

The background of the cover is a solid yellow color. At the top, there are three stylized, light yellow clouds of different shapes. In the middle, the title 'CEREALS GUIDE 2020' is written in large, white, sans-serif capital letters. Below the title, there is a stylized illustration of a landscape. It features a dark yellow hill in the background, a lighter yellow hill in the foreground, and a field of wheat stalks in the center. At the bottom, there are two clusters of stylized yellow flowers. The overall design is clean and modern, with a focus on agricultural themes.

CEREALS GUIDE 2020



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A NEW HERBICIDE FOR THE CONTROL OF BROADLEAF WEEDS WITH UTILITY IN MULTIPLE CROPS. Arylex™ (*halauxifen-methyl*) is an innovative low-dose growth regulator herbicide for use in mixtures with other proprietary herbicides creating a wide spectrum of products customized for specific geographies.



MODE OF ACTION

Arylex™ active is a synthetic auxin herbicide active ingredient that acts through a synthetic auxin mechanism (HRAC group O, WSSA group 4).

TOXICOLOGY

MAMMALIAN TOXICOLOGY



The acute mammalian toxicity of halauxifen-acid and Arylex™ are low by the oral and dermal routes of exposure. The compounds are minimally irritating to the eyes and skin and are not dermal sensitizers. Long-term toxicity and carcinogenicity studies with halauxifen-acid in rats and mice did not demonstrate any potential for carcinogenicity.

FORMULATIONS



Arylex™ will be combined with other herbicides in a range of formulation concepts to meet the various needs of cereals and other crops grown around the world. Depending on the geography or premix combination, it will be offered in dry or liquid formulations. Some of the herbicide combinations being developed for Arylex™ include premix formulations with other active ingredients such as florasulam, fluroxypyr, pyroxsulam, or aminopyralid.

ABSORPTION/ TRANSLOCATION



Arylex™ is a systemic, phloem and xylem mobile herbicide that is readily absorbed through leaves, shoots and roots. When foliar applied it will be symplastically translocated throughout the plant and will accumulate in meristematic tissue.

HERBICIDE ACTIVITY & SYMPTOMOLOGY



Treatment with Arylex™ mimics the effect of a persistent high dose of the natural plant hormone auxin causing over-stimulation of specific auxin-regulated genes. This leads to profound long-lasting physiological and morphological effects on susceptible weeds that stop plant growth and result in cell death.

SYMPTOMS OCCUR WITHIN A FEW HOURS & INCLUDE:

- cessation of growth
- stem and petiole twisting (epinasty)
- leaf malformations (parallel venation)
- leaf strapping, and cupping)
- chlorosis, swelling, thickening and splitting of stems
- callus tissue formation
- stunted root growth

Plant death may not occur for several weeks, but symptoms appear in new growth soon after application.

CROP TOLERANCE & PLANT METABOLISM



Spring and winter wheat, durum wheat, spelt, barley, rye and triticale show excellent tolerance to Arylex™ at projected label rates.

Specific formulations have been designed to optimize selectivity by utilizing cloquintocet as a safener. Good selectivity over a wide window of cereal stages allows for autumn and spring application.

The safener enhances the cereal crop's ability to metabolize Arylex™ through conjugation before halauxifen-acid is formed. Arylex™ degradation in wheat is rapid, preventing the accumulation of active herbicide residues in straw.

Arylex™ rapidly degrades in soil and plant residues, and generally does not persist long enough to impact crops the following season. Like many compounds that are microbially degraded, adequate moisture and temperature are required for breakdown to occur.

CROP ROTATION



NOTEWORTHY FEATURES



EFFECTIVE POST-EMERGENCE CONTROL

of many common and economically damaging broadleaf weeds in cereals and other crops



Consistent weed CONTROL ACROSS VARIABLE CLIMATIC CONDITIONS

(cold and dry conditions) allows for flexibility of application

FEATURES	ATTRIBUTES	BENEFITS
Synthetic auxin mode of action	Like other synthetic auxins, Arylex™ provides complete control of weeds within days to weeks after application	Innovation; gain a new tool to reduce worries about resistance
Unique control spectrum	Controls many difficult to control and ALS resistant weed biotypes	Confidence; get effective control with each application
Low use rates	Effective at much lower use rate than other synthetic auxins	Sustainability; achieve superior control with a low environmental load
Crop safety/ selectivity	Can safely be applied to a wide variety of crops across a wide application window	Flexibility; can spray on many crops across a wide window
Consistent performance	Effective weed control across variable climatic conditions; works in both cold or warm conditions	Reliability; stress less with more good spray days
Low volatility and rapid degradation	Arylex™ rapidly degrades in soil and plant tissues and has a favourable environmental and toxicological profile meaning fewer restrictions	Freedom; to choose your follow crops and cultivation decisions
Compatibility	Arylex™ is highly compatible with other actives, safeners, and adjuvants; it will only be sold in mixtures	Convenience; get products that are easy-to-use and tailored to local needs
Environmental Fate	Arylex™ degrades rapidly in the environment	Stewardship; protect the land and environment where you live
Toxicity	Arylex™ has low toxicity and shows no unreasonable adverse effects	Safety; presents minimal risks to farmers, consumers, and wildlife



LOW USE RATES resulting in low environmental load of the herbicide



Rapid degradation in soil and plant tissues allowing for **CROP ROTATION FLEXIBILITY**



ALTERNATIVE MODE OF ACTION to help manage resistant weed biotypes



FAVOURABLE environmental and toxicological profile

NEW
PRODUCT



Quelex™ 200 WG

Arylex™ active

HERBICIDE

Quelex™ 200 WG
Arylex™ active
HERBICIDE



100 g/kg Arylex™ (halauxifen-methyl)
100 g/kg Florasulam

Quelex™ 200 WG is a water dispersible granule herbicide for early post-emergence broadleaf weed control in wheat in the Western Cape and the summer rainfall region.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Quelex™ 200 WG contains Arylex™ (halauxifen-methyl) and florasulam (Caution) • Reg. No. L10759 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Quelex™ 200 WG is a mixture of Arylex™ (halauxifen-methyl), a systemic auxin-type herbicide (Group O) and Florasulam, an ALS (AcetoLactate Synthase) enzyme inhibitor-type herbicide (Group B). The product controls weed by disrupting normal plant growth patterns and/or by inhibiting production of the enzyme essential for production of certain amino acids needed for normal plant growth.



GETTING THE BEST FROM QUELEX™ 200 WG



Apply prior to crop growth reach a density, which would inhibit effective coverage of the weeds



Ensure thorough coverage of weeds to achieve effective control



Best results are obtained from applications made to young, actively growing seedlings (between 2 to 6-leaf stage)



Warm, moist growing conditions promote active weed growth and enhance the activity of Quelex™ 200 WG by allowing maximum foliar uptake and activity



Only weeds emerged at the time of treatment will be controlled. Weeds germinating after application will not be controlled as this product has no soil residual activity



Do not apply to crops that are stressed by severe weather conditions, drought, waterlogging, nutrient deficiency, disease, insect damage or carry-over herbicide residues



Only apply ONCE per season



Mix with clean water and apply as a uniform broadcast spray by means of ground application



Best results are obtained using flat fan-type spray nozzles and applying a minimum spray volume of 200 litres water per hectare



Rainfast within 1 hour of application

APPLICATION



CROP:
Wheat



RATE/ha:
50g Quelex™ 200 WG



REMARKS:

Apply between 2-leaf stage and end of tillering of the crop when weeds are small and actively growing (2-6 leaf)



COMPATIBILITY

The compatibility of Quelex™ 200 WG in tank mixtures may be influenced by the formulation of these products. Corteva Agriscience™ does not accept any responsibility for the crop tolerance of these tank mixtures where the formulation of products has changed or for mixtures with products not listed.



KEY ADVANTAGES

- 1 Control of key broadleaf weeds
- 2 Applied early post-emergence, to the main flush of actively growing broadleaf weeds
- 3 Quelex™ 200 WG inhibits growth of susceptible weeds. Visible symptoms of dying plants may will therefore occur within 2-4 weeks under ideal growing conditions and up to 6-8 weeks under adverse conditions (prolonged periods of extremes in temperature or moisture)

BROADLEAF WEEDS CONTROLLED BY QUELEX™ 200 WG:

Quelex™
200 WG
Arylex™ active

HERBICIDE

Cape weed

Arctotheca calendula

Musk heron's bill

*Erodium moschatum***

Prostrate knotweed

*Polygonum aviculare***

Chickweed

*Stellaria media****

White goosefoot

Chenopodium album

Fumitory

Fumaria officinalis

Climbing knotweed

*Polygonum convolvulus***

Goose-daisy

Cotula turbinata

Small mallow

Malva parviflora

Wild radish

*Raphanus raphanistrum****

Spiny Emex

*Emex australis***

Clovers

Medicago spp

**Variable control may be expected.

***Where ALS resistant *Raphanus raphanistrum* and *Stellaria media* occur, poor control can be expected.

WAITING PERIOD FOR FOLLOW-UP CROPS

CROP	MONTHS
Barley, oats, wheat	1
Cotton, maize, potatoes, sorghum, sunflowers	5
Canola, lupins, peas	9
Cotton, dry beans, groundnuts, soybeans	14

For all other crops a replanting interval of at least 24 months must be observed, preceded by a test planting.



WARNINGS

- Do not enter treated area until spray deposit has dried unless wearing protective clothing
- Allow 42 days between application and grazing by livestock
- Triple-rinse empty container before destroying the container in a safe manner and do not re-use it for any other purpose

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

NEW
PRODUCT



Tarzec™ 320 WG

Arylex™ active

HERBICIDE

Tarzec™ 320 WG
Arylex™ active
HERBICIDE



70 g/kg Arylex™ (halauxifen-methyl)
250 g/kg Pyroxulam

Tarzec™ 320 WG is a water dispersible granule herbicide for selective, early post-emergence control of broadleaf weeds and some annual grasses in wheat in the Western Cape and irrigated areas in the summer rainfall region.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Tarzec™ 320 WG contains Arylex™ (halauxifen-methyl) and Pyroxulam (Caution) • Reg. No. L10760 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Tarzec™ 320 WG is a combination of Arylex™ (halauxifen-methyl), a synthetic auxin-type herbicide (Group O) and pyroxulam, an ALS (AcetoLactate Synthase) enzyme inhibiting herbicide (Group B). This product controls plants by disrupting normal growth patterns and/or by inhibiting production of the enzyme essential for production of certain amino acids needed for normal plant growth.



GETTING THE BEST FROM TARZEC™ 320 WG



Apply prior to crop growth reaches a density which would inhibit effective coverage of the weeds



Ensure thorough coverage of weeds to achieve effective control



Best results are obtained from applications made to young weeds at 2-leaf seedling stage but before they are beyond the 4-leaf stage



Warm, moist growing conditions promote active weed growth and enhance the activity of Tarzec™ 320 WG by allowing maximum foliar uptake and activity



Only weeds emerged at the time of treatment will be controlled. Weeds germinating after application will not be controlled as this product has no soil residual activity



Optimum application temperature is between 8–25° C, but treatments can be done at temperatures as low as 5° C. Weed control may take longer under colder conditions



On fields with high grass weed populations a suitable "burndown" herbicide treatment prior to planting is recommended to reduce the later in-crop weed pressure and competition



Only apply ONCE per season



Mix with clean water and apply as a uniform broadcast spray by means of ground application



Best results are obtained using flat fan-type spray nozzles and applying minimum spray volume of 200 litres water per hectare

APPLICATION



CROP:
Wheat



RATE/ha:
80g Tarzec™ 320 WG



REMARKS:

Apply between 2 leaf stage until the 2 nodes stage of the crop when weeds are in the seedling stage and actively growing (2-4 leaf)



COMPATIBILITY

The compatibility of Tarzec™ 320 WG in tank mixtures with recommended products may be influenced by the formulation of these products. A physical compatibility test should always be carried out prior to application. Corteva Agriscience™ does not accept any responsibility for the crop tolerance of these tank mixtures where the formulation of products has changed or for mixtures with products not listed.



KEY ADVANTAGES

- 1 Since Tarzec™ 320 WG has two different modes of action, resistance is less likely to develop
- 2 Applied early post-emergence, to the main flush of actively growing broadleaf weeds
- 3 Tarzec™ 320 WG inhibits growth of susceptible weeds. Visible symptoms of dying plants may occur within 2-4 weeks under ideal growing conditions and up to 6-8 weeks under adverse conditions (prolonged periods of extremes in temperature or moisture)
- 4 Cross spectrum control of key broadleaf and grass weeds in a single spray operation
- 5 Safe to crops if used as directed

WEEDS CONTROLLED BY TARZEC™ 320 WG:

Tarzec™
320 WG
Arylex™ active

HERBICIDE

BROADLEAF WEEDS

Cape weed

*Arctotheca
calendula****

White goosefoot

Chenopodium album

Spiny Emex

*Emex australis***

Prostrate knotweed

Polygonum aviculare

Wild radish

*Raphanus
raphanistrum****

Chickweed

*Stellaria media****

***Where ALS resistant weeds occur, variable control can be expected.

GRASSES

Common wild oats

Avena fatua

Little seeded canary grass

*Pphalaris minor***

Ripgut brome

*Bromus diandrus****

Japanese brome

*Bromus japonicas****

** Variable control may be expected.

*** Where ALS resistant Bromus spp. occur, variable control can be expected.

WAITING PERIOD FOR FOLLOW-UP CROPS

CROP	MONTHS
Barley, oats, wheat	1
Cotton, dry beans, groundnuts, potatoes, sorghum, soybeans	5
Canola, lupins, peas	9
Maize, sunflowers	14

For all other crops a replanting interval of at least 24 months must be observed, preceded by a test planting.



WARNINGS

- Do not enter treated area until spray deposit has dried unless wearing protective clothing
- Allow 7 days between application and grazing by livestock
- Not to be used as an aerial application
- Under certain conditions Tarzec™ 320 WG may cause some senescence and/or yellowing of lower/older leaves of the crop but will have no significant effect on the yield
- Avoid applying at temperatures below 5°C or when night-time temperatures are below freezing, or when weather conditions may cause slow drying conditions
- Do not apply to crops that are stressed by severe weather conditions such as cold weather, heavy rain or the risk of freezing temperatures, drought, waterlogging, nutrient deficiency, disease, insect or nematode damage or carry-over herbicide residues

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION



Broadstrike™ 800 WG

HERBICIDE

Broadstrike™ 800 WG
HERBICIDE



800 g/ℓ Flumetsulam

A post-emergence herbicide (with pre-emergence uses) for the control of certain broadleaf weeds in lucerne, medic and clover pastures.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Broadstrike™ 800 WG contains flumetsulam (Caution) • Reg. No. L6180 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Broadstrike™ 800 WG is part of the triazolopyrimidine sulfonanilide group of herbicides which has the ALS (Acetolactate synthase) inhibition method of action. HRAC classification is Group Code B. Other Group Code B herbicides are Pallas™ 45 OD (L8676) and Derby™ 175 SC (L6781).



GETTING THE BEST FROM BROADSTRIKE™ 800 WG

When the crop and weeds are actively growing

When weeds are in the seedling stage (2 – 4 leaves)

When the crop is in the 3-leaf stage

In 200-litre spray mixture per hectare

For Clovers/Lucerne/medics, broadstrike can be applied at 50g/ha with a suitable registered adjuvant

When air temperatures are at least 10°C

When you expect at least 4 but preferably 6 hours of good weather after spraying

When applied in winter, application should be discontinued early enough, taking the above two points into account

Avoid application when the crop may obstruct good weed coverage



COMPATIBILITY

Do not mix with other herbicides on medics, clover and lucerne.



KEY ADVANTAGES

- 1 Excellent crop protection for medics, clover and lucerne
- 2 Early (3-leaf stage) application is possible, to maximise crop production
- 3 Wheat can be planted within 3 months after Broadstrike™ 800 WG application

WAITING PERIOD FOR FOLLOW-UP CROPS

CROP	MONTHS
Medics, barley, wheat, clover and oats	3
Canola, lupins, serradella in shallow soil	24
Canola, lupins, deep-ground serradella	9
All other crops	24



WARNINGS

- Allow 28 days between application and harvest or grazing by livestock
- Do not spray if rain is expected within 6 hours of application
- Avoid conditions that place the crop under stress e.g. very cold, wet conditions or drought conditions
- Avoid poorly drained soil
- Soil pH <5 and >7 may cause poor control
- Poor control can be experienced on soils with organic content > 3%

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Broadstrike™
800 WG

HERBICIDE



Enrich Lives



Derby™ 175 SC

HERBICIDE

Derby™ 175 SC
HERBICIDE



75 g/ℓ Florasulam
100 g/ℓ Flumetsulam

Derby™ 175 SC is a selective post-emergence herbicide for the control of broadleaf weeds in wheat and oats.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Derby™ 175 SC contains florasulam and flumetsulam (Caution) • Reg. No. L6781 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Derby™ 175 SC is part of the triazolopyrimidine group of herbicides, which has the ALS (Acetolactate synthase) inhibition method of action. HRAC classification is Group Code B. Other Group Code B herbicides are Pallas™ (L8676) and Broadstrike™ (L6180).



GETTING THE BEST FROM DERBY™ 175 SC

When the crop and weeds are actively growing

When weeds are in the seedling stage (2 - 4 leaves)

In 200-litre spray mixture per hectare. In the case of sleeve boom sprayers, 75-100 litres of spray mixture per hectare can be used



COMPATIBILITY

Derby™ 175 SC is compatible with Bentrol® Super (L5167) Bayer Crop Science AG, Brominal® Super (L5168) Bayer Crop Science AG, Brush-Off® (L4535) Du Pont, Buctril® DS (L3350) Bayer Crop Science AG, Demeton® EC (L4852) Villa Crop Protection (Pty) Ltd, Folimat® 800 SL (L2316) Bayer Crop Science AG, Hoelon® 36 EC (L5568) Bayer Crop Science AG, Monitor® 75 WG (L6003) Monsanto, Puma® S 120 EC (L5787) Bayer Crop Science AG, Topik® 240 EC (L4250) Syngenta AG and copper oxychloride.



KEY ADVANTAGES

- 1 Excellent control of difficult-to-control weeds such as Cape marigold (*gousblom*) and wild radish (*ramenas*)
- 2 Can be used with other herbicides to provide wider protection
- 3 Excellent crop protection for wheat and oats
- 4 Wide application window for crop growth stage
- 5 Does not leach or move laterally in the ground

WAITING PERIOD FOR FOLLOW-UP CROPS

Lucerne and medics - 3 months

All types of grain (wheat, barley, oats) can be planted without restriction the following season, after the application of Derby™ 175 SC

For all other crops, a waiting period of at least 12 months is recommended, preceded by a test planting



WARNINGS

- Do not apply Derby™ 175 SC to crops under stress due to severe weather conditions, drought, waterlogging, disease or insect damage
- Allow 30 days between application and grazing by livestock
- Do not apply Derby™ 175 SC to cereals undersown with legumes

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Derby™ 175 SC

HERBICIDE

Stand Tall



Flexidor™ 500 SC

HERBICIDE

Flexidor™ 500 SC

HERBICIDE



500 g/ℓ Isoxaben

Flexidor™ 500 SC is a post-emergence herbicide for the control of wild radish (*Raphanus raphanistrum*) and wild mustard (*Sisymbrium thellungii*) in lupins (sweet and bitter), undergrowth lucerne and leguminous crops (lucerne and medics) in the winter rainfall regions.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Flexidor™ 500 SC contains isoxaben (Caution) • Reg. No. L5011 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Flexidor™ 500 SC is part of the benzamide group of herbicides which has a cell wall (cellulose) inhibitory action. HRAC classification is a group code L herbicide.



GETTING THE BEST FROM FLEXIDOR™ 500 SC

In water with a pH between 4.5 and 5.5; water with a higher or lower pH value than 4.5 – 5.5 should be buffered with a registered buffer up to pH 4.5 – 5.5

Post-emergence of crops and weeds as listed on the label

Dose is 150–200ml/ha in 200 litres of water per ha

GROUND APPLICATION



CROP:
Wheat
(Free State only)



RATE/ha:
150 ml Flexidor™ 500 SC



REMARKS:
Must be incorporated prior to planting. The depth of incorporation depends on the last cultivation

GROUND & AERIAL APPLICATION



CROP:
Lupins (Sweet and Bitter),
Undersown Lucerne and
Leguminous Pastures
(Lucerne and Medics) in
the winter rainfall region



RATE/ha:
150-200 ml
Flexidor™ 500 SC



REMARKS:
Apply as a post-emergence application for both crop and weeds. Use the lower rate of Flexidor™ 500 SC (150 ml/ha) for weeds smaller than the 6-leaf stage and the higher rate Flexidor™ 500 SC (200 ml/ha) for weeds from the 6- to 8-leaf stage. The weeds should not have developed further than the 8-leaf stage.



KEY ADVANTAGES

- 1 Only group "L" herbicide registered in lupins, lucerne and medics, so an excellent resistance management option
- 2 Excellent control of wild radish and wild mustard
- 3 Suppression of several other prominent broadleaf weeds as listed on the label
- 4 No waiting period when planting cereals (wheat, barley, oats, rye, grain sorghum and maize) after Flexidor™ 500 SC application

WEEDS CONTROLLED BY FLEXIDOR™ 500 SC:

Flexidor™
500 SC

HERBICIDE

WINTER RAINFALL REGION

Wild radish

Raphanus raphanistrum

Wild mustard

Sisymbrium thellungii

FREE STATE

Wild mustard

Sisymbrium thellungii

Common dubbeltjie

Tribulus terrestris

SUPPRESSION OF THE FOLLOWING WEEDS ARE NORMALLY OBTAINED

White goosefoot

Chenopodium album

Green goosefoot

Chenopodium carinatum

Quickweed

Galinsoga parviflora

Common purslane

Gisekea africana / *Gisekea Portulaca oleracea*

Tall khakiweed

Tagetes minuta



WARNINGS

- On soils that are acidic, alkaline or brackish, crops may be more susceptible to herbicide damage due to stress/sub-optimal growth
- For all crops except wheat, barley, oats, rye, grain sorghum and maize, a waiting period of 12 months after the application of Flexidor™ 500 SC is recommended
- Allow 14 days after spraying before lupin grazing and 150 days in case of undergrowth lucerne and leguminous crops

Be Curious



Gallant™ SUPER

HERBICIDE

Gallant™ SUPER
HERBICIDE



108 g/ℓ Haloxyfop-R Methyl Ester

A selective systemic post emergence emulsifiable concentrate herbicide for the control of annual and perennial grasses in broadleaf crops as indicated on the label.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Gallant™ SUPER contains Haloxyfop-R Methyl Ester (Caution) • Reg. No. L4962 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Gallant™ Super is part of the pyridinil-oxyphenoxy group of herbicides which has the inhibition of acetyl-coenzyme A carboxylase as a mode of action.



GETTING THE BEST FROM GALLANT™ SUPER

In water with a pH of 4.5-5.5; water with a higher or lower pH value than 4.5-5.5 should be buffered to 4.5-5.5

In 200-300L spray mixture per hectare

When grasses are actively growing

When annual grasses are in the 2-6 leaf stage

When perennial grasses are in the early flowering stage

Rain within one hour of application may necessitate a follow-up spray



COMPATIBILITY

Gallant™ Super is compatible with Mamba™ 360 SL (L4817) and Mamba™ MAX 480 SL (L7714).



KEY ADVANTAGES

- 1 Excellent control of a range of annual and perennial grasses at lower rates per hectare than competitive products - less product handled, fewer containers to dispose of
- 2 Very low toxicity to honeybees
- 3 Non-toxic to earthworms and soil microorganisms
- 4 Oral™ LD 50 (mammals) of > 5000mg/kg. Compare table salt (3000mg/kg), nicotine (9mg/kg), caffeine (192mg/kg)

WITHHOLDING PERIOD FOR FOLLOW-UP CROPS

Maize, sorghum, wheat or any other grass crop should not be planted on treated soil for a period of three months after application of Gallant™ Super.

THE FOLLOWING WITHHOLDING PERIODS BETWEEN APPLICATION AND HARVEST / GRAZING APPLY:

CROP	DAYS
Soybeans / Dry beans	60
Lucerne / Medics / Sugarcane	28
All other crops	40



WARNINGS

- Do not use with other herbicides other than Mamba™ 360 SL (L4817) or Mamba™ MAX 480 SL (L7714); if another herbicide is to be used, allow 14 days between applications
- Do not apply in very hard water (> 1000 ppm solutes) and high pH water

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Gallant™
SUPER

HERBICIDE

Build Together



Kerb™ FLO 400 SC

HERBICIDE

Kerb™ FLO 400 SC
HERBICIDE



400 g/ℓ Propyzamide

Kerb™ Flo 400 SC is a suspension concentrate herbicide used for annual winter grasses in orchards (as indicated), canola, grapes, lettuce and legume pastures in the winter rainfall areas.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Kerb™ FLO 400 SC contains propyzamide (Caution) • Reg. No. L4065 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Kerb™ Flo 400 SC is a soil-acting herbicide with uptake occurring through the roots of sensitive grasses that have germinated or just newly emerged. It is a HRAC classification is Group Code K1. Another Group Code K1 herbicide is trifluralin. There is no cross-resistance between trifluralin and Kerb.



GETTING THE BEST FROM KERB™ FLO 400 SC

Sufficient rain or irrigation (= 15mm) within 5 days after application in a single deposit is essential to leach Kerb™ Flo 400 SC into the root zone of sensitive weeds

Apply to pre-emergent, or early post-emergent weeds

Best results can be expected when applying to a moist seedbed, after the clods or loose topsoil have been settled by rain or irrigation. The surface should be relatively fine, even, firm and without large clods. It should also be free of excess organic or surface material (dead or decaying weeds, leaves, plant cuttings, etc.)

Please note that Kerb™ Flo 400 SC should only be applied in winter. The chemical is more active under cool conditions. Warmer conditions are conducive to degradation and shorter residual activity

High and dense pastures must be grazed before application so that the Kerb™ Flo 400 SC can be applied to the soil

Is safe for use in normal Medicago spp and Trifolium spp, used in pasture mixtures in the winter rainfall area



KEY ADVANTAGES

- 1 Good residual control – control grasses that have not germinated during application
- 2 Is compatible with insecticides, e.g. dimethoate

WAITING PERIOD FOR FOLLOW-UP CROPS

Allow 6 months before brassicas, potatoes, beans and onions are planted on soil treated with Kerb™ Flo 400.

FOR SMALL GRAIN (WHEAT, OATS, RYE, BARLEY), SEE THE TABLE BELOW:

CULTIVATION PLANT METHOD WAITING PERIOD

CULTIVATION	PLANT METHOD	WITHHOLDING PERIOD
No processing	Plant	10 months
No processing	Sow	18 months
Processing	Plant	18 months
Operation	Sow	18 months



WARNINGS

Kerb™ Flo 400 is subject to accelerated microbial degradation (VMA). Do not apply more than one Kerb™ Flo 400 application within 12 months on a particular piece of land.

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Kerb™
FLO 400 SC

HERBICIDE

Be Upstanding



Lontrel™ 100 SL

HERBICIDE

Lontrel™ 100 SL

HERBICIDE



100 g/ℓ Clopyralid

Lontrel™ 100 SL is a systemic water-soluble liquid herbicide for post-emergence control of annual broadleaf as listed on the label in canola.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Lontrel™ 100 SL contains clopyralid (Caution) • Reg. No. L4919 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Lontrel™ 100 SL is part of the pyridine family of herbicides. It is rapidly absorbed through the foliage and is systemic in the phloem and xylem. It acts as a synthetic auxin and symptoms are similar to other growth regulators. HRAC classification is Group Code O. Other Group Code O herbicides are Starane™ 200 EC (L4918) and MCPA™ 400 SL (L3616).



GETTING THE BEST FROM LONTREL™ 100 SL

When canola is in the 3 to 6 leaf stage

When weeds are in the 2 to 4 leaf stage

In 150–250 litres spray mixture per hectare



KEY ADVANTAGES

- 1 Narrow spectrum allows control of targeted specific weed groups
- 2 Good crop safety profile in canola
- 3 Minimal transfer in soil (half-life in soil of 1-4 weeks)
- 4 Safe to birds, fish, daphnia, bees, ground micro-organisms and earthworms when used according to label instructions



WARNINGS

- Do not spray if rain is likely within three hours
- Do not apply to wet weeds

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Lontrel™
100 SL

HERBICIDE

Sustain the Land and Grow Your Business



Pallas™ 45 OD

HERBICIDE

Pallas™ 45 OD
HERBICIDE



500 g/l Pyroxulam

Pallas™ 45 OD is a selective post-emergence control of Common Oat (*Avena fatua*), Pulpit (*Bromus diandrus*), Haygrass (*Bromus japonicus*), Cape twin (*Emex australis*), small seed canary (*Phalaris minor*)* and Ramenias (*Raphanus raphanistrum*) in wheat. * Variable control sometimes occurs.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Pallas™ 45 OD contains pyroxulam (Harmful) • Reg. No. L8676 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Pallas™ 45 OD is a member of the triazolopyrimidine group of herbicides which has the ALS (Acetolactate synthase) inhibitory mode of action. HRAC classification is Group Code B. Other Group Code B herbicides are Derby™ 175 SC (L6781) and Broadstrike™ 800 WG (L6180).



GETTING THE BEST FROM PALLAS™ 45 OD

When temperatures are between 8° - 25°C (applications can be made as low as 5°C, but control will then be slower)

When the crop and weeds are actively growing

When the soil is moist

At a dose of 440ml/ha in 200L water per ha. For a sleeve boom sprayer, use 75-100L water per ha

Between the 2 - 3 leaf to the second node stage of wheat

When weeds are in the seedling stage (2 - 4 leaves)

With the addition of an adjuvant such as Break-thru at 100ml/ha, which can increase the effectiveness of Pallas™ 45 OD, especially under dry conditions



COMPATIBILITY

Pallas™ 45 OD, in combination with adjuvant, can be mixed with ONE of Derby™ 175 SC or MCPA™ 400 SL or Dimetoate™ 400 EC or manganese sulfate OR zinc oxide. Do NOT use multiple trace elements or foliar nutrient formulations containing more than 2 trace elements in tank mixtures with Pallas™ 45 OD.



KEY ADVANTAGES

- 1 Excellent control of Common wild Oats and other weeds as listed on the label, resulting in increased yield and profit
- 2 Excellent control of a range of other important grass weeds as well as key broadleaf weeds, leading to a reduction in weed build up
- 3 A wide application window, which allows spraying during favourable weather conditions
- 4 Few restrictions on follow-up crops, which give producers much flexibility over crop rotation. Grain types (wheat, barley, oats, rye and triticale), lupins and canola can be sown or planted the following season, after the application of Pallas™ 45 OD, after a 9-month waiting period has elapsed

WAITING PERIOD FOR FOLLOW-UP CROPS

For crops other than cereal types, lupins and canola, a waiting period of at least 12 months is recommended, preceded by a test planting. Test strips of the desired follow-up crop should be planted and checked for germination and emergence for any abnormal growth to determine whether the follow-up crop can be cultivated successfully.



WARNINGS

APPLICATIONS SHOULD BE AVOIDED:

- In cold, wet conditions – plan applications according to weather forecasts to avoid temperatures below 5°C for 24 hours after application
- In drought conditions
- In waterlogged soils

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Pallas™ 45 OD

HERBICIDE

Live Safely



Starane™ 200 EC

HERBICIDE

Starane™ 200 EC

HERBICIDE



200 g/l Fluroxypyr

Starane™ 200 EC is a systemic emulsifiable concentrate herbicide for the control of volunteer potatoes and woody plants as listed on the label for forestry, grass pastures, conservation and industrial areas

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Starane™ 200 EC contains fluroxypyr (Caution) • Reg. No. L4918 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Starane™ 200 EC is part of the pyridine family of herbicides. It is rapidly absorbed through the foliage and is systemic in the phloem and xylem. It acts as a synthetic auxin and symptoms are similar to other growth regulators. HRAC classification is Group Code O. Other Group Code O herbicides are Lontrel™ 100 SL (L4919) and MCPA™ 400 SL (L3616).



GETTING THE BEST FROM STARANE™ 200 EC

When volunteer potatoes are in the 6-leaf to flowering stage

Only potatoes present during application will be controlled

In 300L / ha spray mixture

Apply as a directed spray in maize when the maize is at least 50cm high

Apply in wheat when the crop is in the 3-leaf to flag leaf stage

Apply in eragrostis when the crop is in the 3-leaf to early flower stage



KEY ADVANTAGES

- 1 Excellent crop protection in cereal crops (up to flag leaf)
- 2 Minimal transfer in soil (half-life in soil of 1-4 weeks)
- 3 Rain after application will have no effect on efficacy provided the spray
- 4 Can be applied at temperatures as low as 8°C



WARNINGS

- Do not apply with a mineral oil-based aid to wheat, maize and Eragrostis
- Do not apply in the calyx or directly over maize (See note on directed spray above)

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Starane™
200 EC

HERBICIDE

Keep Growing



Acanto[®] 250 SC

FUNGICIDE

Acanto[®] 250 SC
FUNGICIDE



250 g/ℓ Picoxystrobin

Acanto[™] 250 SC is a preventive, systemic and translaminar suspension concentrate fungicide for the control of the diseases in barley, wheat and potatoes as listed on the label.

ALWAYS USE ACCORDING TO LABEL RECOMMENDATIONS: Acanto[™] 250 SC contains picoxystrobin (Caution) • Reg. No. L8233 | Act No. 36 of 1947



MODE OF ACTION & CHEMICAL GROUP

Acanto[®] 250 SC is a group code 11 fungicide and contains picoxystrobin, a broad spectrum cereal fungicide from the strobilurin group. Picoxystrobin and other strobilurin analogues inhibit fungal respiration.



COMPATIBILITY

Acanto[®] 250 SC is compatible with Propizole 250 EC (Reg. No. L7561 Act No. 36 of 1947), Propiconazole 250 EC (Reg. No. L7306 Act No. 36 of 1947) and Trend 90 (Reg. No. L8207 Act No. 36 of 1947) in wheat and barley and with H & R Crop Oil (Reg. No. L6802 Act No. 36 of 1947) and Trend 90 (Reg. No. L8207 Act No. 36 of 1947) in potatoes. The compatibility of Acanto[®] 250 SC with other products has not been fully investigated. Tank mixtures that have not been evaluated for physical compatibility and crop safety must first be tested on a limited scale. Consult the manufacturer in case of uncertainty.



KEY ADVANTAGES

- 1 Acanto® 250 SC has systemic, translaminar and preventative properties and is vapour active
- 2 Acanto® 250 SC shows good crop safety, disease control and maintenance of green leaf area which results in significant yield benefits
- 3 Acanto® 250 SC is best used as a preventative treatment or in the earliest stages of disease development

WAITING PERIOD FOR FOLLOW-UP CROPS

Allow the Following Withholding Period Between Last Application and Harvest

CROP	WITHHOLDING PERIOD
Barley	50 days
Wheat	35 days
Wheat & Barley (Grazing)	35 days
Potatoes	7 days



WARNINGS

- Do not apply more than two applications on wheat and barley
- Handle with care
- Harmful if swallowed
- Prevent contact with eyes and skin since the product may cause eye and skin irritation
- Store away from food and feed
- Keep out of reach of children, uninformed persons and animals
- Toxic to fish and harmful to other aquatic organisms
- RE-ENTRY: Do not enter treated area within 1 day after treatment unless wearing protective clothing

THIS DOCUMENT DOES NOT REPLACE THE LABEL OF THE PRODUCT, SEE LABEL FOR COMPLETE INFORMATION

Acanto®
250 SC

FUNGICIDE

Our Purpose

To enrich the lives of those who produce and those who consume, ensuring progress for generations to come.

 @Corteva on Instagram