



# CLEAVE®



ADAMA



**HERBICIDES**

**Suspo-emulsion**

**MAPP 20911  
PCS 05552**

**H**

FOR PROFESSIONAL USE ONLY



## Ingredients

- Florasulam ..... 2.5 g/L (0.25% w/w)
  - Fluroxypyr (present as 144 g/L fluroxypyr-meptyl) ..... 100 g/L (10% w/w)
- Also contains 1,2-benzisothiazol-3(2H)-one.



## Crops

A post-emergence herbicide for use on winter and spring wheat, winter and spring barley, winter and spring oats and winter rye and triticale.



## Warning

**Causes skin irritation.**

**Causes serious eye irritation.**

**May cause an allergic skin reaction.**

**May cause drowsiness or dizziness.**

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

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Avoid breathing spray.

Wear protective gloves, protective clothing, eye protection and face protection.

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

IF IN EYES: rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

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

Collect spillage.

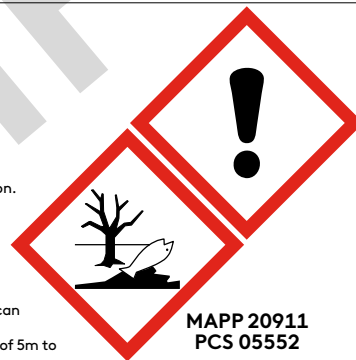
Dispose of contents/container to a licensed hazardous waste disposal

contractor or collection site except for triple rinsed, empty containers which can

be disposed of as non-hazardous waste.

*Ireland only:* To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

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



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## Scan for Safety Data Sheet

Or use the weblink : <https://bit.ly/3ytsOx>

Alternatively, contact your supplier.



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This label is  
compliant with  
the Voluntary  
Initiative  
Guidance.

**NO VARNISH  
AREA**

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ADAMA



## HERBICIDES

Suspo-emulsion

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### SAFETY PRECAUTIONS

#### Operator Protection

*UK only - 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 concentrate.

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

TAKE OFF IMMEDIATELY all contaminated clothing.

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work. WHEN USING DO NOT EAT DRINK OR SMOKE.

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

#### 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.

*UK only:* To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies in line with LERAP requirements.

*UK only:* 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

**GROUP 2 | 4 HERBICIDES**

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.

*UK only:* 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 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 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. THIS MATERIAL AND ITS CONTAINER must be disposed of in a safe way.

KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

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

In the event of emergency, call the National Poisons Information Centre, Beaumont Hospital on 01 809 2166 or 01 837 9964 (8am - 10pm 7 days a week) or the UK National Chemical Emergency Centre on +44 (0)1865 407333 (24 hours, 7 days a week).

### IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

**Crops:** winter wheat, winter barley, winter triticale, winter rye, spring wheat, spring barley, winter oats, spring oats.

**Maximum individual dose; maximum number of applications; latest time of application & other specific restrictions:**

full details are given in the information box within the leaflet attached to the product.

**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.**

Authorised to & marketed by:

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

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

Continue rinsing.

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

Collect spillage.

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.

*Ireland only:* To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

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



**MAPP 20911  
PCS 05552**

**This leaflet is part of the approved label.**

**CLEAVE® (MAPP 20911, PCS 05552)** is a suspo-emulsion formulation containing 2.5g/L (0.25% w/w) florasulam and 100g/L (10% w/w) fluroxypyr (present as 144g/L fluroxypyr-meptyl). It also contains 1,2-benzisothiazol-3(2H)-one.

A post-emergence herbicide for use on winter and spring wheat, winter and spring barley, winter and spring oats and winter rye and triticale.

IMPORTANT INFORMATION			
FOR USE ONLY AS A PROFESSIONAL HERBICIDE			
Crop	Maximum individual dose (L product/ha)	Maximum total dose (L product/ha/crop)	Latest time of application
Winter wheat, winter barley, winter triticale and winter rye	1.5	1.5	Up to and including late boot stage – flag leaf sheath swollen (GS 45)
Spring wheat and spring barley	1.5	1.5	Up to and including flag leaf ligule just visible (GS 39)
Winter and spring oats	1.5	1.5	Up to and including first node detectable (GS 31)
<b>Other specific restrictions</b> For autumn planted crops a maximum total dose of 3.75 g/ha of florasulam must be observed for applications made between crop emergence in the year of planting and February 1st in the year of harvest. The total amount of florasulam applied to a cereal crop must not exceed 7.5 g/ha. This product must not be applied via hand-held equipment.			
<b>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.</b>			

## 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

Cleave® is a contact herbicide which is mainly absorbed by the leaves. The optimum timing is to apply Cleave when the weeds are small and actively growing.

## RESTRICTIONS OR WARNINGS

DO NOT apply when crop is under stress, such as in frosty weather or when frost is expected, insect attack, manganese deficiency, wind damage or where there is possible check from earlier pesticide treatments.

DO NOT overlap spray swaths.

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

Applications of Cleave may cause transient symptoms of phytotoxicity.

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

## RESISTANCE

Cleave contains two active ingredients with different modes of action and therefore the risk of resistance building up is reduced. Cleave contains florasulam which acts by inhibition of acetolactate synthase (ALS) and is classified as a group 2 (formerly group B) herbicide by the Herbicide Resistance Action Committee (HRAC) and fluroxypyr-meptyl classified as a synthetic auxin and acts like indoleacetic acid within the plants. The Herbicide Resistance Action Committee (HRAC) grouped this mode of action in the international HRAC group 4 (formerly group O) (Synthetic Auxins).

Repeated use of herbicides with the same mode of action can increase the risk of strains of weeds developing resistance to these compounds, leading to poor control. In order to minimise the risk, a strategy for preventing and managing such resistance should be adopted.

Growers are advised to apply products containing herbicides with different modes of action in sequence or tank mix where two or more components are active against the target weeds.

Use the recommended rate of Cleave and the correct application timing for the hardest to control weed species present in the field.

The above should be used in conjunction with effective cropping rotation and cultivation techniques e.g. stale seedbed, cultivation and use of non-selective herbicide prior to drilling.

Control of poppy by Cleave is largely due to the florasulam component. Avoid using ALS inhibitors every year in the same field and use in mixtures or sequences with herbicides with a different mode of action which are effective against common poppy.

Further guidance on weed resistance management is available from the Herbicide Resistance Action Committee (HRAC) and Weed Resistance Action Group (WRAG). Follow WRAG Guidelines.

## WEED CONTROL

For best results apply Cleave when weeds are small and actively growing. Weeds emerging after application will not be controlled.

Cleave may be applied to all soil types.

### Weeds controlled

	Cleave 1.0 L/ha	Cleave 1.5 L/ha
Black-bindweed	S up to 3 leaf stage	-
Cleavers	S up to 4 side shoots	S before flower buds visible
Common chickweed	S up to mid flowering	-
Common poppy	S up to 8 leaf stage	-
Fat-hen	R	R
Field forget-me-not	S up to 8 leaf stage	-
Field pansy	R	R
Field penny-cress	S flower buds visible	-
Fumitory	R	R
Hemp-nettle	S up to 4 leaf stage	-
Mayweeds	S up to 8 leaf stage	S up to beginning of stem elongation of main shoot
Red dead-nettle	R	R
Shepherd's purse	S up to before flower buds visible	-
Speedwells	R	R
Volunteer OSR	S up to 6 leaf stage	-

S = Susceptible

R = Resistant

## **CROP SPECIFIC INFORMATION**

Cleave may be applied to all varieties of winter and spring wheat, barley, oats and winter rye and triticale.

### **Winter wheat, barley, rye and triticale**

Apply in the spring from the 3 leaf stage of the crop (GS 13) and up to and including late boot stage-flag leaf sheath swollen stage (GS 45).

### **Spring wheat and barley**

Apply in the spring from the 3 leaf stage of the crop (GS 13) and up to and including flag leaf ligule just visible (GS 39).

### **Winter and spring oats**

Apply in the spring from the 3 leaf stage of the crop (GS 13) and up to and including first node detectable. (GS 31).

## **RATE OF USE AND WATER VOLUME**

Apply Cleave at 1.0-1.5 L/ha in 200-300 litres water per hectare as a MEDIUM spray (BCPC category). The lower rate of Cleave should only be used on susceptible weed species that are small and actively growing at the time of application. For more details see weed susceptibility table above.

Qualified recommendation: lower water volumes of 100 L/ha may also be used, however these have not been supported by effectiveness or crop safety data. As Cleave has contact activity, it is important to achieve a good coverage of the crop when spraying.

## **FOLLOWING CROPS**

Cereals, maize, sugar beet, oilseed rape, grass, carrots, sunflowers and peas may be sown in the calendar year following treatment with Cleave. There is no need to plough before drilling the following crop. In the event of crop failure for any reason these crops may also be sown, although vigour reductions in following crops of oilseed rape may be seen after a dry summer. This will be outgrown and will not result in yield loss.

## **MIXING AND SPRAYING**

For use by tractor mounted/trailed sprayer only.

Ensure the sprayer is clean and in good working order. Calibrate according to the sprayer manufacturers recommendations.

Half fill the spray tank with clean water and begin agitation. Add the required quantity of Cleave to the tank and complete filling. Continue agitation until spraying is complete.

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.

Do not leave the sprayer standing with the spray mixture in it for a long period of time.

## **TANK MIXTURES**

Where tank mixes are used, and unless directed otherwise, the preferred order of addition of products to the spray tank is as follows: water dispersible granules, wettable powders, suspension concentrates (flowables), emulsifiable concentrates, solution concentrates. Each product should be added to the half full sprayer and be fully dispersed before the addition of the next product.

## COMPATIBILITY AND SEQUENCES

### Joint application

A joint application refers to use of one product in tank mixture or sequence with a second product.

Cleave can be applied to a cereal crop in joint application with one of the following alternative ALS inhibitor products (in the Republic of Ireland only products marked with a #). Only one other ALS inhibitor product can be applied to a cereal crop also treated with Cleave. In addition, the maximum total dose of florasulam (see 'other specific restrictions'), taking into consideration the contributions from both applied products, must not be exceeded. Where the product is marked\* the product may be applied in a joint application with Cleave either as a convenience tank mix partner or in sequence. Otherwise, the joint application with Cleave can only be made in sequence and not in tank mix.

Alias SX*	Harmony M SX #	Refine Max SX
Ally Max SX* #	Hatra*	Savvy Premium*
Answer SX*	Horus	Seduce
Avro SX	Hunter	Simba SX*
BiPlay SX* #	Inka SX*	Slalom
Barton WG	Jubilee SX*	Snicket*
Boxer	Lorate* # only in Rep of Ireland	Spitfire* #
Calibre SX #	Mozaic SX	Thor # only in Rep of Ireland
Chimera SX	Othello*	Traton SX*
Concert SX	Parana	
Finish SX #	Pennant	
Galaxy* #	Presite SX #	
GF-184	Ratio SX	

Always read the label of the partner product carefully before use in a joint application. All joint applications must be made within the label recommendations of both products.

Apart from the products listed above, Cleave must not be used in sequence or in mixture with any other product containing an ALS inhibitor.

For information on additional non-ALS inhibitor tank mixes, consult your supplier.

Ireland only: For information on tank mixes, consult ADAMA Agricultural Solutions UK Ltd, your agronomist or your distributor.

### SPRAY TANK CLEANING

To avoid subsequent damage to crops other than cereals immediately after spraying thoroughly clean all spray equipment including inside and outside of the lid using ALL CLEAR EXTRA™ sprayer cleaner according to the following label instructions.

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 boom 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 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. Again flush the boom and hoses and drain tank completely.
  4. Nozzles and filters should be removed and cleaned separately with an 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. Dispose of washings safely follow the 'Code of Practice for Using Plant Protection Products' (DEFRA Publications, 2006). Do not spray onto sensitive crop or land intended for cropping with sensitive crops.
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## **COMPANY ADVISORY INFORMATION**

*This section is not part of the Product Label under the Plant Protection Products Regulations and provides additional advice on product use at the discretion of ADAMA Agricultural Solutions UK Ltd.*

## **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.

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