



**Dow AgroSciences**

**UNITE®**



*HERBICIDE*

Product Registration Number: MAPP 17385

A water dispersible granule blend containing 6.94% w/w pyroxsulam, 6.94% w/w cloquintocet-mexyl and 3.71% w/w flupyr-sulfuron-methyl-sodium (soluble granule).

A post-emergence ALS inhibitor (HRAC group B) for use on all varieties of WINTER WHEAT for the control of BLACKGRASS and other grasses and broad leaved weeds. 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 grassweed control.

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.**

Pack size: 1.08 Kg e

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This label is compliant with the CPA Voluntary Initiative Guidance.



**IMPORTANT INFORMATION**

**FOR USE ONLY AS AN AGRICULTURAL HERBICIDE**

<b>Crops/Situations:</b>	Winter wheat
<b>Maximum Individual Dose:</b>	0.27 kg product per hectare
<b>Maximum Number of Applications:</b>	One per crop
<b>Latest Time of Application:</b>	Before first node detectable stage (GS 31)
<b>Other Specific Restriction:</b>	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 grassweeds 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.**

SPECIMEN

## SAFETY PRECAUTIONS

### Operator protection

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

WEAR SUITABLE PROTECTIVE GLOVES when handling the product or handling contaminated surfaces.

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

AVOID EYE AND SKIN CONTACT.

### Environmental protection:

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

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 metres of the top of the bank of a static or flowing waterbody, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 metre of the top of a ditch which is dry at the time of application. Direct applications 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 a LERAP must be carried out in accordance with HSE'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.

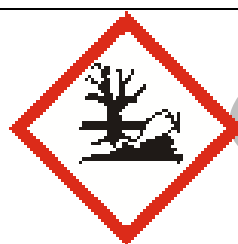
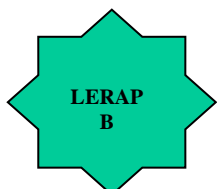
### Storage and disposal:

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP IN ORIGINAL CONTAINER, in a cool, dry and well-ventilated place.

DO NOT RE-USE CONTAINER for any purpose.



**Product Identifier according to Art.18 of Reg. (EC) No 1272/2008 [CLP]:** Unite

### Warning

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

Wear protective gloves.

IF ON SKIN: Wash with plenty of soap and water.

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.

Collect spillage

Contains Pyroxsulam and Cloquintocet-mexyl. May produce an allergic reaction.

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

## **DIRECTIONS FOR USE**

**IMPORTANT:** This information is approved 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.

### **GENERAL INFORMATION**

UNITE has foliar and some residual activity against blackgrass and a range of other grasses and broad-leaved weeds. The ideal timing for application is when the weeds are small and actively growing. For optimal weed control it is essential to ensure good coverage. The effectiveness of UNITE may be reduced when soils are very dry, or temperatures are low and subsequently weed growth is slow. The residual activity of UNITE is reduced by high soil temperatures due to increased degradation of flupyrsulfuron-methyl.

Do not use UNITE on crops undersown with grasses, clover or other legumes or any broad-leaved crop.

### **NOTES**

Avoid overlapping of spray swaths.

Do not spray when crops are under stress from cold, drought, water logging, pest damage, nutrient deficiency etc.

Do not roll or harrow 7 days before or after application.

Take extreme care to avoid damage by drift onto susceptible crops, non-target plants or waterways. Do not apply directly to, or allow spray drift to come into contact with agricultural or horticultural crops, amenity plantings, gardens, ponds, lakes or watercourses.

To avoid crop injury do not apply UNITE in tank mixture with plant growth regulators. A minimum interval of 7 days between applications should be left.

To avoid crop injury do not apply UNITE in tank mix with an organophosphate insecticide. A minimum interval of 14 days between applications should be left.

### **WEED RESISTANCE**

If herbicides with the same mode of action are used repeatedly in the same field against the same target weed, selection of resistant plants may occur. A plant is considered to be resistant to a herbicide if it survives after a treatment applied at the correct timing and recommended dose rate.

Strains of some annual grasses (e.g. blackgrass, wild oats and Italian rye) 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 developed by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer.

Resistance can be delayed by using products with different modes of action either tank mixed or used in alternate years.

UNITE is a product with an ALS inhibitor mode of action (HRAC group B).

UNITE + an authorised adjuvant should be used in a programme with pre-emergence products, and in tank mixture with products with a different mode of action. Control may be reduced if UNITE + an authorised adjuvant is applied alone.

No more than one ALS product per crop should be applied for grassweed control.

Do not use products that only contain a herbicide with an ALS mode of action where common chickweed or mayweed are present.

## **MANAGEMENT OF RESISTANT BLACKGRASS**

For good resistance management and where resistance is known or suspected to be present to substituted ureas, dinitroanilines or ACCase inhibitors the following is recommended.

1. Good cultural techniques such as drilling date and seedbed preparation should be adopted. See WRAG guidelines.
2. Use only as part of a resistance management strategy that includes cultural methods of control and does not include ALS inhibitors as the sole chemical method of grassweed control.
3. Use mixtures of herbicides with different modes of action at full recommended dose rates.
4. Apply herbicides at optimum timing and environmental conditions.
5. A recommended sequence in such a situation would be a pre-emergence product followed by a tank mix of UNITE at 0.27 kg/ha + an adjuvant + a grassweed product with an alternative mode of action. Where weather conditions have prevented an application of UNITE + adjuvant in the autumn a spring application can be made provided that it is used as part of a planned programme of products utilising different modes of action. Contact Dow AgroSciences for recommended programmes.
6. 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 grassweeds more than once to any crop.

## **FOLLOWING CROPS**

Only cereals, oilseed rape, field beans, red and white clover or grass may be sown in year of harvest to succeed a cereal crop treated with UNITE.

Following a sequence of UNITE and metsulfuron-methyl or florasulam, treated ground should be ploughed to a depth of 15 cm before establishing winter oilseed rape.

## **CROP FAILURE**

In the event of a crop failure after a crop has been treated with UNITE + an authorised adjuvant sow only winter wheat or spring wheat within three months of application. Prior to re-sowing, soil should be ploughed and cultivated to a depth of at least 15cm.

After three months only cereals, oilseed rape, field beans, red or white clover or grass may be sown in the year of harvest of a cereal crop treated with UNITE.

## **CROPS**

UNITE + an authorised adjuvant can be used on all varieties of winter wheat.

Under certain climatic, soil and crop conditions some slight chlorosis and stunting of the crop may occur. Crops will quickly recover and there will be no effect on grain yield.

## **TIMING**

UNITE + an authorised adjuvant should be applied from 1 leaf (GS 11) up to and before the 1st node detectable stage (GS 31).

UNITE + an authorised adjuvant must be applied during periods of active growth i.e. warm temperatures and moist conditions.

## **RATE OF USE**

UNITE should be applied at up to 0.27 kg/ha with an authorised adjuvant.

## **ADJUVANTS**

Authorised adjuvants are esterified and methylated rapeseed types, and those containing alkoxylated fatty amines, polyoxyalkylene glycol and alcohol ethoxylates.

## **SPRAY PROGRAMMES**

Where blackgrass is the main problem, UNITE at a rate of 0.27 kg/ha + an authorised adjuvant should be used in a programme of pre-emergence products, followed by a tank mixture of UNITE + an authorised adjuvant and products with a different mode of action. Control may be reduced if UNITE + an authorised adjuvant is applied alone.

Only one application of UNITE + an authorised adjuvant in a spray programme may be made.

Sequences should only be applied within the label recommendations of every product in the sequence.

Recommended pre-emergence products are:

Approved formulations of pendimethalin (MAPP 13405, 13406, 13441, 13442, 13815, 13816, 13859, 14664, 14712, 15761)

Approved formulations of pendimethalin + flufenacet (MAPP 13914, 13930, 13924, 14106)

Approved formulations of flufenacet + diflufenican (MAPP 13535, 14826, 16195, 15206)

Approved formulations of prosulfocarb (MAPP 16202, 16203, 16204, 16209)

Recommended tank mixtures can be found in the Weed Susceptibility section.

## WEED SUSCEPTIBILITY AND MAXIMUM SIZE CONTROLLED

Apply UNITE + an authorised adjuvant at manufacturers recommended rate in a recommended programme to give the following control.

UNITE should only be used where mixed populations of blackgrass, ryegrass, brome and/or wild oats occur. Where blackgrass is not a significant constituent of the mixture consider using a product based on pyroxsulam alone.

Weed species	Rate g/ha	Optimum timing	Susceptibility
Blackgrass	270	Apply to actively growing plants up to 4 tillers	MS
Ryegrass (from seed)	270	Apply to actively growing plants up to end of tillering	S
Sterile brome	270	Apply to actively growing plants up to 4 tillers	S
Wild oats	270	Apply to actively growing plants up to second node detectable	S
Cleavers	270	Apply to actively growing plants up to 75 mm	MS
Common field speedwell	270	Apply to actively growing plants up to 6 true leaves	S
Forget-me-not	270	Apply to actively growing plants up to 6 true leaves	S
Poppy	270	Apply to actively growing plants up to 6 true leaves	S
Red dead nettle	270	Apply to actively growing plants up to 6 true leaves	S
Shepherd's-purse	170	Apply to actively growing plants up to 6 true leaves	S
Common chickweed	210	Apply to actively growing plants up to 100 mm	S
Field Pansy	210	Apply to actively growing plants up to 4 true leaves	S
Geranium spp	270	Apply to actively growing plants up to 8 true leaves	S
Groundsel	170	Apply to actively growing plants up to 6 true leaves	S
Ivy-leaved speedwell	210	Apply to actively growing plants up to 6 true leaves	S
Mayweed spp	210	Apply to actively growing plants up to 8 true leaves	S
Charlock	170	Apply to actively growing plants up to 6 true leaves	S
Volunteer oilseed rape	170	Apply to actively growing plants up to 6 true leaves	S

Recommended tank mixture partners are:

Approved formulation of	Grass Weed			
	Blackgrass	Ryegrass	Wild Oats	Sterile Brome
Pendimethalin MAPP 13405, 13406, 13441, 13442, 13815, 13816, 13859, 14664, 14712, 15761	✓	✓	✓	✓
Pendimethalin + picolinafen MAPP 12534, 12541, 13455, 13456, 13428, 13454, 14986, 14991	✓	✓	✓	✓

#### NOTES:

Tank mixtures should only be applied within the label recommendations of every product in the tank mixture.

#### JOINT APPLICATION

A joint application is the use of a product in tank mixture or sequence with another product.

**IMPORTANT NOTE:** Joint applications should only be made within the label recommendations of every product in the application.

Only one other product with an ALS inhibitor mode of action may be applied to a cereal crop treated with UNITE.

UNITE may be applied in joint application (**tank mixture or sequences**) to the same cereal crop with one of the following ALS products:

Alias	Jubilee SX
Alias SX	Lorate
Ally Express	Pinnacle
Ally SX	Primus 25 SC
Answer SX	Quantum
Barton WG	Quantum SX
Cleancrop Mondial	Simba SX
Dakota	Slalom
Galaxy	Spitfire
Gartrel	Starane Gold
GF-184	Starane Vantage
Gropper SX	Starane XL
Harmony SX	Taxi
Hiker	Thor
Hunter	Triad



UNITE may be applied in **sequenced** application (**i.e. as separate applications on two separate occasions to the same crop**) to the same cereal crop with one of the following ALS products:

Ally Max SX	Mozaic SX
Avro SX	Parana
BiPlay SX	Pennant
Calibre SX	Presite SX
Chimera SX	Ratio SX
Concert SX	Refine Max SX
Finish SX	Seduce
Harmony M SX	Traton SX
Inka SX	

Apart from these specific joint applications UNITE must NOT be applied with any other product containing an ALS inhibitor, for example amidosulfuron.

Do not use products that only contain a herbicide with an ALS inhibitor mode of action where common chickweed is present. A product containing a non ALS inhibitor should be used.

## SOIL

UNITE may be used on all soil types. On light soils some crop vigour effects may be observed. These are transient symptoms and will not normally affect crop yield.

On highly alkaline soil (pH >7.7) the residual activity and subsequent weed control achieved by UNITE is reduced. UNITE is more persistent in soils of low pH.

## APPLICATION

UNITE + an authorised adjuvant should be applied through tractor-mounted hydraulic sprayers providing they are in good working order and have been calibrated according to the manufacturers' recommendations.

Do not apply through CDA applicators.

## WATER VOLUME

Apply UNITE + an authorised adjuvant in 100 to 200 litres of water per hectare. The lower volume must only be used in open crops on small weeds.

## SPRAY QUALITY

Apply UNITE as a FINE to MEDIUM spray as defined by the BCPC system.

## MIXING

Half fill the spray tank with water and add the required amount of UNITE granules through the top of the spray tank. Fill up the spray tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing.

Where an induction bowl is fitted the following method is suggested.

Half fill the spray tank with clean water and maintain agitation levels at all times.

Ensure adequate suction at outlet in base of bowl and rinse bar is working and will effectively keep clear internal surfaces. Add required amount of UNITE by pouring at a controlled flow directly into opening to suction pipe outlet. Avoid any granules bridging or adhering to internal surfaces whilst being filled. Fill up the spray tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing.

## **TANK CLEANING**

To avoid subsequent injury to crops other than wheat, rye and triticale, all spraying equipment must be thoroughly cleaned both inside and out, using All Clear Extra spray cleaner as follows:

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 the Safe Use of Pesticides on Farms and Holdings. 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.

## **TRADEMARK ACKNOWLEDGEMENTS**

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## **DOW AGROSCIENCES 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.