



Starane[®]

Hi-Load HL

HERBICIDE

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GROUP 4 HERBICIDE

Product Registration Number: MAPP No. 16557

An emulsifiable concentrate containing 480 g/litre (45.6% w/w) fluroxypyr as the 1-methyl heptyl ester (333 g/litre acid equivalent).

A selective post-emergence herbicide for use on WINTER and SPRING CEREALS, FORAGE MAIZE, GRASS SEED CROPS and NEWLY SOWN LEYS to control a range of perennial and annual weeds, including CLEAVERS, COMMON CHICKWEED, FIELD FORGET-ME-NOT, COMMON HEMP-NETTLE and BLACK-BINDWEED.

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

PROTECT FROM FROST
READ DIRECTIONS FOR USE ON ATTACHED LEAFLET

IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop

Wheat (winter), barley (winter), oats (winter), rye (winter), wheat (spring), barley (spring), oats (spring), rye (spring), triticale, durum wheat, spelt, forage maize, grassland, grassland (seed crops).

Maximum Individual Dose: }

Maximum Total Dose: } Full details are given in the Important

Latest Time of Application: } Information area on the attached leaflet

Other Specific Restrictions: }

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.

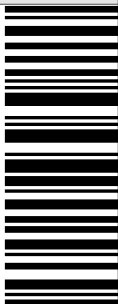
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Starane® Hi-Load HL

Contains Reaction mass of N,N-dimethyldecan-1-amide and N,N-dimethyloctanamide

UFI: 85X4-901Q-900F-5660

**WARNING**

May cause allergic skin reaction

Causes serious eye irritation

May cause respiratory irritation

Very toxic to aquatic life with long lasting effects

Avoid breathing mist / vapours / spray.

Wear protective gloves / protective clothing / eye protection / 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.

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.

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

**Non-printed area on page 2 ONLY
(on the back of 2D code area printed
on the front page)**

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 CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection. WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH CONCENTRATE from eyes or skin 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 farm yards and roads.)

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

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within the distance specified for the crop to the top of the bank of a static or flowing water body, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water. ALL CROPS WITH A BUFFER ZONE GREATER THAN 5M ARE NOT ELIGIBLE FOR BUFFER ZONE REDUCTION UNDER THE LERAP HORIZONTAL BOOM SPRAYERS SCHEME.

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 CRD's published guidance or the statutory buffer zone as appropriate to the crop must be maintained. NOTE ALL BUFFER ZONES OF MORE THAN 5M ARE NOT REDUCIBLE. The results of the LERAP must be recorded and kept available for three years.

Storage and disposal:

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

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 label is compliant with the CPA
Voluntary Initiative Guidance.



IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop	Maximum Individual dose (L product/ha)	Maximum Total Dose (L product/ha)	Latest Time of Application	Aquatic Buffer Zone Distance
Wheat (winter), barley (winter)	0.6	0.6	Before flag leaf sheath opening stage (GS45 inclusive)	5m
Triticale	0.6	0.6	Before flag leaf sheath extending stage (GS39 inclusive)	5m
Rye (winter), spelt, oats (winter), durum wheat	0.6	0.6	Before second node detectable stage (GS31 inclusive)	5m
Wheat (spring), barley (spring)	0.45	0.45	Before flag leaf sheath extending stage (GS39 inclusive)	5m
Oats (spring), rye (spring)	0.45	0.45	Before second node detectable stage (GS31 inclusive)	5m
Forage maize	0.6	0.6	Before seven leaves unfolding stage	5m
Grassland, grassland (seed crop)	0.45	0.45 (see Other Specific Restrictions)	-	5m

Other Specific Restrictions:

A maximum total dose of 0.45 litres per hectare must be observed for applications made to crops between crop emergence in the year of planting and 1st February in the year of harvest.

DO NOT apply via hand-held equipment.

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.

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.

NOTES

Keep livestock out of treated areas for at least 3 days and until poisonous weeds such as ragwort have died and become unpalatable.

For best results apply STARANE HI-LOAD HL when weeds are actively growing. In newly-sown crops, seedling and small weeds are more susceptible to STARANE HI-LOAD HL and will respond quicker when treated at this stage. Vigorous crop competition enhances control of the more resistant weeds and prevents weeds which germinate after application from becoming a problem in the crop.

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

DO NOT apply to crops undersown with clover or other legume-containing mixtures.

STARANE HI-LOAD HL is of low volatility and is therefore not subject to vapour drift.

DO NOT spray in windy weather and avoid drift onto non-target crops/areas.

DO NOT treat crops under stress. Stress can be caused by many factors including frost, drought, waterlogging, trace element deficiency, disease and pest attack etc.

Avoid overlapping spray swaths.

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

DO NOT spray if night temperatures are low ($<6^{\circ}\text{C}$) or if frost is imminent.

DO NOT roll or harrow 7 days before or after treatment.

Wash equipment thoroughly with water and detergent immediately after use as traces of STARANE HI-LOAD HL can cause harm to susceptible crops sprayed later.

MIXING

Add the appropriate amount of STARANE HI-LOAD HL to clean water in a half-filled sprayer tank, mix thoroughly and add the remainder of the water. The spray mix must be used immediately and agitated continuously during mixing and until application is complete.

VOLUME

Using standard nozzles the recommended spray volume is 200 to 400 litres of water per hectare. The lowest water volume should only be used in very open crops on small weeds. On later applications where the crop is dense, the spray volume should be increased to 400 litres water per hectare. The minimum recommended pressure is 2 to 3 bars.

SPRAY QUALITY

Apply STARANE HI-LOAD HL as a MEDIUM spray as defined by the BCPC system.

MODE OF ACTION AND RESISTANCE MANAGEMENT

Fluroxypyr is the active substance included in STARANE HI-LOAD HL. Fluroxypyr belongs to the synthetic auxin herbicide family (Group "4" according to HRAC classification). In Europe, there is no resistance or cross-resistance issue to fluroxypyr of any tested biotype of the susceptible weeds species (cleavers, Common chickweed, Common hemp nettle, field bindweed).

The risk of resistance development of broad leaved weeds to fluroxypyr is unlikely and STARANE HI-LOAD HL can be used for controlling all biotypes - including those which are resistant to other modes of actions (e.g. Common chickweed, Common hemp nettle).

In order to reduce the risk of resistance developing, consider using products of different mode of action when carrying out repeat treatments.

EFFICACY

STARANE HI-LOAD HL controls susceptible broad leaved weeds which are already emerged. The efficacy is not influenced by the soil type but it is influenced by the weed species, the weed growth stage (young weeds are more susceptible) and the weather conditions. Efficacy is optimized under good growing conditions. Efficacy can be reduced by cold temperatures (less than 10°C) or dry conditions.

CEREALS

CROPS AND TIMING

Winter cereals

STARANE HI-LOAD HL alone can be applied from the two leaf stage of the crop up to and before the following growth stages:

Winter wheat and winter barley: before flag leaf sheath opening stage (GS12-45 inclusive).

Triticale: before flag leaf sheath extending stage (GS12-39 inclusive).

Winter oats, winter rye, spring oats, spring rye, durum wheat and spelt: before second node detectable (GS12-31 inclusive).

WINTER AND SPRING APPLICATION TO WINTER CEREALS

Wheat, barley, oats, rye, durum wheat, triticale and spelt

RATES OF USE, WEED SUSCEPTIBILITY AND MAXIMUM SIZE CONTROLLED

Product and rate of use per hectare	0.6 litre STARANE HI-LOAD HL
Cleavers Common chickweed Common hemp-nettle Field forget-me-not	Flowering
Black bindweed Henbit dead-nettle Red dead-nettle Common fumitory Knotgrass	6 true leaves 4 true leaves 4 true leaves 2 true leaves 2 true leaves
Common field-speedwell Groundsel Ivy-leaved speedwell Mayweed spp Pale persicaria Redshank	Checked at 2 true leaf stage only

Product and rate of use per hectare	0.6 litre STARANE HI-LOAD HL
Bugloss Charlock Common poppy Corn marigold Fat-hen Field penny-cress Scarlet pimpernel Shepherd's-purse Small nettle Wild radish Volunteer rape	Resistant

SPRING APPLICATION TO SPRING CEREALS

CROPS AND TIMING

Spring cereals

Spring wheat, spring barley, spring oats, spring rye

STARANE HI-LOAD HL alone can be applied from the two leaf stage of the crop up to and **before** the following growth stages:

Spring wheat and spring barley: before **flag** leaf sheath opening stage (GS12-39 inclusive).

Spring oats: before second **node** detectable (GS12-31 inclusive).

RATES OF USE, WEED SUSCEPTIBILITY AND MAXIMUM SIZE CONTROLLED

Product and rate of use per hectare	0.45 litre STARANE HI-LOAD HL
Cleavers Common chickweed Common hemp-nettle Field forget-me-not	100 mm 100 mm 100 mm 50 mm
Black bindweed Common fumitory Knotgrass	4 true leaves 2 true leaves 2 true leaves
Corn spurrey Groundsel Mayweed spp Pale persicaria Redshank Speedwell spp	2 true leaves Checked at 2 true leaf stage only
Common orache Common poppy Corn marigold Fat-hen Shepherd's-purse Small nettle	Resistant

NEWLY SOWN LEYS

WEEDS CONTROLLED

Weed	Rate of use litres/ha	Weed size controlled
Common chickweed	0.45	50 mm

RATE OF USE AND WATER VOLUME

Apply STARANE HI-LOAD HL at 0.45 litre/ha in a spray volume of 200 to 400 litres of water per hectare to give good coverage of the weed.

Use the higher volume of water where weeds, especially common chickweed, are large at the time of spraying and where the grass is dense.

TIMING

Application timing is crucial and STARANE HI-LOAD HL should be applied when weeds are actively growing.

Autumn application

Apply STARANE HI-LOAD HL in early autumn when the grasses have at least 3 fully expanded leaves. Best control is achieved if STARANE HI-LOAD HL is applied when the weeds are growing actively.

Spring application

Apply STARANE HI-LOAD HL to newly sown spring leys when grasses have at least 3 fully expanded leaves.

GRASS FOR SEED

Autumn application

Apply STARANE HI-LOAD HL in early autumn when the grasses have at least 3 fully expanded leaves. Best control is achieved if STARANE HI-LOAD HL is applied when the weeds are growing actively.

Spring application

Apply STARANE HI-LOAD HL to newly sown spring leys when grasses have at least 3 fully expanded leaves.

FORAGE MAIZE

NOTES

DO NOT apply if the crop is beyond the recommended growth stage.

Avoid spray boom overlaps or applications when the crop is under stress.

Consult Corteva Agriscience for advice concerning tank mixing.

WEEDS CONTROLLED

STARANE HI-LOAD HL will control the following weed species. Those germinating after treatment will not be controlled.

	STARANE HI-LOAD HL at 0.6 L/ha
Black nightshade to 4 true leaves	S

TIMING

STARANE HI-LOAD HL can be applied from the 3 leaf stage (GS13) to before the 7 leaves unfolding stage (GS16).

DO NOT apply once the buttress roots (side roots) have started to develop on the first node.

NEIGHBOURING CROPS

STARANE HI-LOAD HL is of low volatility and is therefore not subject to vapour drift.

DO NOT spray in windy weather and avoid spray drift onto non-target crops. Spray drift can be injurious to various susceptible crops so that a 3-5 m buffer zone must be observed when spraying close to vines, orchards, sunflower, legumes, vegetable crops, ornamentals, linseed, sugar beet, potatoes etc.

SUCCEEDING CROPS

Crop failure

In the event of a cereal crop failure the following crops can be sown: Spring cereals, spring oilseed rape, maize, onion, cultivated poppies 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 STARANE HI-LOAD HL.

Consider all herbicides used on the treated field before deciding the new crop to be sown.

For the latest advice please contact Corteva Agriscience or the product supplier.

TANK WASHING

Traces of STARANE HI-LOAD HL can cause harm to susceptible crops sprayed later.

Carefully rinse the bottle after use and pour the rinsing water into the spray tank. Ensure the empty bottle cannot be re-used.

Following use thoroughly wash the spraying equipment. If there is any contamination on the outside of the sprayer wash with clean water. Rinse the inside of the spray tank with clean water and pump through spray pipes and nozzles to remove any contamination. Re-fill spray tank with a minimum of 10% of the total spray tank volume and re-circulate water for approximately 10 minutes. Safely dispose of spray rinse water.

Dispose of empty containers responsibly.

COMPANY ADVISORY INFORMATION

The following information does not form part of the product label under the UK plant protection products regulations and provides additional advice on product use at the discretion of Corteva Agriscience.

TRADEMARK ACKNOWLEDGEMENTS

STARANE HI-LOAD HL is a trademark of Corteva Agriscience and its affiliated companies.

All other brand names are trademarks of other manufacturers for which proprietary rights may exist.

EXTENSION OF AUTHORISATION

This extension of the authorised use provides for the use of STARANE HI-LOAD HL in respect of crops and situations other than those included on the product label (above). Neither the efficacy nor the phytotoxicity of the product for which this Extension of Authorisation for Minor Uses has been granted have been assessed and, as such, the user bears the risk in respect of failures concerning its efficacy and phytotoxicity.

IMPORTANT: When applying this product under the terms of this Extension of Authorisation for Minor Uses, comply with any resistance guidance or restrictions stated on the product label.

Total reliance on one pesticide will hasten the development of resistance. Pesticides of different chemical types or alternative control measures should be included in the planned programme. Alternating with different modes of action is a recognised anti-resistance strategy.

This Extension of Authorisation relates to the use of STARANE HI-LOAD HL (M16557) in crops of bulb onion, garlic, shallot, leek and salad onion.

Environmental protection:

- Extreme care must be taken to avoid spray drift on to non-crop plants outside of the target area.
- Since there is a risk to aquatic life from use, direct spray from horizontal boom sprayers must not be allowed to fall within 5m of the top of the bank of any static or flowing waterbody or within 1m of the top of a ditch which is dry at the time of application. Spray must be aimed away from water.
- Buffer zones must be measured in accordance with the guidance set out in the booklet 'Local Environment Risk Assessment for Pesticides - Horizontal Boom Sprayers' available from HSE Chemicals Regulation Directorate's website and any amendments made to it.
- The results of the LERAP must be recorded in written form and must be available for a period of three years for inspection to any person entitled to exercise enforcement powers under or in connection with the Plant Protection Products Regulations 2011 or the Plant Protection Products (Sustainable Use) Regulations 2012. (An electronic record will satisfy the requirement for a written record, providing it is similarly available for inspection and can be copied).

STARANE HI-LOAD HL must only be applied in accordance with the terms of this extension of authorisation, the product label and/or leaflet and any additional guidance on extensions of authorisation.

This product must not be applied via hand-held equipment.

IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop	Maximum Individual Dose	Maximum Total Dose	Latest Time of Application	Aquatic Buffer Zone Distance
Outdoor crops of bulb onion, garlic, shallot	0.3 litres product per hectare	0.9 litres product per hectare per crop	42 days before harvest	5m
Outdoor crops of leek, salad onion	0.18 litres product per hectare	0.9 litres product per hectare per crop	28 days before harvest	5m

Other Specific Restrictions:

- A maximum total dose of 0.9 L/ha/year must not be exceeded on the same field.
- For use on outdoor crops of bulb onion, garlic and shallot a minimum interval of 7 days applies between applications.
- For use on outdoor crops of leek and salad onion a minimum interval of 4 days applies between applications.

This product must not be applied via hand-held equipment.

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Corteva Agriscience 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.

For further information please contact Corteva Agriscience

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



<https://www.corteva.co.uk/content/dam/dpagco/corteva/eu/gb/en/files/sds/STARANE-HILOAD-SDS.pdf>

Alternatively contact your supplier

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GROUP	4	HERBICIDE
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IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop	Wheat (winter), barley (winter), oats (winter), rye (winter), wheat (spring), barley (spring), oats (spring), rye (spring), triticale, durum wheat, spelt, forage maize, grassland, grassland (seed crops).
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Maximum Individual Dose: }

Maximum Total Dose: } Full details are given in the Important

Latest Time of Application: } Information area on the attached leaflet

Other Specific Restrictions: }

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