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Dow AgroSciences



# Broadway® STAR

**HERBICIDE****IMPORTANT INFORMATION  
FOR USE ONLY AS AN AGRICULTURAL HERBICIDE**

Crops/Situations	Maximum Individual Dose	Max Number of applications	Latest Time of Application
Winter wheat, winter rye, triticale	265 g product/Ha	One	Before third node detectable stage (Before BBCH 33)
Spring Wheat	200 g product/Ha	One	Before third node detectable stage (Before BBCH 33)

**Other Specific Restrictions:**

One application of BROADWAY STAR per season

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.****BROADWAY® STAR****WARNING****VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.**

Wear protective gloves

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.

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.**

PCS No. 05582

**SAFETY PRECAUTIONS****Operator protection**

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

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

AVOID EYE AND SKIN CONTACT.

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

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### BROADWAY<sup>®</sup> STAR

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### SAFETY PRECAUTIONS

#### Operator protection

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AVOID EYE AND SKIN CONTACT.

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

Operators must wear suitable protective gloves when handling the product or handling contaminated surfaces.

### **Environmental protection:**

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 of 5m to surface water bodies.

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.

### **Storage and disposal:**

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place away from damp/ sources of heat.

DO NOT RE-USE CONTAINER for any purpose.

### **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**

BROADWAY\* STAR has foliar activity against wild oats, ryegrass, sterile brome and broad-leaved weeds. The ideal timing for application is when the weeds are small and actively growing. As BROADWAY STAR is mainly foliar acting it is essential to ensure good coverage. The effectiveness of BROADWAY STAR may be reduced when soils are very dry, or temperatures are low and subsequently weed growth is slow. Susceptible weeds that germinate after application will not be controlled.

### **NOTES**

Avoid overlapping of spray swaths.

BROADWAY STAR is rainfast in one hour.

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 drift onto susceptible crops, non-target plants or waterways.

Crop injury may occur if BROADWAY STAR is applied in tank mixture with plant growth regulators. A minimum interval of 7 days between applications should be observed.

Under some conditions applications of Broadway Star on spring wheat may have adverse impact on yield.

When applying BROADWAY STAR + an authorised adjuvant in tank mixture with chlorotoluron avoid double spray overlaps on light soil types as a reduction in yield may occur.

To avoid crop injury do not apply BROADWAY STAR in tank mixture with an organophosphate insecticide. A minimum interval of 14 days between applications should be observed.

### **WEED RESISTANCE**

BROADWAY STAR is a product with an ALS inhibitor mode of action (HRAC group B). Strains of some annual grasses (e.g. blackgrass, wild oats and Italian ryegrass) 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 Teagasc, your distributor, crop advisor or product manufacturer.

BROADWAY STAR + an authorised adjuvant should be used in a programme. Following application of a pre-emergence product BROADWAY STAR should be used in tank-mixture with products with a different mode of action.

Control may be reduced if BROADWAY STAR + an authorised adjuvant is applied alone to weeds that have developed resistance.

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

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

Avoid using ALS inhibitors every year in the same field where common poppy, common chickweed or mayweeds are present. Use in mixtures or sequences with herbicides with a different mode of action which are effective against these weeds

## MANAGEMENT OF RESISTANT GRASSWEEDS

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 use ALS inhibitors as the sole chemical method of grass-weed 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 BROADWAY STAR at 265 g/ha + an authorised adjuvant + a grassweed product with an alternative mode of action. This should be applied within 4 weeks of the pre-emergence treatment. Where weather conditions have prevented an application of BROADWAY STAR + authorised 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<sup>1</sup>. 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 grass weeds more than once to any crop.

## FOLLOWING CROPS

Crops that can be sown after a crop treated with BROADWAY STAR:

Autumn	Winter wheat and barley, winter oats, winter triticale, winter rye, oilseed rape, grass, winter beans, brassica plants as transplants
Spring:	Spring wheat, spring barley, spring oats, triticale, rye, spring oilseed rape, sugar beet, potatoes, grass, clover (as part of a grass/clover ley), beans, peas, maize, linseed, brassica plants as transplants, carrots, parsnips

<sup>1</sup>Control may be reduced if Broadway Star + and authorised adjuvant is applied alone to weeds that have developed resistance.

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

Vigour reductions may be seen in following crops of oilseed rape after a dry summer. This will be outgrown and will not result in yield loss.

## **CROP FAILURE**

In the event of a crop failure after a crop has been treated with BROADWAY STAR + an authorised adjuvant before February 1st only the following crops may be planted after ploughing to a depth of at least 15 cm; Spring wheat, spring barley, grass or maize. At least 6 weeks must elapse between treatment and re-drilling.

Where crop failures occurs following an application after February 1<sup>st</sup>, plough and then allow 6 weeks before planting grass or maize.

## **RATE OF USE**

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

BROADWAY STAR should be applied at 265 g/ha with an authorised adjuvant at manufacturers recommended rates.

### **Spring wheat:**

BROADWAY STAR should be applied at 200 g/ha with an authorised adjuvant at manufacturers recommended rates.

## **ADJUVANTS**

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

## **CROPS**

BROADWAY STAR + an authorised adjuvant can be used on all varieties of winter wheat, winter rye and triticale and on all varieties of spring wheat.

## **TIMING**

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

BROADWAY STAR + an authorised adjuvant should be applied from 1 leaf (BBCH 11) up to before third node detectable stage (before BBCH 33).

BROADWAY STAR + an authorised adjuvant must be applied during periods of active growth i.e. warm temperatures and moist conditions<sup>2</sup>.

### **Spring wheat:**

BROADWAY STAR + an authorised adjuvant may be applied from first tiller detectable (BBCH 21) but not before March 1<sup>st</sup>, up to before third node detectable stage (before BBCH 33) but not after May 31<sup>st</sup>.

BROADWAY STAR + an authorised adjuvant must be applied during periods of active growth i.e. warm temperatures and moist conditions<sup>3</sup>.

## **SPRAY PROGRAMMES**

For best results BROADWAY STAR + an authorised adjuvant should be used in a spray programme. Following a pre-emergence treatment, use BROADWAY STAR + an authorised adjuvant and products with a different mode of action. Control may

<sup>2</sup>Control may be reduced if Broadway Star + and authorised adjuvant is applied alone to weeds that have developed resistance.

<sup>3</sup>Control may be reduced if Broadway Star + and authorised adjuvant is applied alone to weeds that have developed resistance.

be reduced if BROADWAY STAR + an authorised adjuvant is applied alone.

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

When applying BROADWAY STAR + an authorised adjuvant in tank mixture with chlorotoluron avoid double spray overlaps on light soil types as a reduction in yield may occur.

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

Recommended pre-emergence products are:

Approved formulations of pendimethalin

Approved formulations of flufenacet + diflufenican

Approved formulations of prosulfocarb

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

## **RATES OF USE, WEED SUSCEPTIBILITY AND MAXIMUM SIZE CONTROLLED**

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

Apply BROADWAY STAR + an authorised adjuvant at 0.5% v/v in a recommended programme as follows:

<b>Weed species</b>	<b>Rate g/ha*</b>	<b>Optimum timing</b>	<b>Susceptibility</b>
Wild oats	265	Apply to actively growing plants up to second node detectable	S
Sterile brome	265	Apply to actively growing plants up to 4 tillers	S
Ryegrass (from seed)	265	Apply to actively growing plants up to end of tillering	S
Common field speedwell	210	Apply to actively growing plants up to 6 true leaves	S
Cleavers	210	Apply to actively growing plants up to 150 mm	S
Ivy-leaved speedwell	210	Apply to actively growing plants up to 6 true leaves	S
Poppy	210	Apply to actively growing plants up to 6 true leaves	S
Charlock	170	Apply to actively growing plants up to 6 true leaves	S
Common chickweed	170	Apply to actively growing plants up to 100mm	S
Field Pansy	170	Apply to actively growing plants up to 4 true leaves	S
Geranium spp	170	Apply to actively growing plants up to 8 true leaves	S
Mayweed spp	170	Apply to actively growing plants up to 8 true leaves	S
Volunteer oilseed rape	170	Apply to actively growing plants up to 6 true leaves	S

\*Where grass weeds are present, rates of BROADWAY STAR lower than 265 g/ha should not be used.

### Spring wheat

Apply BROADWAY STAR + an authorised adjuvant at 0.5% v/v in a recommended programme as follows:

Common field speedwell	200	Apply to actively growing plants up to 6 true leaves	S
Cleavers	200	Apply to actively growing plants up to 150 mm	S
Ivy-leaved speedwell	200	Apply to actively growing plants up to 6 true leaves	S
Poppy	200	Apply to actively growing plants up to 6 true leaves	S
Charlock	170	Apply to actively growing plants up to 6 true leaves	S
Common chickweed	170	Apply to actively growing plants up to 100mm	S
Field Pansy	170	Apply to actively growing plants up to 4 true leaves	S
Geranium spp	170	Apply to actively growing plants up to 8 true leaves	S
Mayweed spp	170	Apply to actively growing plants up to 8 true leaves	S
Volunteer oilseed rape	170	Apply to actively growing plants up to 6 true leaves	S

BROADWAY STAR applied to broadleaved weeds in spring wheat will not provide control of grass weeds. Where grass weeds are present, BROADWAY STAR at 200g/ ha (or lower rates) should not be used.

*Recommended tank mixture partners (winter cereals only) are:*

Approved formulation of	Grass Weed		
	Ryegrass	Wild Oats	Sterile Brome
Pendimethalin	✓	✓	✓
Pendimethalin + picolinafen	✓	✓	✓

### NOTES:

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

For the latest advice, please contact Dow AgroSciences.

### JOINT APPLICATION (winter cereals only)

A joint application is the use of a product in tank mixture or sequence with another product (for joint application please refer to table below).

**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 BROADWAY STAR. Where a second product containing florasulam is applied the maximum total dose of florasulam must not be exceeded.

Accurate	Galaxy <sup>§</sup>
Ally Express	Harmony M SX
Ally Max SX	Harmony SX
Ally SX	Lorate
Biplay SX	Metro 20
Boxer <sup>§</sup>	Pike
Calibre SX	Presite SX
Choir	Quantum
Ergon	Savvy
Finish SX	Starane XL <sup>§</sup>
Finy	Thor

<sup>§</sup> **The maximum total dose of florasulam applied to the crop must not exceed 7.5 g.** For autumn planted crops a maximum total dose of 3.75 g of florasulam must be observed for applications made between crop emergence in the year of planting and February 1<sup>st</sup> in the year of harvest.

Apart from these specific joint applications BROADWAY STAR must NOT be applied with any other product containing an ALS inhibitor, for example amidosulfuron. These sequences must only be used with a robust non-ALS inhibitor autumn herbicide programme. This is especially important where both products are applied in the spring. Do not apply other products containing ALS inhibitors in sequence with BROADWAY STAR for the control of common chickweed in order to avoid increased selection for herbicide resistant individuals.

Following a joint application of BROADWAY STAR and metsulfuron-methyl, treated ground should be ploughed to a depth of 15 cm before establishing winter oilseed rape.

## SOIL

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

## APPLICATION

BROADWAY STAR + an authorised adjuvant<sup>4</sup> 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 BROADWAY STAR + an authorised adjuvant<sup>5</sup> 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 BROADWAY STAR as a FINE to MEDIUM spray as defined by the BCPC system. Nozzles that deliver a MEDIUM to COARSE droplet size e.g. Air Induction types are not recommended as product performance may be reduced.

<sup>4</sup>Control may be reduced if Broadway Star + and authorised adjuvant is applied alone to weeds that have developed resistance.

<sup>5</sup>Control may be reduced if Broadway Star + and authorised adjuvant is applied alone to weeds that have developed resistance.



## **MIXING**

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

### **Option 1: Using an Induction Bowl**

Ensure adequate suction at outlet in base of bowl and rinse bar is working. Add required amount of BROADWAY STAR by pouring the granules at a controlled flow directly into the opening to the suction pipe outlet.

Avoid the granules bridging or adhering to internal surfaces whilst filling.

### **Option 2: Top Tank Loading**

Remove tank lid and filter basket.

Add required amount of BROADWAY STAR by pouring the granules at a controlled flow into the agitating water.

Ensure BROADWAY STAR is dispersed and does not adhere to internal structures such as tank sprinklers.

Add the remainder of the clean water, maintaining agitation until spraying is complete.

## **TANK CLEANING**

To avoid subsequent injury to crops other than cereals, 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 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.

## **TRADEMARK ACKNOWLEDGEMENTS**

BROADWAY, Boxer, Galaxy and Starane are trademark of the Dow Chemical Company (Dow) or an affiliate company of Dow.

All other brand names referred to are trademarks of other manufacturers in which proprietary rights might exist.

## **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.

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



<http://uk.dowagro.com/wp-content/uploads/BROADWAY-STAR-IRL-SDS.pdf>

**Alternatively contact your supplier**

**SPECIMEN**