

# MORAINÉ®

MAPP 19608 PCS 06768

A post-emergence herbicide for annual and perennial weed control in maize, barley, wheat, durum wheat, established grassland, oats, rye, seedling leys and triticale.

An emulsifiable concentrate formulation containing 200 g/l (20.4% w/w) fluroxypyr acid equivalent.

GROUP 4 HERBICIDE



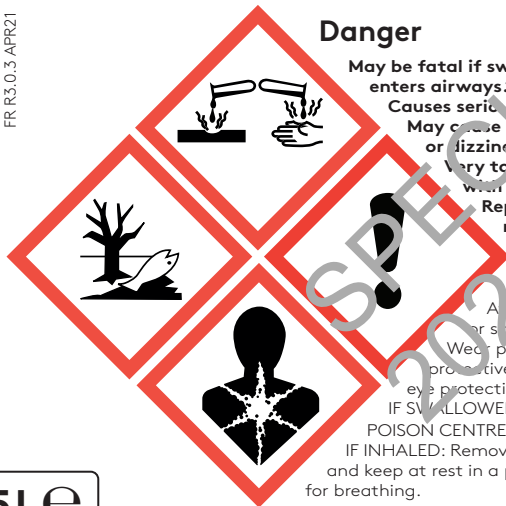
ADAMA

FOR PROFESSIONAL USE ONLY UFI:9F3D-J3X2-F00K-9GV



Scan for Safety Data Sheet or use weblink:  
<https://bit.ly/3nzJ6a7>

FR R3.0.3 APR21



## Danger

May be fatal if swallowed and enters airways.

Causes serious eye damage. May cause drowsiness or dizziness.

Very toxic to aquatic life with long lasting effects.

Repeated exposure may cause skin dryness or cracking.

Keep out of reach of children.

Avoid breathing vapours or spray.

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

IF SWALLOWED: immediately call a POISON CENTRE or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTRE or doctor/physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Do NOT induce vomiting.

Use only outdoors or in a well-ventilated area. Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed, empty containers which can be disposed of as non-hazardous waste.

To protect aquatic organisms, respect an unsprayed buffer zone of 5 m to surface water bodies.

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

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# MORAINÉ®

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SHAKE WELL BEFORE USE

DIRECTIONS FOR USE:

full instructions in this leaflet.

Batch No.: see packaging

Adama Agricultural Solutions UK Ltd

Third Floor East, 1410 Arlington Business Park, Theale, Reading RG7 4SA

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[www.adama.com](http://www.adama.com) | [ukenquiries@adama.com](mailto:ukenquiries@adama.com)

For advice on medical emergencies, fires or major spills telephone the UK National Chemical Emergency Centre on +44 (0)1865 407333

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

OPEN HERE ►

## 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 GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when applying by hand-held equipment.

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

WASH CONCENTRATE from skin or eyes immediately.

IN CASE OF CONTACT WITH EYES, rinse immediately with plenty of water and seek medical advice.

DO NOT BREATHE SPRAY.

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

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

IN CASE OF ACCIDENT OR IF YOU FEEL

UNWELL, seek medical advice immediately (show the label where possible).

### Environmental Protection

Livestock must be kept out of treated areas for at least 7 days following treatment.

If RAGWORT IS PRESENT, FOLLOW THE GUIDANCE IN THE 'DIRECTIONS FOR USE'.

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.

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

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

UK only: 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 water body, 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 used at the time of application. Aim spray away from water.

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### Storage and Disposal

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

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

Keep away from food, drink and animal feedingstuffs.

Keep out of reach of children.

## IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE

**Crops:** Winter & spring wheat, winter & spring barley, winter & spring oats, rye, triticale, durum wheat, forage maize, grassland, permanent grassland, rotational grass and newly sown leys.

**Maximum individual dose (L product/ha)**

**Maximum total dose (L product/ha/crop)**

**Latest time of application**

**Other specific restrictions**

Full details are given in the information box within this leaflet.

**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.**

BK R3.0.3 APR21

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## This leaflet is part of the approved label.

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the UK National Chemical Emergency Centre on +44 (0)1865 407333

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**MAPP19608 PCS 06768**

## IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE

Crop	Maximum individual dose (L product/ha)	Maximum total dose (L product/ha/crop)	Latest time of application
Winter wheat, winter barley	2.0	2.0	Before flag leaf sheath opening stage (GS 47)
Winter oats, rye, triticale, durum wheat	1.0	1.0	Before 2nd node detectable stage (GS 32)
Spring wheat, spring barley	0.75	0.75	Before flag leaf sheath opening stage (GS 47)
Spring oats	0.75	0.75	Before 2nd node detectable stage (GS 32)
Forage maize	1.0	1.0	Before 7 leaves unfolded stage (GS 17)
Grassland	2.0	2.0/year	-
Permanent grassland, rotational grass	2.0	2.0/year	-
Newly sown leys	0.75	0.75/year	-

### Other specific restrictions:

A maximum total dose of 0.75 litres per hectare must be observed for applications made to cereals between crop emergence in the year of planting and 1st February in the year of harvest.

The container must not be re-used for any other purpose.

Livestock must be kept out of treated area for at least 7 days following treatment. If ragwort is present, follow the guidance in the 'Directions for Use'.

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# SAFETY PRECAUTIONS

## Operator Protection

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Keep away from food, drink and animal feedstuffs.

Keep out of reach of children.

## 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.

MORAINE® is a post-emergence aryloxyalkanoic acid herbicide for the control of annual dicotyledonous weeds and perennial weeds in maize, wheat, barley, durum wheat, established grassland, oats, rye, seedling leys and triticale.

The best results are achieved when the weeds are actively growing when uptake of MORAINE will be at the optimum. MORAINE acts by uptake from the leaves, and from there is readily translocated to other parts of the plant, inducing auxin-type characteristics e.g. leaf curling.

### RESTRICTIONS

Do not use on crops undersown with clovers or other legumes.

Crops undersown with grass may be sprayed provided the grasses are tillering.

Do not treat crops suffering stress caused by any factor, e.g. frost, drought etc.

Do not roll or harrow for 7 days before or after treatment.

Avoid drift onto non-target crops.

Where ragwort is present users should consult the Code of Practice on How to Prevent the Spread of Ragwort. Ragwort plants sprayed with this herbicide are more palatable with higher levels of toxins.

Animals should be excluded from treated areas until any ragwort has completely recovered or died and there is no visual sign of the dead weed. Do not include treated ragwort in hay or silage crops.

Do not spray if night temperatures are low or if frost is imminent

Wash equipment thoroughly with water and detergent immediately after use. Traces of MORAINE can cause harm to susceptible crops sprayed later.

Crops should not be re-entered until spray residues are dry.

† Cautions to be followed where 2.0 L/ha of MORAINE is applied to winter wheat and winter barley.

1. Do not tank-mix with other pesticides.
2. Avoid overlapping spray bouts.
3. Straw from cereals sprayed with 2.0 L/ha of MORAINE should not be incorporated into the soil. Treated straw should only be used for animal bedding. Manure from animal bedding should only be used where cereals or grassland is to be grown.
4. Do not follow treated crops with winter sown beans or other legumes.
5. Do not drill any legumes, including peas, in the spring following a treated crop.

### RESISTANCE

MORAINE contains fluroxypyr which belongs to the synthetic auxin family (Group 4 – HRAC/WSSA Classification). There is no known resistance or cross-resistance issues with fluroxypyr and the risk of resistance developing is unlikely.

As part of a resistance management strategy avoid repeated application and use products with different modes of action.

### WEED CONTROL

For weed control details please look under the 'Crop Specific Information' section.

## CROP SPECIFIC INFORMATION (including weed control)

### Cereals

Crop	Timing of application	Rate of use L/ha	Weeds controlled at weed sizes shown
<b>Winter Cereals</b>			
Spring application to winter wheat and winter barley	From the 2 leaf stage of the crop to before flag sheath opening stage (up to and including Zadoks GS 45).	1.0	<p><u>up to flowering:</u></p> <p>Cleavers</p> <p>Common chickweed</p> <p>Common hemp-nettle</p> <p>Field forget-me-not</p> <p><u>up to 6 true leaves:</u></p> <p>Black-bindweed</p> <p><u>up to 4 true leaves:</u></p> <p>Red dead-nettle</p> <p>Henbit dead-nettle</p> <p><u>up to 2 true leaves:</u></p> <p>Knotgrass</p> <p>Common fumitory</p> <p>Chickweed up to 2 true leaves:</p> <p>Reishank</p> <p>Groundsel</p> <p>Mayweed spp</p> <p>Common field speedwell</p> <p>Ivy-leaved speedwell</p> <p>Pale persicaria</p>
Spring application to winter oats, triticale, rye and durum wheat	From the 2 leaf stage of the crop to before 2nd node detectable stage (up to and including Zadoks GS 31)		
Spring application to winter wheat and winter barley	From 3rd node detectable to the flag leaf ligule visible (Zadoks GS 39)	2.0	<p>Volunteer potato shoots. Spray when there is adequate foliage i.e. when shoots are between 10 and 40 cm high.</p> <p>Complete control of top growth will not be achieved but a good degree of stunting can be expected.</p> <p>Best results will be obtained with late timings and high water volumes. See cautions!</p>

Crop	Timing of application	Rate of use L/ha	Weeds controlled at weed sizes shown
<b>Spring cereals - spring application</b>			
Spring wheat and spring barley	From 2 leaf stage of the crop but before flag sheath extending stage (up to and including Zadoks GS 39).	0.75	<u>up to 100 mm:</u> Cleavers Common chickweed Common hemp-nettle <u>up to 50 mm:</u> Field forget-me-not <u>up to 4 true leaves stage:</u> Black-bindweed <u>up to 2 true leaves stage:</u> Common fumitory Knotgrass Corn spurrey <u>checked up to 2 true leaves stage:</u> Mayweed spp Pale nettle Speedwell spp Groundsel Redchick
Spring oats	From 2 leaf stage of the crop but before 2nd node detectable stage (up to and including Zadoks GS 31)		

#### Volume of water:

For cereals apply in 200-400 litres of water per hectare.

#### Forage maize

Apply before the crop reaches 7 leaves unfolded stage and over 20 cm. Optimum timing is between the 3-6 leaf stage. Do not apply once the buttress roots (side roots) have started to develop on the first node.

Rate of use: Apply MORAINÉ at 1.0 L/ha in 200-300 L/ha water.

#### Weed Control

Black nightshade will be controlled from cotyledons up to 6 true leaves stage.

#### Grassland

MORAINÉ can be applied to established grassland or newly sown spring leys when grasses have at least 3 fully expanded leaves. Application should be made in the spring. It is important to ensure that weeds are actively growing at the time of application.

Rate of use on established grassland: Apply MORAINÉ at 2.0 L/ha in 200-400 L/ha water, using the higher volume in dense vegetation.

Rate of use on newly sown leys: Apply MORAINÉ at 0.75 L/ha in 200-400 L/ha water, using the higher volume in dense vegetation.

#### Weed control

Newly sown leys at 0.75 L/ha, weed size 50 mm:

Common chickweed

Established grassland, 2.0 L/ha:

Common nettle - spray before flowering - a reduction in top growth only can be expected.

Dandelion - spray before flowering.

Curled and broad-leaved docks - spray in the spring when docks are 15-20 cm high at the rosette stage. Large established docks may require a follow up treatment in the following season. If the grass has been cut for hay or silage or grazed over winter, leave for 2-3 weeks to allow sufficient re-growth to occur before spraying.



## MIXING AND SPRAYING

For use by tractor mounted/trailed sprayer only.

Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume.

Half-fill the sprayer tank with water, add the required quantity of MORaine. Top up the sprayer tank with water to the required level. The spray mix must be used immediately and agitated continuously during mixing and until application is complete.

### SHAKE WELL BEFORE USING.

On emptying the container 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 container safely.

### Volume of water

Refer to individual crop sections for water volume. Use the higher water volumes on dense crops.

### Spray quality

Apply MORaine as a MEDIUM quality spray (PCPC definition).

### Crop failure

In the event of a cereal crop failure the following crops can be sown: spring cereals, spring oilseed rape, maize and new leys. A minimum interval of 5 weeks is required and there are no cultivation restrictions.

### Rotational crops

All crops can be sown following an application of MORaine.

## DISCLAIMER/CONDITIONS OF SUPPLY

The specified properties of our products and the mode of application stated on this label have been established on the basis of research and experience. Products conform to specification at the time of delivery but, as we exercise no control over their subsequent storage, handling, mixing or use or the weather conditions before, during and after application, all of which may affect the performance of the products, no responsibility or liability will be accepted by us or our re-sellers for any failure in performance, damage or injury to person or property whatsoever arising from the storage, handling, application or use of the products. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in or make recommendations concerning the use of such products. We recommend you contact your dealer to request advice on the suitability of this product for any new and/or unusual growing methods or for new varieties not listed on this label.

### Marketed by

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