

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE FOR PROFESSIONAL USE ONLY

Crops: Wheat, barley, triticale, rye and oats.
Maximum individual dose: 100 g product per hectare
Maximum number of treatments: One per crop
Latest time of application: Before flag leaf sheath extending stage (GS 39)
Method of use: Tractor mounted/trailed sprayer

OTHER SPECIFIC RESTRICTIONS:

This product must only be applied from 1st February in the year of harvest until the specified latest time of application. Application has to be performed in post-emergence of weeds, from 3 leaf stage of the crop (GS 13).

READ 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.

For 24 hour emergency information contact the National Poisons Centre.
Telephone 00353 1 837 9964 or 00353 1 809 2166

SAFETY PRECAUTIONS

Operator Protection:

WASH CONCENTRATE from skin or eyes immediately DO NOT BREATHE SPRAY. 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)

To protect aquatic organisms, respect an unsprayed buffer zone of 10m to surface water bodies.

Spray must be aimed away from water

NAUTIUS®

HERBICIDE

NAUTIUS is a water dispersible granule containing 400 g/kg thifensulfuron-methyl and 150 g/kg tribenuron-methyl for spring control of broad-leaved weeds in winter wheat, spring wheat, winter barley, spring barley, winter rye, triticale and oats.



WARNING

VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

Avoid release to the environment.
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 tribenuron-methyl. May produce an allergic reaction.
To avoid risks to human health and the environment, comply with the instructions for use.

PCS No 05187

Registered by:
Rotam Agrochemical Europe Ltd
Hamilton House
Mableton Place
London WC1H 9BB – United Kingdom

Net Contents: 500g

Batch n° and Date of manufacturing: see packaging



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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.

Restrictions

NAUTIUS must not be applied to any crop suffering from stress as a result of drought, waterlogging, low temperatures, pest or disease attack, nutrient or lime deficiency or other factors reducing crop growth.

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

Due to the high level of activity of the herbicide, special care must be taken to avoid damage by drift onto broad-leaved plants outside the target area, or onto ponds, waterways or ditches. Thorough cleansing of equipment is also very important - see below.

Contract agents should be consulted before using on crops grown for seed.
Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

Weed control

NAUTIUS contains thifensulfuron-methyl and tribenuron-methyl, sulfonylurea (ALS inhibitors) herbicides, which have both foliar and root activity against a wide range of broad-leaved weeds.

NAUTIUS is readily translocated within the weed plant, inhibiting growth within hours of treatment, thus preventing competition with the crop. Many weeds show marked colour changes as they die back after treatment, but the time taken for these symptoms to appear and death to occur may vary according to weed species and weather conditions. The full effect of the treatment may not be apparent for up to four weeks. Plants not completely killed are often severely stunted and much less competitive with the crop.

NAUTIUS is most effective when applied to small, actively growing weeds. As larger weeds may become less susceptible, it is important to note the size of each weed species so that application is made at the optimum time. Good spray cover of the weeds must be obtained. Weed control may be reduced when soil conditions are very dry. Residual effects may be reduced by heavy rain. The susceptibility rating of weeds in the following table refer to good spray cover and good growing conditions.

Weed Resistance

This product contains thifensulfuron-methyl and tribenuron-methyl which are ALS inhibitors, also classified by the Herbicide Resistance Action Committee as 'Group B'.

To reduce the risk of developing resistance, 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. When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered resistant to a herbicide if it survives a correctly applied treatment at the recommended dose. Development of resistance with a weed species can be avoided or delayed by alternating (or tank mixing) with suitable products having a different mode of action. A strategy for preventing and managing resistance should be adopted. The Weed Resistance Action Group has produced guidelines and copies are available from the HGCA, CPA, your distributor, crop advisor or product manufacturer.

Susceptible Weeds

The susceptibility rating of weeds in the following table refer to good spray cover and good growing conditions with application made when the weeds are at up to six true leaf stage. Weeds germinating after treatment will not be adequately controlled.

Weed species		Level of susceptibility
Common name	Scientific name	
Black bindweed	<i>Fallopia convolvulus</i>	S
Cleavers	<i>Galium aparine</i>	MS
Scentless Mayweed	<i>Matricaria inodora</i>	S
Common chickweed	<i>Stellaria media</i>	S
Common field speedwell	<i>Veronica persica</i>	MS
Fat-hen	<i>Chenopodium album</i>	S
Common poppy	<i>Papaver rhoeas</i>	S
Field forget-me-not	<i>Myosotis arvensis</i>	S
Field pansy	<i>Viola arvensis</i>	MS
Henbit deadnettle	<i>Lamium amplexicaule</i>	S
Red dead nettle	<i>Lamium purpureum</i>	MS
Shepherd's purse	<i>Capsella bursa-pastoris</i>	S
Speedwell, ivy-leaved	<i>Veronica hederifolia</i>	MS

S = Susceptible (>85% control); MS = Moderately susceptible (75-85% control)

In many situations a dose of 80 g/ha will be sufficient, but if cleavers, speedwells, common poppy or black bindweed are a particular concern, a dose of 100 g/ha should be used.

Soil and Weather

NAUTIUS can be used on all soil types. Weed control may be reduced when conditions are very dry.

Volume and application

BEFORE USING NAUTIUS, SPRAYING EQUIPMENT MUST BE CLEAN AND FREE FROM CONTAMINATION WITH OTHER PESTICIDES.

Application should be made in 200 litres of water per hectare using suitable ground equipment to give good spray cover of the weeds. In thick crops or dense weeds use higher volumes of water (up to 400 litres of water/ha) to ensure good spray cover of the weeds. Use a

conventional field crop sprayer at a pressure of 2 - 3 bars and apply as a MEDIUM spray. Care should be taken not to overlap spray swaths.

Mixing

Quarter fill the spray tank with clean water, start the agitation and add the required quantity of NAUTIUS directly to the tank without prior creaming. Continue agitation while topping up the tank and while spraying.

Compatibility

In any tank-mix add NAUTIUS to the tank first and ensure it is fully dispersed before adding the partner product. Do not allow NAUTIUS to come into contact with undiluted pesticide concentrate. Products should only be tank-mixed if each product can be applied within the label recommendations for its use. For further information contact your Rotam distributor.

'Joint application' with any one of the following other sulfonyl-urea and 'ALS inhibiting' herbicides may be applied to a crop treated with NAUTIUS. 'Joint application' is the use of NAUTIUS in tank mixture or sequence with one of the products listed below:

Amidosulfuron (only cereals may be sown as a following crop)

Flupyrulfuron

Iodosulfuron

Mesosulfuron

Pyroxulam

Requirements and restrictions on the above mentioned product labels must be observed when using in tank-mixture or sequence.

Do not apply NAUTIUS to any cereal crop in sequence or tank-mixture with any product containing any other sulfonylurea herbicide.

When using tank-mixtures take care not to overlap spray swaths.

Do not tank-mix NAUTIUS with chlorpyrifos. Allow a minimum of 14 days between application of NAUTIUS and any chlorpyrifos treatment.

Cultivation (following crop):

No special requirements for cultivation are needed where cereals are to be sown as the following crop.

Before sowing either oilseed rape or field beans, soil should be cultivated to a depth of 20 cm.

Vigour reductions may be seen in following crops of oilseed rape and field beans under certain circumstances e.g. dry summer. Any effects should be outgrown and should not result in yield loss.

Sugar beet may be grown in the spring, following harvest of a preceding cereal crop which has received one of the above sequences.

Crops

CEREALS

Crop Safety

NAUTIUS can be used on all varieties of winter wheat, spring wheat, winter barley, spring barley, winter rye, triticale and oats between the growth stages given below.

Timing

NAUTIUS must only be applied in the spring after 1st of February from the three-leaf stage up to and including the flag-leaf fully emerged stage of crop growth. NAUTIUS should not be applied within 7 days of rolling the crop. Do not apply NAUTIUS more than once to any cereal crop.

Dose

Apply NAUTIUS at 80-100 g of formulated product per hectare.

Following crops

Only cereals, oilseed rape and field bean may be sown in the same calendar year as harvest of a cereal crop treated with NAUTIUS. In spring, following cereal harvest, cereals, oilseed rape or sugar beet may be sown. Where joint application with other sulfonyl urea and 'ALS-inhibiting' herbicides is required, recommendations in the compatibility section must be followed.

Replacement crops

In case of crop failure for any reason, sow only spring small grain cereal. Before sowing, soil should be ploughed and cultivated to a depth of at least 15 cm.

WARNINGS

EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE BY DRIFT ONTO BROAD-LEAVED PLANTS OUTSIDE THE TARGET AREA OR ONTO SURFACE WATERS OR DITCHES.

SPRAYING EQUIPMENT SHOULD NOT BE DRAINED OR FLUSHED ONTO LAND PLANTED WITH OR INTENDED FOR PLANTING WITH TREES OR CROPS OTHER THAN CEREALS.

SPRAY TANK CLEAN-OUT

TO AVOID SUBSEQUENT DAMAGE TO CROPS OTHER THAN CEREALS, IMMEDIATELY AFTER SPRAYING ERGON THOROUGHLY CLEAN ALL SPRAY EQUIPMENT, INCLUDING INSIDE AND OUTSIDE OF LID, USING A PROPRIETARY SPRAYER CLEANER FOR USE WITH SULFONYLUREAS ACCORDING TO THE FOLLOWING PROCEDURE:

1. Immediately after spraying, drain tank completely. Wash any contamination off the outside of the sprayer with clean water.
2. Rinse the inside of the tank with clean water and flush at least one tenth of the spray tank volume through the boom and hoses. Drain tank completely.
3. Half-fill the tank with clean water and add the correct quantity of a proprietary sprayer cleaner for use with sulfonyl ureas. Agitate and then flush the boom and hoses with the solution. Top up completely with water and allow to stand for 15 minutes with agitation. Again flush the booms and hoses and drain tank completely (if it is not possible to drain the tank completely, repeat step 3 before going on).
4. Remove nozzles and filters and soak in a bucket containing a proprietary sprayer cleaner for use with sulfonyl ureas at the same concentration as that used for the sprayer.
5. Rinse tank again with clean water and flush at least one tenth of the tank volume through the booms and hoses. Drain tank completely.

GENERAL NOTES:

Consult label tank clean-up procedures for all tank mix partners and be sure to use the most rigorous procedure recommended.

NOTICE TO BUYER

All goods supplied by us are of a high grade and we believe them to be suitable for any purpose for which we expressly supply them, but as we cannot exercise control over their mixing or use, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use.