



VOLCANO
AGROSCIENCE

Tandem WSG

Reg. No. / Nr. L 8047 Act No. / Wet Nr. 36 of / van 1947

A non-selective, systemical, herbicide with soil persistence, for the control of a wide spectrum of annual and perennial weeds on non-crop land and industrial sites.		'n Nie-selektiewe, sistemiese, onkruidodder met grondaksie, vir die beheer van 'n wye reeks eenjaar- en meerjarige onkruide in nie-gewas areas en industriële gebiede.	
HRAC [†] HERBICIDE GROUP	G + B	HRAC [†] ONKRUIDDODER GROEP	

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

Imazapyr (Imidazolinone)

300 g/kg

Imasapir (Imidasolinoon)

Glyphosate

216g/kg

glifosaat

NET VOLUME.....



.....NETTO VOLUME

Registered by / Geregistreer deur:

VOLCANO AGROSCIENCE (Pty) Ltd. / (Edms) Bpk.

Reg. No. / Nr. 2000/004551/07

P.O. Box 1726

Mount Edgecombe

4300

Tel: (031) 538 9700

Batch number.....



.....Lotnommer

Date of manufacture.....

.....Vervaardigingsdatum

UN No. / Nr. 3077



Group / Groep III

Blue / Blou

WARNINGS

- Handle with care.
- Poisonous when swallowed.
- Prevent contact with skin and eyes since product is eye irritant and may cause skin irritation.
- Store unused **Tandem WSG** tightly closed in this container in a cool, well-ventilated place away from food, feeds, fertilizers and other chemicals.
- Keep behind lock and key and out of reach of children, animals and uninformed persons.
Do not enter treated field until spray deposit has dried up after application 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 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

- Do not inhale fumes or spray mist.
- Wear protective clothing when handling the concentrate and when preparing and applying the spray mixture. Wash protective clothing daily.
- Avoid contact with the remedy with the skin and eyes.
- Wash with soap and water after handling and application or after accidental contact with the skin.
- In the event of contact with the eyes, rinse the eyes with clean running water for at least 15 minutes. Seek medical attention, if required.
- Do not eat, drink or smoke whilst mixing or applying the remedy but wash hands and face thoroughly before doing so.
- Prevent contamination of food, feed, eating utensils and drinking water.
- Prevent spray drift onto other crops, grazing, water bodies and areas not to be treated.
- Mildly corrosive - clean applicator thoroughly after use and dispose of wash water responsibly to prevent contamination of the environment and water sources.
- Dispose of in approved landfill or preferably in a pesticide incinerator.
- Never use or re-use an empty container for any other purpose.

USE RESTRICTIONS

- **Do not use Tandem WSG on or near desirable vegetation or within their root zones, as severe injury or death may occur.** Also ensure that surface run-off, in the case of heavy downpours, do not wash herbicide laden soil particles to sensitive areas such as open water or desirable vegetation such as trees or cultivated lands.
- Prevent spray from drifting onto off-target areas, open water or desirable vegetation, by using low-pressure nozzles and anti-drift spray additives.
- **Do not use Tandem WSG if the aforementioned use restrictions cannot be adhered to.**

DIRECTIONS FOR USE

Use only as indicated

It is a violation of Government Notices R.1716 of 26 July 1991 and R.181 of 7 February 2003 issued in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No 36 of 1947), to use this product in a manner inconsistent with its labelling.

Mode of action:

- Due to its non-selective, systemic nature, **Tandem WSG** is suitable for the control of a wide range of annual and perennial grasses and broad leaf weeds occurring in industrial sites and on non-crop land.
- **Tandem WSG** is particularly useful on sites where the soil is rich in railway ash and in areas where common quick grass (*Cynodon dactylon*) needs to be controlled.
- The residual effect of **Tandem WSG** is influenced by soil type, total seasonal rainfall, weed susceptibility, density of the weed population being treated and the rate of application. At higher rates, effective residual control over a three to nine month period can be expected under favourable conditions.
- **Tandem WSG**, which is root and foliar absorbed, provides both pre- and post-emergence weed control. Optimum results however, are obtained when the product is applied directly onto actively growing weeds. In such cases, rain two hours after application, will not adversely affect results.
- Although Tandem WSG is slow acting, plant growth usually halts soon after application. Under dry conditions, hardy weeds may take several months to kill.

Compatibility:

The compatibility of **Tandem WSG** with other products may be influenced by the formulation of the products involved as well as the quality of the dilution water. Therefore a physical compatibility test should always be carried out prior to application as the formulation of other products may change without the knowledge of VOLCANO AGROSCIENCE, and the quality of water may vary from area to area.

Tandem WSG is compatible with **Kilo WSG** (Reg. No. L7431), **Springbok** (Reg. No.L6719), or **Seismic** (Reg. No. L7016).

- When tank mixtures are made, study the labels of both **Tandem WSG** and the complimenting product carefully before application, and adhere to all prescriptions during the application process.

MIXING INSTRUCTIONS

Ground application:

- Always use only clean water.
- Fill the spray tank to the three-quarter mark.
- Pre-mix the measured **Tandem WSG** with a suitable volume of water before adding to the spray tank contents.
- If a complimenting product is going to be used in conjunction with Tandem WSG, pre-mix this product the same way.
- Before application commences, fill the spray tank to the required level.
- Ensure continuous agitation throughout the application process.
- Prepared spray mixture must not be left in the spray tank for any length of time, e.g., overnight.

DOSAGE RATES FOR APPLICATION

Table 1. Industrial vegetation management on road verges, along railway lines and on non-crop land.

Situation	Tandem WSG Dosage	Remarks
All areas	2,5 – 6,66 kg / ha	<ul style="list-style-type: none"> Apply as a full cover spray onto target area. Depending on the overall density of the target weed population, use 300 – 600 l spray water / ha. Use the higher rate (6,66kg/ha) where common quick grass (<i>C. dactylon</i>) and hardy tufted perennial grasses are to be controlled. The lower rates are generally only suitable for control of annual weeds or where limited residual control is required. On soils rich in organic matter, coal and ash, as well as coastal areas, apply at least 5 – 6,66 kg Tandem WSG / ha. Also study USE RESTRICTIONS, PRECAUTIONS, and DIRECTIONS FOR USE before mixing and applying Tandem WSG.

LIST OF BROADLEAF WEEDS AND GRASSES CONTROLLED BY TANDEM WSG

Broadleaf weeds:

SCIENTIFIC NAME	COMMON NAME
<i>Asclepias physocarpa</i>	Milkweed
<i>Argemone ochroleuca</i>	White-flowered Mexican poppy
<i>Bidens pilosa</i>	Common blackjack
<i>Chenopodium album</i>	White goosefoot
<i>Conyza albida</i>	Tall fleabane
<i>Conyza podocephala</i>	Conyza
<i>Chamaesyce inaequilatera</i>	Smooth creeping milkweed
<i>Flaveria bidentis</i>	Smelter's bush
<i>Lepidium bonariense</i>	Pepperweed
<i>Medicago sativa</i>	Lucerne
<i>Plantago lanceolata</i>	Ribwort
<i>Schkuhria pinnata</i>	Dwarf marigold
<i>Senecio polyanthemoides</i>	Ragwort
<i>Tagetes minuta</i>	Tall khaki weed
<i>Tribulus terrestris</i>	Common dubbeltjie

Grasses:

SCIENTIFIC NAME	COMMON NAME
<i>Cynodon dactylon</i>	Common quick grass
<i>Cynodon aethopicus</i>	Star grass
<i>Digitaria sanguinalis</i>	Crab finger grass
<i>Eleusine indica</i>	Goose grass

<i>Eragrostis</i> spp. *	Love grass
<i>Hyparrhenia hirta</i>	Common thatch grass
<i>Panicum maximum</i>	Guinea grass
<i>Paspalum dilatatum</i>	Common paspalum
<i>Paspalum paspaloides</i>	Buffalo paspalum
<i>Paspalum urvillei</i>	Giant paspalum
<i>Pennisetum clandestinum</i>	Kikuyu
<i>Rhynchelytrum repens</i>	Natal redtop
<i>Sorghum halepense</i>	Johnson grass
<i>Sporobolus Africans</i> *	Ratstail dropseed
<i>Themeda triandra</i>	Red grass
<i>Urochloa panicoides</i>	Annual signal grass

* The control of these two species is variable.

Note:

Tandem WSG controls the abovementioned broadleaf weed and grasses when used alone, or in tank mixtures with other products as indicated. Other broadleaf weed and grasses that were not present during the development trials, may also be controlled to a certain degree. The registration holder does not accept any responsibility for unlisted weeds.

Explanatory note:

HRAC[†] = Herbicide Resistance Action Committee

WAARSKUWINGS

- Hanteer versigtig.
- Giftig indien ingesluk.
- Voorkom kontak met die vel en oë aangesien die produk irriterend is vir die oë en ook mag lei tot vel irritasie.
- Berg ongebruikte **Tandem WSG** dig toegemaak in hierdie houër in 'n koel, goedgeventileerde plek weg van voedsel, voer, voedingstowwe en ander chemikalieë.
- Bêre agter slot en grendel en buite bereik van kinders, diere en oningeligte persone.
- Herbetredings periode. Moet nie behandelde gebied betree nie tot dat die spuitneerslag droog is indien geen beskermende klere gedra word 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 grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van onkruid teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan die omgewing of nadelige effek op mens of dier of vir 'n gebrek aan prestasie as gevolg van die versuim van 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 of registrasiehouer in geval van enige onsekerheid.

VOORSORGMATREËLS

- Moenie dampe of spuitnewel inasem nie.
- Dra beskermende oorklere wanneer die konsentraat gehanteer en die spuitmengsel voorberei en toegedien word. Was besoedelde klere daaglik.
- Voorkom dat die middel in aanraking kom met die oë en vel.
- Was met seep en water ná gebruik en toediening of ná toevallige kontak met die vel.
- Indien die oë besmet word, moet die oë met skoon lopende water gespoel word vir minstens 15 minute. Verkry mediese hulp indien nodig.
- Moenie eet, drink of rook terwyl die spuitmengsel aangemaak of toegedien word nie alvorens die hande en gesig nie eers gewas is nie.
- Voorkom die besoedeling van voedsel, voer, eetgerei en drinkwater.
- Voorkom dat spuitnewel oorwaai na ander gevoelige gewasse, weiding, watermassas en gebiede wat nie behandel moet word nie.
- Matig korrosief – reinig toedieningsapparaat deeglik na gebruik. Doen weg met die waswater op 'n verantwoordelike wyse sodat die omgewing en waterbronne nie besoedel sal word nie.
- Gooi die houër weg in 'n goedgekeurde stortingsterrein of venietig dit in 'n plaagdoder verasser.
- Moet nooit die leë houër vir enige ander doel gebruik of hergebruik nie.

GEBRUIKSBEPERKINGS

- **Moenie Tandem WSG op of naby gewenste plantegroei of binne hul wortelzones aanwend nie, aangesien dit mag lei tot ernstige skade of die dood van sulke plante.** In die geval van swaar reënbuie, verseker ook dat afloopwater gelaai met gronddeeltjies en onkruidodder, nie in sensitiewe areas soos oop water of gewenste plantegroei soos bome of landerye beland nie.
- Voorkom dat sproeinewel wegdryf na nie-teiken areas, oop water of gewenste plantegroei deur gebruik te maak van lae-druk spuitpunte en anti-dryf bymiddels.
- **Moenie Tandem WSG gebruik indien daar nie aan bogenoemde gebruiksbepelkings voldoen kan word nie.**

GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui

Dit is 'n oortreding van Goewermentskennisgewings R.1716 van 26 Julie 1991 en R.181 van 7 Februarie 2003 uitgereik kragtens die Wet op Misstawe, Veevoedsel, Landboumiddels en Veemiddels, 1947 (Wet No 36 van 1947), om hierdie middel te gebruik op 'n wyse wat strydig is met die etikettering daarvan.

Wyse van werking:

- As gevolg van die nie-selektiewe, sistemiese aard van **Tandem WSG**, is die produk geskik vir die beheer van 'n wye reeks eenjaar- en meerjarige breëblaar onkruid en grasse wat voorkom in industriële- en nie-oes areas.
- **Tandem WSG** is besonder geskik in areas waar die grond ryk is aan spoorweg-as en in areas waar kweek (*Cynodon dactylon*) beheer moet word.
- Die nawerkende effek van **Tandem WSG** word beïnvloed deur grondtipe, totale seisoenale reënval, onkruidsensitiwiteit, digtheid van die onkruidpopulasie wat behandel word, asook onkruidodderdosis. Teen hoër dosisse kan effektiewe nawerking van drie tot nege maande verwag word onder gunstige toestande.
- **Tandem WSG**, wat loof- en wortelopneembaar is, voorsien beide voor- en na-opkoms beheer van onkruid. Optimale resultate word egter behaal indien die produk direk op aktiefgroeiende onkruid toegedien word. In sulke gevalle sal reën binne twee uur ná toediening, nie resultate nadelig beïnvloed nie.
- Alhoewel **Tandem WSG** stadig werk, staak verdere groei van behandelde plantegroei gewoonlik kort na toediening. Onder droë toestande mag onkruid maande neem om af te sterf.

Mengbaarheid:

Die mengbaarheid van **Tandem WSG** met ander produkte kan beïnvloed word deur die formulering van die ander produkte asook die kwaliteit van die water. Aangesien die formulering van produkte kan verander sonder die medewete van VOLCANO AGROSCIENCE en die kwaliteit van die water ook van area tot area kan verskil, moet 'n fisiese mengbaarheidstoets altyd uitgevoer word voordat toegedien word.

Tandem WSG kan met **Kilo WSG** (Reg. Nr. L7431), **Springbok** (Reg. Nr. L6719) of **Seismic** (Reg. Nr. L7016) gemeng word.

- Wanneer hierdie tipe tenkmengsels gebruik word, moet die etikette van beide **Tandem WSG** en die komplimentêre produk bestudeer word en moet verseker word dat daar gehou word by alle voorskrifte tydens toediening.

MENGVOORSKRIFTE

- Gebruik slegs skoon water.
- Maak die spuittenk driekwart vol.
- Meng die afgemete hoeveelheid **Tandem WSG** met 'n geskikte volume water voordat dit in die tenk gegiet word.
- Indien 'n komplimenterende produk saam met **Tandem WSG** gebruik gaan word, meng ook hierdie produk vooraf, soos reeds beskryf.
- Vul nou die spuittenk tot die nodige vlak voordat toediening begin.
- Verseker voortdurende beroering tydens die toedieningsproses.
- Aangemaakte spuitmengsel moenie in die spuittenk gelaat word vir enige tydperk nie, bv oornag.

TOEDIENINGSHOEVEELHEDE

Tabel 1. Industriële onkruidbeheer op padskouers, langs spoorlyne en in ander nie-oes areas.

Situasie	Tandem WSG Dosis	Opmerkings
Alle areas	2,5 – 6,66 kg / ha	<ul style="list-style-type: none">• Dien as 'n volle dekbespuiting toe oor die teikenarea. Afhangende van die digtheid van die onkruidstand, gebruik 300 – 600 l spuitwater/ha.• Gebruik die hoër dosis (6,66kg/ha) waar kweek (<i>C. dactylon</i>) en / of geharde meerjarige polgrasse beheer moet word. Die laer dosisse is oor die algemeen net geskik vir beheer van eenjaaronkruid of waar 'n kort nawerking benodig word.• Op gronde ryk aan organise material, steenkool en as of in kusgebiede, dien ten minste 5 – 6,66 kg Tandem WSG / ha toe.• Bestudeer die GEBRUIKS BEPERKINGS, VOORSORGMATREËLS en GEBRUIKS-AANWYSINGS voordat Tandem WSG aangemaak en toegedien word.

LYS VAN BREËBLAAR ONKRUIDE EN GRASSE WAT DEUR TANDEM WSG BEHEER WORD

Breëblaar onkruid:

WETENSKAPLIKE NAAM	GEWONE NAAM
<i>Asclepias physocarpa</i>	Balbos
<i>Argemone ochroleuca</i>	Meksikaanse papawer
<i>Bidens pilosa</i>	Gewone knapsekêrel
<i>Chenopodium album</i>	Wit hondebossie
<i>Conyza albida</i>	Vaalskraalhans
<i>Conyza podocephala</i>	Oondbos
<i>Chamaesyce inaequilatera</i>	Gladde kruipmelkkruid
<i>Flaveria bidentis</i>	Smeltersbossie
<i>Lepidium bonariense</i>	Peperbossie
<i>Medicago sativa</i>	Lusern
<i>Plantago lanceolata</i>	Smalblaar plantago
<i>Schkuhria pinnata</i>	Kleinkakiebos
<i>Senecio polyanthemoides</i>	Radiatorbossie
<i>Tagetes minuta</i>	Langkakiebos
<i>Tribulus terrestris</i>	Dubbeltjie

Grasse:

WETENSKAPLIKE NAAM	GEWONE NAAM
<i>Cynodon dactylon</i>	Kweek
<i>Cynodon aethopicus</i>	Stergras
<i>Digitaria sanguinalis</i>	Kruisvingergras
<i>Eleusine indica</i>	Jongosgras
<i>Eragrostis</i> spp. *	Eragrostis spesies
<i>Hyparrhenia hirta</i>	Dektamboekiegras
<i>Panicum maximum</i>	Buffelsgras
<i>Paspalum dilatatum</i>	Gewone paspalum
<i>Paspalum paspaloides</i>	Buffelskweek paspalum
<i>Paspalum urvillei</i>	Reuse paspalum
<i>Pennisetum clandestinum</i>	Kikoejoe
<i>Rhynchelytrum repens</i>	Natal blinkgras
<i>Sorghum halepense</i>	Johnsonsgras
<i>Sporobolus Africans</i> *	Rotstert fynsaadgras
<i>Themeda triandra</i>	Rooigras
<i>Urochloa panicoides</i>	Eenjarige sinjaalgras

* Die beheer van hierdie twee spesies is wisselvallig.

Nota:

Tandem WSG beheer die bogenoemde breëblaar- en grasonkruidspesies as alleen gebruik, of in tenkmengsels met ander middels soos genoem. Ander breëblaar- en grasonkruid wat nie teenwoordig was tydens die ontwikkelingsproewe nie, kan moontlik ook beheer word in 'n sekere mate. Die registrasiehouer aanvaar nie enige verantwoordelikheid vir enige ongelyste onkruid nie

Verduidelikende nota:

HRAC[†] = Herbicide Resistance Action Committee