



# Principal<sup>®</sup> Forte

**HERBICIDE**

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**GROUP 4 | 2 HERBICIDES**

**Product Registration Number: MAPP No. 20797**

A water dispersible granule (WG) formulation containing 541.68 g as/kg of dicamba, 62.475 g as/kg of nicosulfuron, 31.25 g as/kg of rimsulfuron and 31.25 g/kg isoxadifen-ethyl safener.

A selective herbicide for the control of annual and perennial grassweeds and broad-leaved weeds in forage and grain maize.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

**READ DIRECTIONS FOR USE ON ATTACHED LEAFLET  
PROTECT FROM FROST**

**Authorisation Holder:**

**Corteva Agriscience UK Limited**

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**24 Hour Emergency Telephone Number: +44 (0) 161 884 1235**

Technical Hotline: 0800 689 8899, e-mail: ukhotline@corteva.com

This label is compliant with the CPA  
Voluntary Initiative Guidance



**282847 2401 - UNITED KINGDOM**

**MANDATORY REQUIREMENT:  
THIS AREA MUST BE BLANK  
(for 2D Data Matrix, Lot Nr.,  
Manufacturing Date ...)**

**NET CONTENTS : 2.4 KG e**

**IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

<b>Crops</b>	<b>Maximum individual dose (product/hectare/crop)</b>	<b>Maximum number of treatments per crop</b>	<b>Latest time of application</b>
Forage maize, Grain maize	480 grams	1	Up to and including 9 leaves unfolded (BBCH 19), 1 day before harvest

**Other specific restrictions**

Application must not be made outside the period of 1<sup>st</sup> May to 31<sup>st</sup> July.

MUST be applied with an approved 95.0% w/w oil (rapeseed triglycerides) adjuvant or the adjuvant Vivolt at 0.2% v/v.

Do not apply via hand-held equipment.

To avoid the build-up of resistance do not apply this or any other product containing an ALS inhibitor herbicide with claims for control of grass-weeds more than once to any crop.

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.**

Non-printed

Non-printed area on page 2 ONLY  
(on the back of 2D code area  
printed on the front page)

## PRINCIPAL FORTE

Contains Ethyl 5,5-diphenyl-2-isoxazoline-3-carboxylate

UFI: 5KYA-50T9-W00S-6G22



### WARNING

**May cause an allergic skin reaction**

**Causes serious eye irritation**

**Very toxic to aquatic life with long lasting effects**

Wear protective gloves / protective clothing / eye protection / face protection.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation or rash occurs: Get medical advice / attention.

If eye irritation persists: Get medical advice / attention.

Dispose of contents / container to a licensed hazardous-waste disposal contractor or collection site, except for empty clean containers which can be disposed of as non-hazardous waste.

**To avoid risks to human health and the environment, comply with the instructions for use.**

## SAFETY PRECAUTIONS

### Operator protection:

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

Wear suitable protective clothing (coveralls), suitable protective gloves and face protection (faceshield) when handling the product.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

DO NOT BREATHE SPRAY.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH CONCENTRATE from skin or eyes immediately.

WASH HANDS AND EXPOSED SKIN before eating and drinking, and after work.

### Environmental protection:

DO NOT CONTAMINATE WATER with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

Extreme care must be taken to avoid spray drift onto the non-crop plants outside the target area.

#### **Storage and disposal:**

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DO NOT REUSE CONTAINER for any purpose.

## **DIRECTIONS FOR USE**

**IMPORTANT:** This information is authorised as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

### **RESTRICTIONS / WARNINGS**

MUST be applied with an approved 95.0% w/w oil (rapeseed triglycerides) adjuvant or the adjuvant Vivolt at 0.2% v/v.

DO NOT spray if temperature fluctuations are expected to be greater than 15°C between day and night.

DO NOT apply to a wet leaf.

DO NOT apply to crops under stress. Stress can be caused by many factors including frost, drought, water-logging, trace element deficiency, disease and pest attack etc.

DO NOT apply directly to, or allow spray drift to come into contact with, agricultural or horticultural crops, amenity plantings or gardens, ponds, lakes or water courses.

DO NOT apply PRINCIPAL FORTE in sequence or in tank-mixture with any other product containing an ALS inhibiting herbicide.

### **WEEDS CONTROLLED**

PRINCIPAL FORTE is a primarily foliar acting herbicide for the control of annual and perennial grassweeds and broad-leaved weeds in forage and grain maize. PRINCIPAL FORTE works mainly by contact action and is most effective if applied when the weeds are small and actively growing. Good spray cover of the weeds must be obtained for best results.

One application of PRINCIPAL FORTE + approved 95.0 % w/w oil (rapeseed triglycerides) or the adjuvant Vivolt at 0.2% v/v will control susceptible emerged weeds at the following rate.

The 95.0 % w/w oil (rapeseed triglycerides) adjuvant should be used at the recommended rate provided by the manufacturer.

#### Grasses:

Susceptibility	PRINCIPAL FORTE + an approved 95.0% w/w oil (rapeseed triglycerides) adjuvant or the adjuvant Vivolt at 0.2% v/v	
	480 g/ha	Weed size controlled
Susceptible species:	Barnyard/Cockspur grass	Up to 6 true Leaves
	Green bristle-grass	Up to 6 true Leaves
	Couch grass	Up to 6 true Leaves
Moderately susceptible species:	Hairy finger-grass	Up to 2 true Leaves

PRINCIPAL FORTE gives useful control of the top growth of Common couch in the year of application, but reduction of growth in the following year has not been established.

#### Broad-leaved weeds:

Susceptibility	PRINCIPAL FORTE + an approved 95.0% w/w oil (rapeseed triglycerides) adjuvant or the adjuvant Vivolt at 0.2% v/v	
	480 g/ha	Weed size controlled
Susceptible species:	Common amaranth	Up to 4 true Leaves
	Fat-hen	Up to 4 true Leaves
	Field pennycress	Up to 4 true Leaves

### RESISTANCE MANAGEMENT

PRINCIPAL FORTE contains dicamba, nicosulfuron and rimsulfuron. Dicamba belongs to HRAC Group 4 (previously Group O) and nicosulfuron and rimsulfuron belong to HRAC Group 2 (previously Group B) according to the Herbicide Resistance Action Committee. Dicamba is a member of the benzoic acid family of synthetic auxins (Group "4" according to HRAC classification) and the risk of developing resistance to this active is low. This product contains Nicosulfuron and Rimsulfuron which are ALS inhibitors, also classified by the Herbicide Resistance Action Committee as 'Group 2' (previously 'Group B'). The risk of developing resistance to these actives is high. To reduce the risk of developing resistance or where resistance to sulfonylurea herbicides is suspected applications should be made to young, actively growing weeds. The use of cultural methods of control and herbicides with non-ALS modes of action within the cropping season and/or throughout the cropping rotation will help reduce the risk of developing resistance.

Anti-resistance strategies are recommended:

- use label rates allowing an efficient control of the weed species present at application.
- follow label statements concerning rates and timing of application as described below.
- consider the use of cultural control and crop rotation to help control resistant biotypes.

Use PRINCIPAL FORTE as part of an Integrated Crop Management Strategy (ICM).

Use only as part of a resistance management strategy that includes cultural methods of control and does not use ALS inhibitors as the sole chemical method of grass-weed control.

Strains of some annual grasses, e.g. black-grass, wild-oats, and Italian rye-grass, have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. Guidelines have been produced by the Weed Resistance Action Group and copies are available from AHDB, CropLife UK, your distributor, crop adviser or product manufacturer.

To avoid the build-up of resistance do not apply this or any other product containing an ALS inhibitor herbicide with claims for control of grass-weeds more than once to any crop.

For further advice on resistance management contact your agronomist or advisor and consult the HRAG-UK website.

## **CROP SPECIFIC INFORMATION**

PRINCIPAL FORTE may be used on all varieties of maize (forage and grain) between the growth stages given below.

### **Timing of application and Rate of use**

Application timing is crucial for good control. Applications must be made to weeds that are actively growing at the time of application.

It is important that there is sufficient leaf area for the uptake of the herbicide.

PRINCIPAL FORTE can be applied from 2 leaves unfolded to 9 leaves unfolded (BBCH 12-19) at a dose rate of 480 g/ha plus an approved 95.0% w/w oil (rapeseed triglycerides) adjuvant or the adjuvant Vivolt at 0.2% v/v.

Applications of PRINCIPAL FORTE can be made between 1<sup>st</sup> May and 31<sup>st</sup> July at a water volume from 200 L/ha to 400 L/ha. Use higher water volumes when the crop is thick or weed growth is dense. Extreme care should be taken not to overlap spray swaths as phytotoxicity and yield loss may occur.

## **FOLLOWING CROPS AND CROP FAILURE**

In the event of crop failure only maize and cereals can be planted after a period of at least 75 days after application. It is recommended to plough first.

In a normal rotation only winter cereals can be drilled in the same calendar year of application. It is recommended to plough first.

Spring cereals, ryegrass, oilseed rape, potato, sugar beet, peas or soybeans can be planted in the spring following application.

## **RAINFASTNESS**

PRINCIPAL FORTE is rainfast in 4 hours.

## **MIXING**

Half fill the spray tank with clean water and start the agitation. SHAKE THE CONTAINER WELL before use and pour in the required amount of product. Rinse any empty containers thoroughly and add rinsings to the spray tank. Add the remainder of the water and continue agitation until spraying is completed. Spray solution MUST be used on the day of mixing and must NOT be left overnight.

## **SPRAYING**

PRINCIPAL FORTE should be applied through a hydraulic boom sprayer provided it is in good working order and has been calibrated according to the manufacturers' recommendations. Nozzle choice will depend on any drift management / buffer zone requirements.

Apply PRINCIPAL FORTE as a MEDIUM / COARSE spray as defined by the BCPC system. Boom height should be adjusted to ensure even coverage of the crop, particularly at later growth stages. The correct height is one at which the spray from alternate nozzles meets just above the crop. In dense crops, at later growth stages, higher water volumes should be used.

## **TANK CLEANING**

To avoid subsequent injury to crops other than grassland and cereals, all spraying equipment must be thoroughly cleaned both inside and out, using a proprietary spray tank cleaner, for example, All Clear Extra as follows (or following tank cleaner manufacturers advice):

1. Immediately after spraying, drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. Rinse inside of tank with clean water and flush through booms and hoses using at least one tenth of the spray tank volume. Drain tank completely.
3. Half fill tank with clean water and add All Clear Extra at the recommended rate. Agitate and then briefly flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full and allow to stand for 15 minutes with agitation. Flush the boom and hoses and drain tank completely.
4. Nozzles and filters should be removed and cleaned separately with All Clear Extra solution containing 50 ml of All Clear Extra per 10 litres of water.
5. Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume. Drain tank completely.
6. For disposal of washings, follow Code of Practice for Using Plant Protection Products. Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

**Note:** If it is not possible to drain the tank completely, step 3 must be repeated before going onto step 4.

## **COMPANY ADVISORY INFORMATION**

The following information does not form part of the product label under the UK plant protection products regulations and provides additional advice on product use at the discretion of Corteva Agriscience UK Limited.

## **TRADEMARK ACKNOWLEDGEMENTS**

PRINCIPAL FORTE is a trademark of Corteva Agriscience and its affiliated companies.

All other brand names are trademarks of other manufacturers for which proprietary rights may exist

## **Corteva Agriscience UK Limited Conditions of Supply**

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury

whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

All manufacturers trademarks are duly acknowledged

For further information please contact Corteva Agriscience UK Limited

**To access the Safety Data Sheet for this product scan the QR code or use the weblink below :**



<https://www.corteva.co.uk/content/dam/dpagco/corteva/eu/gb/en/files/sds/PRINCIPAL-FORTE-SDS.pdf>

Alternatively contact your supplier

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