONKRUIDE WAT DEUR TERBUZINE 600 SC BEHEER WORD:

Die volgende onkruide word normaalweg deur **TERBUZINE 600 SC** beheer teen die toedieningshoeveelhede soos hierbo aanbeveel.

<u>Breëblaaronkruide</u>:

Acanthospermum australe	Agtsadige kruipsterklits
Acanthospermum glabratum	Vyfsadige kruipsterklits
Acanthospermum hispidum	Regopsterklits
Amaranthus deflexus	Meerjarige misbredie
Amaranthus hybridus	Gewone misbredie
Amaranthus spinosus	Doringmisbredie
Amaranthus thunbergii	Rooimisbredie
Bidens bipinnata	Spaanse knapsekêrel
Bidens formosa => Cosmos bipinnatus	Kosmos
Bidens pilosa	Knapsekêrel
Chenopodium album	Withondebossie
Chenopodium carinatum	Groenhondebossie = Hondepisbossie
Cleome monophylla	Rusperbossie = Enkelblaar Cleome
Cleome rubella	Mooinooientjie
Commelina benghalensis	Bengaalse wandelende Jood
Crotalaria sphaerocarpa	Mielie-Crotalaria
Datura ferox	Grootstinkblaar = Grootolieboom
Datura stramonium	Stinkblaar = Olieboom
Galinsoga parviflora	Knopkruid
Gisekia pharnaceoides	Gisekia
Hibiscus cannabinus	Wildestokroos
Hibiscus trionum	Terblansbossie
Nicandra physaloides	Basterappelliefie
Physalis angulata	Wilde-appelliefie
Portulaca oleracea	Porslein = Varkslaai
Richardia brasiliensis	Tropiese Richardia
Schkuhria pinnata	Kleinkakiebos
Tagetes minuta	Kakiebos
Vigna vexillata	Wilde-akkerboontjie

Grasse:

Eleusine indica => *Eleusine corocana* Jongosgras

Indien droë weerstoestande voortduur vir 'n tydperk van 7 tot 14 dae na 'n vooropkom bespuiting mag die volgende onkruidsoorte nie na wense beheer word nie, veral op swaarder grond:

Bidens formosa => *Cosmos bipinnatus*	Kosmos
Commelina benghalensis	Bengaalse wandelende Jood
Datura spp**.**	Stinkblaar
Eleusine indica=> *Eleusine corocana*	Jongosgras

BIODEW® is die geregistreerde handelsmerk van AECI Beperk (Nulandis® 'n Afdeling van AECI Beperk)
2,4-D AMINE 480 SL is die geregistreerde handelsnaam van Nulandis® ('n Afdeling van AECI Beperk)