



TRIFLUREX[®] 480 EC

Reg. no. L5350 Act/Wet 36 of/van 1947
N-AR 0495

A selective emulsifiable concentrate herbicide for pre-plant soil incorporation for the control of annual grasses and some broadleaf weeds in crops as indicated.

'n Selektiewe, emulgeerbare konsentraat onkruidodder wat voor plant in die grond ingewerk word vir die beheer van eenjarige grasse en sommige breëblaaronkruid in gewasse soos aangedui.

HRAC HERBICIDE GROUP CODE

K1

HRAC ONKRUIDDODERGROEPKODE

ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL

trifluralin 480 g/l
(dinitroaniline)

trifluralin
(dinitroanilien)

NET VOLUME/NETTO VOLUME

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REGISTRATION HOLDER/REGISTRASIEHOUER

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TRIFLUREX[®] is the registered trademark of a company of the ADAMA GROUP.
TRIFLUREX[®] is die geregistreerde handelsmerk van 'n maatskappy van die ADAMA GROEP.

CONTACT IN EMERGENCY/KONTAK IN NOOD

Griffon Poison Information Centre: +27 82 446 8946

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Batch number
Date of manufacture

Lotnommer
Datum van vervaardiging

UN no: 1993



WARNINGS

- Poisonous by swallowing.
- Very toxic to fish.
- Store in a cool place, away from food, feeds, seed, fertilizer and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- **Flammable** – keep away from heat and flames.
- Do not allow to freeze.
- If swallowed do not induce vomiting since product contains an aromatic hydrocarbon solvent.

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 method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damages to crops, vegetation, and 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 eat, drink or smoke while applying or mixing or before washing hands and face and change of clothing
- Prevent contamination of food, feed, drinking water and eating utensils.
- Avoid inhalation of fumes and spray mist.
- Wash with soap and water after use or accidental skin contact.
- Invert the empty container over the spray tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Rinse the empty container three times with a volume of water of at least 10 % of that of the container. Add the rinsate to the spray tank. Perforate and flatten the empty container and do not re-use for any other purpose.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean applicator after use and dispose of wash water where it will not contaminate food, grazing, rivers or dams.

RESISTANCE WARNING

TRIFLUREX® 480 EC is a member of the dinitroaniline group of herbicides, HRAC Herbicide Group Code K1. Some naturally occurring weed biotypes resistant to **TRIFLUREX® 480 EC** and other herbicides belonging to Group Code K 1 herbicides may exist through normal genetic variability in any weed population. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by **TRIFLUREX® 480 EC** and other Group Code K1 herbicides.

To delay the selection resistant weeds, the following steps can be taken:

- Integrate tillage or other mechanical control methods (including non-selective herbicides during the fallow period) into weed control programmes whenever practical.

- Avoid the repeated use of products in the same mode of action group. Plan crop rotations to allow use of herbicides from different mode of action groups.
- For further advice on the prevention of herbicide resistance, contact your local ADAMA South Africa representative.

USE RESTRICTIONS

General

In addition to the crops mentioned below, the following crops may also be planted directly after a treated field has been harvested: beetroot, brassicae, carrots, castor oil, celery, cowpeas, cucurbits, fruit trees, mint, okra, potatoes, safflower, sugarcane and tomatoes. All other crops need a waiting period of at least 12 months between treatment and planting, except for grain sorghum, which is 18 months. Periods of cold weather after planting the crops may lead to phytotoxicity, e.g. in the case of early season plantings.

Wheat and barley

TRIFLUREX® 480 EC can be used in wheat and barley provided the following conditions are met:

- **TRIFLUREX® 480 EC** can only be applied if the Ausseeder DBS (Ausplow) or planters with a similar mode of action is used to plant the seed.
- The planter must throw the **TRIFLUREX® 480 EC** treated soil away from the plant row to cover the inter-row areas. Care should therefore be taken that planting speed and row spacing is such that the inter-row is covered by the soil that is removed from the row but that the treated soil is not thrown back in the next plant row.
- Do not use **TRIFLUREX® 480 EC** in areas with steep slopes where the possibility exist that treated soil may roll into the plant row.
- Do not use in very stony areas
- Apply **TRIFLUREX® 480 EC** on a well prepared seedbed, free of excessive plant material and clods.
- **TRIFLUREX® 480 EC** is an excellent graminicide and must be removed completely from the plant row before planting. Failure to do this might lead to crop damage.

DIRECTIONS FOR USE

Use only as directed.

TRIFLUREX® 480 EC is easily decomposed by sunlight and must therefore be incorporated into the soil immediately (within 10 minutes) after it has been sprayed evenly onto the surface in about 150–500 l water/ha at low pressure. The most advantageous method is to mount the spray boom in front of the tractor and pull a disc-harrow or in the case of wheat and barley, the planter with the same tractor.

INCORPORATION

Crops other than wheat and barley

It is important to incorporate very thoroughly into the top 5–10 cm of soil. Set the disc to penetrate to a depth of 10–15 cm. In the case of groundnuts a slightly shallow incorporation is necessary for 3–5 cm with disc set to penetrate to a depth of 6–10 cm. In the case of groundnuts set the disc to a depth of 6–10 cm to incorporate to a depth of 5 meter. In the incorporation with implements set to cut less than 5 cm deep may give erratic weed control. Thorough incorporation may be achieved

with P.T.O. driven rotary tillers or an offset or tandem disc (alone or with spike/tooth harrow in tandem), disking the field twice, the second time at right angles with the first time. Clods must be broken up because the weed seeds in untreated clods may germinate unaffected. **TRIFLUREX® 480 EC** has a long residual action and may be incorporated at any convenient time from 2-3 weeks before planting time, before the rush spring season starts up to the day of planting. **TRIFLUREX® 480 EC** will not leach out of the soil, not even under conditions of high rainfall or irrigation. **TRIFLUREX® 480 EC** may stunt or even reduce the stand of cotton seedlings affected by soil borne disease. To control seedling diseases apply a fungicide in the planting row and use treated seed.

Wheat and barley

The most effective way to apply **TRIFLUREX® 480 EC** in the case of wheat and barley is to apply it overall with a boom spray on the same tractor that is used to pull the planter. Application can also be done by spraying with a separate tractor and followed by the planter provided that not more than 10 minutes lapse between application and incorporation with the planter.

APPLICATION RATES

CROP AND TARGET	SOIL CLAY %	DOSAGE/HA	REMARKS
Groundnuts Natal Common and other Spanish upright types	0–10 11–20	0.75 L 1.0 L	Apply before planting and incorporate in the soil within 10 minutes. The treated fields may be weeded mechanically and tilled lightly during the season without affecting the efficacy of TRIFLUREX® 480 EC adversely.
Canola	0–10 11–20 > 20	1.0 L 1.5 L 2.0 L	Apply before planting or sowing and incorporate within 10 minutes. Can be used in situations where canola is planted or sown for the control of mainly <i>Lolium</i> spp (ryegrass). For improved control of mainly broad leaf weeds and some grasses in triazine-resistant Canola, TYLSIMEX 500 SC or SIMANEX® 500 SC can be used as a follow on application direct after planting at a rate of 2.0 L/ha
Cotton, dry beans, cow peas, carrots, sunflowers, transplanted cabbages, tomatoes, chilies	0–15 16–35 36–55	1.0 L 1.5 L 2.0 L	Apply before planting or transplanting and incorporate in the soil within 10 minutes. The treated fields may be weeded mechanically by a light cultivation without affecting TRIFLUREX® 480 EC adversely.
Stone fruit, pome fruit, vineyards, guavas, citrus, macadamias, pecans	0–30	8.0 L	Overall application before the establishment of nurseries and orchards. Use accordingly less for band treatment.

CROP AND TARGET	SOIL CLAY %	DOSAGE/HA	REMARKS
Wheat and barley Southern and Western Cape	0–25	1.0–2.0 L	Apply as an overall application and incorporate by a suitable planter as is described in the section under “USE RESTRICTIONS” within 10 minutes. Do not use in fields which was sown with wheat and barley but ONLY in fields which are planted. Use the higher rate where a high infestation of <i>Lolium</i> spp is expected. The control of other grasses than <i>Lolium</i> spp might be unsatisfactory and should be controlled with other herbicides from a different chemical group.

WEEDS NORMALLY CONTROLLED BY TRIFLUREX® 480 EC

Grass weeds

BOTANICAL NAME	COMMON NAME
<i>Brachiaria eruciformis</i>	Sweet signal grass
<i>Bromus unioloides</i>	Rescue grass
<i>Cenchrus incertus</i>	Mat sandbur
<i>Chloris virgata</i>	Feather-top chloris
<i>Dactyloctenium aegyptium</i>	Common crowfoot
<i>Digitaria sanguinalis</i>	Crab finger grass
<i>Digitaria ciliaris</i>	Tropical Finger grass
<i>Echinochloa crusgalli</i>	Barnyard grass
<i>Echinochloa colona</i>	Marsh grass
<i>Eleusine indica</i>	Goose grass
<i>Eragrostis cilianensis</i>	Stink love grass
<i>Eragrostis aspera</i>	Rough love grass
<i>Lolium spp</i>	Rye grass
<i>Panicum shinzii</i>	Sweet buffalo grass
<i>Poa annua</i>	Winter grass
<i>Seteria pallide-fusca</i>	Garden bristle grass
<i>Setaria verticillata</i>	Bur bristle grass
<i>Sorghum halepense</i>	Johnson grass (from seed)
<i>Tragus racemosus</i>	Stalked bristle grass
<i>Urochloa panicoides</i>	Garden urochloa

Broadleaf weeds

BOTANICAL NAME	COMMON NAME
<i>Amaranthus deflexus</i>	Perennial pigweed
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Chenopodium album</i>	White goosefoot
<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Portulaca oleracea</i>	Common purslane
<i>Stellaria media</i>	Chick weed
<i>Tribulus terrestris</i>	Common dubbeltjie

WAARSKUWINGS

- Giftig indien ingesluk.
- Uitsers giftig vir visse.
- Bêre in 'n koel plek en weg van voedsel, voer, saad, kunsmis en ander landbouchemikalieë.
- Hou buite bereik van kinders, oningeligte persone en diere.
- **Vlambaar** – hou weg van hitte en vlamme.
- Sorg dat dit nie vries nie.
- Indien ingesluk moet nie braking induseer nie aangesien produk 'n aromatiese koolstof oplosmiddel bevat.

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 die onkruid 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 en 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 geval van enige onsekerheid.

VOORSORGMAATREËLS

- Moenie eet, drink of rook tydens vermenging en toediening nie of voordat hande en gesig gewas is en skoon klere aangetrek is nie.
- Voorkom besoedeling van voedsel, voer en drinkwater en eetgerei.
- Vermyn inaseming van spuitnewel.
- Was met seep en water na gebruik of na toevallige velkontak.
- Keer die leë houer om oor die spuittenk en laat toe om vir ten minste 30 sekondes te dreineer nadat die vloeitot 'n gedrup verander het. Spoel daarna die leë houer drie keer uit met 'n volume water gelykstaande aan ten minste 10 % van die van die houer. Gooi die spoelwater in die spuittenk. Vernietig die leë houer deur gate daarin te maak en plat te druk. Moet die leë houer vir geen ander doel hergebruik nie.
- Voorkom die besoedeling van ander gewasse, weiding, riviere, damme en enige gebied nie onder behandeling nie.
- Maak toedieningsapparaat deeglik skoon na gebruik en gooi spoelwater uit waar dit nie voedsel, weiding, riviere of damme sal besoedel nie.

WEERSTANDSWAARSKUWING

TRIFLUREX® 480 EC behoort tot die dinitroanilienanilien onkruidodergroep oftewel HRAC onkruidodergroepkode K1. In enige natuurlike plantpopulasie mag daar as gevolg van genetiese variasie onkruidbiotipes voorkom wat weerstandbiedend is teen **TRIFLUREX® 480 EC** en ander onkruidoders wat in die onkruidodergroepkode K1 val. Hierdie weerstandbiedende individue kan uiteindelik die onkruidpopulasie oorheers as hierdie onkruidoders aanhoudend gebruik word. Hierdie weerstandbiedende onkruid sal nie deur **TRIFLUREX® 480 EC** of enige ander groepkode K1 onkruidoder beheer word nie.

Om die seleksie van weerstandbiedende onkruid te vertraag kan die volgende gedoen word:

- Integreer bewerking en ander meganiese beheermetodes (insluitende nie-selektiewe onkruidodders gedurende die braakperiode) in onkruidbeheerprogramme waar moontlik.
- Verminder die aanhoudende gebruik van produkte wat dieselfde werkingswyse het. Beplan gewasrotasie sodat van produkte met 'n ander werkingswyse gebruik gemaak kan word.
- Vir meer inligting rakende die vermyding van onkruidweerstand, skakel met 'n plaaslike ADAMA Suid-Afrika verteenwoordiger.

GEBRUIKSBEPERKINGS

Algemeen

Behalwe die gewasse wat hieronder genoem word, mag die volgende verbou word direk nadat 'n behandelde land ge-oes is: beet, koolgewasse, wortels, kasterolie, seldery, akkerbone, pampoengewasse, vrugteboorde, kruisement, okra, aartappels, saffloer, suikerriet en tamaties. Alle ander gewasse vereis 'n wagperiode van ten minste 12 maande tussen behandeling en plant behalwe graansorghum wat 18 maande vereis. Periode van koue weer na plant van die gewas mag tot fitotoksisiteit lei, byvoorbeeld, vroeë seisoen aanplantings.

Koring en gars

TRIFLUREX® 480 EC kan in koring en gars gebruik word, as die volgende voorwaardes nagekom word.

- **TRIFLUREX® 480 EC** kan alleenlik gebruik word waar die Ausseeder DBS (Ausplow) of soortgelyke planters met 'n soortgelyke werkingswyse gebruik word om die saad te plant.
- Die planter moet die **TRIFLUREX® 480 EC** behandelde grond van die plantry afgooi om die gebied tussen die plantrye te bedek. Sorg moet daarom gedra word dat die plantspoed en die ryspasiëring sodanig is dat die tussenry bedek word met grond wat van die plantry verwyder is, maar dat die behandelde grond nie oorgedroei word in die volgende plantry nie.
- Moet nie **TRIFLUREX® 480 EC** gebruik op steil hellings waar die moontlikheid bestaan dat die behandelde grond in die plantry kan inrol nie.
- Moet nie in baie klipperige grond gebruik nie.
- Dien **TRIFLUREX® 480 EC** toe op 'n goed voorbereide saadbed sonder oormatige plantreste en kluite.
- **TRIFLUREX® 480 EC** is 'n uitstekende vooropkom grasdoder en moet geheel en al van die plantry verwyder word, voor die saad geplant word. Indien dit nie gedoen word nie, mag dit tot gewasskade lei.

GEBRUIKSAANSYNSINGS

Gebruik slegs soos aangedui.

TRIFLUREX® EC word maklik deur sonlig afgebreek en moet dadelik (binne 10 minute) in die grond ingewerk word nadat dit egalig oor die oppervlak gespuit is in ongeveer 150–500 L water/ha teen lae druk. Die voordeligste metode is om die spuitbalk voor op die trekker te monteer sodat die skotteleg of in die geval van koring en gars, die planter met dieselfde trekker getrek kan word.

Inwerking

Gewasse uitgesonderd koring en gars

Dit is belangrik om baie deeglik in die boonste 5–10 cm van die grond in te werk. Stel die skottels sodat hulle 10–15 cm penetreer. In die geval van grondbone, sny 6–10 cm diep sodat effektiewe inwerkingsdiepte ongeveer 5 m is. Vlak inwerking deur implemente wat minder as 5 cm diep sny kan wisselvallige onkruidbeheer tot gevolg hê. Deeglike inwerking kan met 'n kragaangedrewe kapploeg of wisselgang- of tandemskotteleg (met of sonder tande agteraan) verkry word. Bewerk twee keer met die tweede keer reghoekig oor die eerste keer. Kluite moet opgebreek word omdat die onkruidsade in onbehandelde kluite ongeskonde mag ontkiem. **TRIFLUREX® 480 EC** het 'n lang nawerking en mag te eniger tyd, vanaf 2–3 weke voor planttyd ingewerk word voordat die spitswerktyd van die lente aanbreek, tot op die dag van plant. **TRIFLUREX® 480 EC** sal nie uit die grond loog nie, selfs nie in gevalle van hoë reënval of besproeiing nie. **TRIFLUREX® 480 EC** mag katoen saailinge wat deur grondgedraagde siektes verswak is, se groei belemmer of selfs die stand verminder. Om saailingsiektes te bestry moet 'n geskikte swamdoder in die plantvoor aangewend en behandelde saad gebruik word.

Koring en gars

Die mees effektiewe manier om **TRIFLUREX® 480 EC** in die geval van koring en gars toe te dien is om algeheel toe te dien deur middel van 'n spuitbalk wat op die trekker wat die planter trek, gemonteer is. Toediening kan ook gedoen word deur 'n spuit op 'n aparte trekker te monteer wat dan deur 'n ander trekker met die planter gevolg word. Dit is egter belangrik om daarop te let dat 'n periode van nie meer as 10 minute tussen toediening en plant moet verloop nie.

TOEDIENINGSHOEVEELHEDE

GEWAS EN TEIKEN	GROND KLEI %	DOSIS/HA	OPMERKINGS
Grondbone Natal Common Spaanse regop tipes	0–10 11–20	0.75 L 1.0 L	Dien toe voor plant en werk binne 10 minute in die grond in. Die behandelde lande mag dwarsdeur die seisoen lig geskoffel of bewerk word sonder om die werking van TRIFLUREX® 480 EC te benadeel.
Kanola	0–10 11–20 > 20	1.0 L 1.5 L 2.0 L	Dien voor plant of saai toe en werk binne 10 minute in die grond in. Kan gebruik word in situasies waar KANOLA gesaai word of waar dit geplant word vir die beheer van hoofsaaklik <i>Lolium</i> spp (Raaigras). Vir verbeterde beheer van hoofsaaklik breëblaaronkruiden en sommige grasse in Triasien weerstandbiedende Kanola kan TYLSIMEX 500 SC of SIMANEX® 500 SC direk na plant as 'n opvolgbespuiting teen 2.0 L/ha toegedien word.
Katoen, droëbone, akkerbone, geelwortels, sonneblomme, uitgeplante kool, rissies, tamaties	0–15 16–35 36–55	1.0 L 1.5 L 2.0 L	Dien toe voor plant of uitplant toe en werk binne 10 minute in die grond in. Die behandelde lande mag dwarsdeur die groeiseisoen lig geskoffel word sonder dat die werking van TRIFLUREX® 480 EC sal benadeel.

GEWAS EN TEIKEN	GROND KLEI %	DOSIS/HA	OPMERKINGS
Steenvrugte, kernvrugte, wingerde, koejawels, sitrus, makadamias, pekanneute	0–30	8.0 L	Algehele toediening voordat kwekerie en boorde gevestig word. Gebruik dienoooreenkomstig vir strookbehandeling
Koring en gars Suid- en Wes-Kaap	0–25	1.0–2.0 L	Dien algeheel toe en werk binne 10 minute deur middel van 'n geskikte planter in soos onder "GEBRUIKSBEPERKINGS" BESKRYF. MOET NIE op lande gebruik word nie waar koring en gars gesaai is nie, maar gebruik ALLEENLIK op lande waar geplant word. Gebruik die hoër toedieningshoeveelheid waar hoër besmettings van <i>Lolium</i> spp verwag word. Die beheer van ander grasse behalwe <i>Lolium</i> spp mag onbevredigend wees en moet deur ander onkruidodders van 'n ander chemiese groep beheer word.

ONKRUIDE NORMAALWEG BEHEER DEUR TRIFLUREX® 480 EC

Grasonkruide

BOTANIESE NAAM	GEWONE NAAM
<i>Brachiaria eruciformis</i>	Litjiesinjaalgras
<i>Bromus unioloides</i>	Reddingsgras
<i>Cenchrus incertus</i>	Dubbeljiesgras
<i>Chloris virgata</i>	Witpluimchloris
<i>Dactyloctenium aegyptium</i>	Gewone hoenderspoor
<i>Digitaria sanguinalis</i>	Kruisvingergras
<i>Digitaria ciliaris</i>	Tropiese kruisvingergras
<i>Echinochloa crusgalli</i>	Hanepotmanna
<i>Echinochloa colona</i>	Moerasgras
<i>Eleusine indica</i>	Jongosgras
<i>Eragrostis cilianensis</i>	Stinkeragrostis
<i>Eragrostis aspera</i>	Grootpluimeragrostis
<i>Lolium spp</i>	Raaigras
<i>Panicum shinzii</i>	Soetbuffelsgras
<i>Poa annua</i>	Wintergras
<i>Seteria pallide-fusca</i>	Tuinsetaria
<i>Setaria verticillata</i>	Klitssetaria
<i>Sorghum halepense</i>	Johnsongras (van saad)

BOTANIESE NAAM	GEWONE NAAM
<i>Tragus racemosus</i>	Loosaarwortelsaadgras
<i>Urochloa panicoides</i>	Tuin urochloa

Breëblaaronkruid

BOTANIESE NAAM	GEWONE NAAM
<i>Amaranthus deflexus</i>	Meerjarige misbredie
<i>Amaranthus hybridus</i>	Gewone misbredie
<i>Amaranthus spinosus</i>	Doringmisbredie
<i>Amaranthus thunbergii</i>	Rooimisbredie
<i>Chenopodium album</i>	Withondebossie
<i>Polygonum aviculare</i>	Voëlduisenknoop
<i>Portulaca oleracea</i>	Porselein
<i>Stellaria media</i>	Gewone sterremuur
<i>Tribulus terrestris</i>	Gewone dubbeltjie