Use: A residual herbicide for the control of a range of broad-leaved and grass weeds including cleavers, in winter oilseed rape.

Formulation: A suspo-emulsion, containing 200 g/l dimethenamid-p, 200 g/l metazachlor and 100 g/l quinmerac.

Pack Size:
Shadow: 5 litres in outers of four.
Elk and Katamaran Turbo: 10 litres in outers of two

LERAP: Category B (See Appendix 12 for further information).

Recommended Crops: Winter oilseed rape

Maximum Total Dose: 2.5 litres of product per hectare

Maximum Number of Treatments: One per crop

Spray Quality: MEDIUM

Latest Time of Application: Before 7th true leaf stage (GS 17)

Water Volume: Minimum of 200 litres of water per hectare.

Aerial Application: No

Compatibility: For details of compatibilities contact your distributor, local BASF representative, the BASF Technical Services Hotline: 0845 602 2553 or visit our website on: www.agriCentre.basf.co.uk

Major changes since last printing: Restriction of metazachlor - a maximum total dose of 1000g metazachlor/hectare may only be applied every third year on the same field.

This product label is compliant with the CPA Voluntary Initiative Guidance
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.

Elk/Katamaran Turbo/Shadow is a residual herbicide that can be used on all varieties of winter oilseed rape for the control of a range of broad leaved and grass weeds.

1. RESTRICTIONS/WARNINGS

When Elk/Katamaran Turbo/Shadow is applied pre emergence, it is important for crop safety to ensure physical separation of the herbicide from the seed. Ensure that the seed is well covered with soil to a depth of 15 mm. With direct drilled crops, harrow across the slits to cover the seed before spraying.

DO NOT disturb the soil after application.

DO NOT apply to broadcast crops until the crop has attained the two fully expanded cotyledon growth stage.

Elk/Katamaran Turbo/Shadow is suitable for use on all soil types as defined by Soil Texture (85) System, except sands and very light soils and soils containing more than 10% organic matter.

DO NOT apply to stony soils; i.e. stones, flints or chalk readily visible on surface. On brashy and stony soils, Elk/Katamaran Turbo/Shadow may cause some reduction in crop vigour and/or plant stand.

DO NOT apply to cloddy seedbeds. Seedbeds must have a fine, firm tilth for optimum weed control. Loose or cloddy seedbeds must be consolidated prior to application.

DO NOT apply when heavy rain is forecast and DO NOT use on waterlogged soil or soils prone to waterlogging. Crop thinning or reductions in crop vigour can occur if there is very wet weather after application. Where a crop check has occurred, this normally grows out after a few weeks and yields are normally unaffected.

Soil moisture is required for effective weed control via root uptake. Residual control may be reduced under prolonged dry conditions.

Weeds germinating from depth may not be controlled.

DO NOT apply Elk/Katamaran Turbo/Shadow to crops suffering from stress, which may be caused, for example, by pests, disease, waterlogging, poor seedbed conditions or previous chemical treatment.

Under frosty conditions a transient scorch may occur.

Avoid spray drift on to neighbouring crops and plants outside the target area.

Care should be taken to avoid overlap of spray swaths

To reduce the risk of movement of Elk/Katamaran Turbo/Shadow to water:-

a. On clay soils, create a fine, consolidated seedbed to slow the downward movement of water.

b. DO NOT apply Elk/Katamaran Turbo/Shadow to dry soil. Moist soils have fewer and smaller cracks.

c. DO NOT apply Elk/Katamaran Turbo/Shadow if heavy rain is forecast, wait until after the event.
2. **WEED CONTROL**

Elk/Katamaran Turbo/Shadow is taken up via cotyledons and roots and takes maximum effect before, or shortly after, weed emergence. Optimum results are obtained from applications made to fine, firm and moist seedbeds.

2.1 **Susceptibility of weeds to single applications of Elk/Katamaran Turbo/Shadow.**

<table>
<thead>
<tr>
<th>Weed species</th>
<th>Application pre-emergence of weed 2.5 l/ha</th>
<th>Application post-emergence of weed 2.5 l/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black-grass</td>
<td>MS</td>
<td>1 true leaf (MR)</td>
</tr>
<tr>
<td>Chickweed, Common</td>
<td>S</td>
<td>2 true lvs</td>
</tr>
<tr>
<td>Cleavers</td>
<td>S</td>
<td>2 Whorls</td>
</tr>
<tr>
<td>Crane’s-bill, Cut-leaved</td>
<td>S</td>
<td>Cotyledon</td>
</tr>
<tr>
<td>Crane’s-bill, Round-leaved</td>
<td>S</td>
<td>Cotyledon</td>
</tr>
<tr>
<td>Crane’s-bill, Small-flowered</td>
<td>S</td>
<td>Cotyledon</td>
</tr>
<tr>
<td>Dead-nettle, Red</td>
<td>S</td>
<td>Cotyledon (MS)</td>
</tr>
<tr>
<td>Forget-me-not, Field</td>
<td>MS</td>
<td>Pre-em</td>
</tr>
<tr>
<td>Mayweed, Scented</td>
<td>S</td>
<td>Pre-em</td>
</tr>
<tr>
<td>Pansy, Field</td>
<td>MR</td>
<td>Pre-em</td>
</tr>
<tr>
<td>Poppy, Common</td>
<td>S</td>
<td>Pre-em</td>
</tr>
<tr>
<td>Shepherd’s-purse</td>
<td>S</td>
<td>2 true leaf (MS)</td>
</tr>
<tr>
<td>Speedwell, Common Field</td>
<td>S</td>
<td>2 true lvs</td>
</tr>
<tr>
<td>Speedwell, Ivy-leaved</td>
<td>S</td>
<td>Pre-em</td>
</tr>
</tbody>
</table>

S = Susceptible
MS = Moderately Susceptible
MR = Moderately Resistant
R = Resistant
Pre-em = Pre-emergence of weed

2.2 **Resistance management.**

Strains of some annual grasses (e.g. Black-grass, wild-oats, and Italian rye-grass) 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 produced by the Weed Resistance Action Group (WRAG) and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer.

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. Use products with different modes of action and from different chemical groups in sequence or tank-mix, in conjunction with effective cropping rotation and cultivation techniques. In all cases the recommended rate of use should be adhered to. Follow WRAG guidelines.
Key elements of the resistance management strategy for Elk/Katamaran Turbo/Shadow:

- Always follow WRAG guidelines for preventing and managing herbicide resistant weeds.
- Maximise the use of cultural control measures wherever possible (e.g. crop rotation, ploughing, stale seedbeds, delayed drilling, etc).
- Use tank mixes or sequences of effective herbicides with different modes of action within individual crops, or successive crops.
- For the control of herbicide resistant grass weeds, always use Elk/Katamaran Turbo/Shadow in sequence with other effective graminicides with different modes of action.
- Monitor fields regularly and investigate the reasons for any poor control.

3. CROPS

3.1 Time of application

Elk/Katamaran Turbo/Shadow may be applied pre- or post-emergence of the crop but for optimum activity application must be pre-emergence or early post-emergence of the weeds.

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

Pre-crop emergence applications:-

- should be made before the crop seed chits, which in optimum conditions may occur within 48 hours of drilling.
- should only be made on medium and heavy soils (as defined by the ADAS Soil Texture (85) System).

DO NOT USE Elk/Katamaran Turbo/Shadow pre-crop emergence when any of the following conditions apply:-

- When crop has been broadcast.
- The crop seed has started to germinate (i.e. 48 hours after drilling)
- Seed is not covered with 15 mm of soil;
- When heavy rain is forecast;
- Dry, cloddy or open seedbeds;
- Late drilled crops – as a guide these are crops drilled later than the first week in September in Northern England and Scotland and later than mid-September in the rest of the UK;
- Stony soils, i.e. stones, flints or chalk are readily visible on the soil surface.

Post crop emergence applications can be made in the following circumstances:

- When the majority of the crop has two fully expanded cotyledons and up to the sixth true leaf growth stage (GS 16);
- On light, medium and heavy soils (as defined by the ADAS Soil Texture (85) System);
- When seedbed conditions are not ideal for pre-emergence use;
- When the seed is not covered with 15 mm of soil (as with broadcast crops);
- To light, stony, brashy or gravelly soils, particularly if heavy rainfall was forecast for the period following drilling;
- When late-drilled crops are to be treated.
3.2 Rate of application

Apply 2.5 litres/hectare Elk/Katamaran Turbo/Shadow in a minimum of 200 litres of water per hectare.

Qualified minor use recommendation
Elk/Katamaran Turbo/Shadow may be applied at 2.5 l/ha in 100 litres of water per hectare; however this recommendation has not been supported by effectiveness or crop safety data.

4. FOLLOWING CROPS

4.1 Following crops after normally harvested winter oilseed rape
Any crop can follow normally harvested winter oilseed rape treated with Elk/Katamaran Turbo/Shadow. Ploughing is not essential before sowing a following cereal crop, but is required for all other crops.

4.2 Re-drilling due to crop failure
In the event of crop failure, the following crops may be sown after cultivating to a depth of at least 15 cm:

Re-drilling the same autumn: Winter wheat (excluding durum).
Re-drilling the following spring: Cereals (excluding durum wheat), spring oilseed rape, peas and field beans.

5. MIXING AND SPRAYING

5.1 Application
Apply as a MEDIUM spray, as defined by BCPC. Elk/Katamaran Turbo/Shadow should be applied in a minimum water volume of 200 litres/ hectare.

5.2 Mixing
Never prepare more spray solution than is required.
Fill the spray tank three quarters full with water and start the agitation. To ensure thorough mixing of the product, invert the container several times before opening. Add the required quantity of Elk/Katamaran Turbo/Shadow to the spray tank while re-circulating. Fill up the tank with water and continue agitation until spraying is completed.
On emptying the product 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.

5.3 Sprayer cleaning
Wash sprayer thoroughly immediately after use, using clean water and following the sprayer cleaning guidance provided by the equipment manufacturer.

6. CONTAINER AND STORAGE
Shadow is supplied in 5 litre containers.
Elk/Katamaran Turbo are supplied in 10 litre containers.
Store in a suitable pesticide store, keep dry and protect from frost.
7. 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) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate or contaminated surfaces.

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

WASH CONCENTRATE from skin or eyes immediately.

WASH HANDS before meals and after work.

WHEN USING DO NOT EAT, DRINK OR SMOKES.

IF YOU FEEL UNWELL seek medical advice (show the label if 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.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1m of the top of a ditch which is dry at the time of application. Aim spray away from water.

This product qualifies for inclusion within the Local Environmental 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 must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years.

KEEP LIVESTOCK out of treated areas until poisonous weeds such as ragwort have died and become unpalatable.

Storage and disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

DO NOT RE-USE CONTAINER for any purpose.

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

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.
8. DPD REGULATIONS (CHIP 3)

Elk® / Katamaran Turbo® / Shadow®
A suspo-emulsion containing 200 g/l dimethenamid-p, 200 g/l metazachlor and 100 g/l quinmerac

MAY CAUSE SENSITISATION BY SKIN CONTACT
VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT
KEEP OUT OF REACH OF CHILDREN
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING TUFFS
WHEN USING DO NOT EAT, DRINK OR SMOKE
AVOID CONTACT WITH SKIN
THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY
WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES
IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL
USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION

To avoid risks to man and the environment, comply with the instructions for use

This product is approved under the Control of Pesticides Regulations 1986.

9. IMPORTANT INFORMATION

IMPORTANT INFORMATION
FOR USE ONLY AS AN AGRICULTURAL HERBICIDE
CROPS: Winter oilseed rape
MAXIMUM INDIVIDUAL DOSE: 2.5 litres product / ha
MAXIMUM TOTAL DOSE: 2.5 litres product / ha / crop
LATEST TIME OF APPLICATION: Before 7th true leaf stage (GS 17)

Other specific restrictions:  
A maximum total dose of 1000g metazachlor/hectare may only be applied every third year on the same field.

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.

Elk MAPP No. 13974
Katamaran Turbo MAPP No. 13999
Shadow MAPP No. 14000