Stomp® Aqua

A herbicide for the control of a range of grass and annual broad-leaved weeds in a wide range of crops.

A capsule suspension containing 455 g/litre pendimethalin

Risk and Safety Information

Warning:
May cause an allergic skin reaction.
Very toxic to aquatic life with long lasting effects.

Avoid breathing spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
If on skin (on hair): wash with plenty of soap and water.
If skin irritation or rash occurs: call a poison centre or doctor/physician.
Dispose of contents/container to a licensed waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

Contains pendimethalin. May produce an allergic reaction.

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

UN 3082
Environmentally hazardous substance, liquid, N.O.S. (contains pendimethalin)
Marine pollutant

Supplied by:
BASF Ireland Limited
P.O. Box 4, Earl Road
Cheadle Hulme, CHEADLE
Cheshire SK8 6QG, UK
Tel: 01 825 5701
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Emergency Information (24 hours freephone):
0049 180 227 3112
Technical Enquiries:
0044 (0)845 602 2553 (office hours)

® = Registered trademark of BASF
### IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE, as directed below:

<table>
<thead>
<tr>
<th>Crops</th>
<th>Maximum Individual Dose</th>
<th>Maximum Number of Treatments</th>
<th>Latest Time of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter wheat, Durum wheat, Winter barley, Winter rye and Triticale</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Before leaf sheath erect stage (crop GS 30).</td>
</tr>
<tr>
<td>Spring barley, potato, combining pea and sunflower</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Pre-crop emergence</td>
</tr>
<tr>
<td>Forage maize, grain maize</td>
<td>3.3 litres product/ha</td>
<td>One per crop</td>
<td>Before 4th leaf stage</td>
</tr>
<tr>
<td>Bulb onion (spring and autumn, drilled and transplanted)</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Pre-crop emergence</td>
</tr>
<tr>
<td>Leek</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Pre-crop emergence</td>
</tr>
<tr>
<td>Carrot and parsnip</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Pre-crop emergence</td>
</tr>
<tr>
<td>Broccoli/calabrese, Brussels sprout, Cabbage, Cauliflower</td>
<td>2.9 litres product/ha</td>
<td>One per crop</td>
<td>Before transplanting</td>
</tr>
<tr>
<td>Blackcurrant, Gooseberry</td>
<td>2.9 litres product/ha</td>
<td>One per year</td>
<td>Before bud burst</td>
</tr>
<tr>
<td>Strawberry (outdoor)</td>
<td>2.9 litres product/ha</td>
<td>One per year</td>
<td>After flower initiation but before flower truss emergence</td>
</tr>
<tr>
<td>Apple, Cherry, Pear, Plum</td>
<td>2.9 litres product/ha</td>
<td>One per year</td>
<td>Before bud burst</td>
</tr>
<tr>
<td>Raspberry, Loganberry, Rubus Hybrid, Blackberry (outdoor)</td>
<td>2.9 litres product/ha</td>
<td>One per year</td>
<td>After harvest but before bud burst</td>
</tr>
</tbody>
</table>

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE.

### 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 GLOVES when handling the concentrate.
- WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by hand held equipment.
- WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
- WASH CONCENTRATE from skin or eyes immediately.
- WASH HANDS AND EXPOSED SKIN before meals and after work.
- AVOID ALL CONTACT BY MOUTH.
- DO NOT BREATHE SPRAY.

**Environmental protection**

Extreme care should be taken to avoid damage by drift onto plants outside the target area.

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 ground crop sprayers to fall within 5m of the top of the bank of a static or flowing water body or within 1m of a ditch which is dry at the time of application.

Do not allow spray from handheld sprayers to fall within 1m of the top of the bank of a static or flowing waterbody.

Aim spray away from water.

**Storage and disposal**

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

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinse three times, add washings to sprayer at time of filling and dispose of safely.

Keep dry and frostproof in a suitable pesticide store.
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.

A herbicide for the control of annual-grass and broad-leaved weeds in a wide range of crops.

1. Restrictions/Warnings

1.1 Efficacy

Some soil moisture must be present for STOMP AQUA to be activated. Best results will be obtained if rainfall occurs within seven days of application.

Residual control may be reduced:
- under prolonged dry conditions
- on soils with a high Kd factor
- where organic matter exceeds 6%
- where ash content is high.

Do not disturb the soil after STOMP AQUA has been applied as this will result in reduced weed control.

Where cultural techniques which encourage the build up of organic residues in the surface soil are practised for a number of seasons, the effectiveness of residual herbicides may be reduced. In such circumstances periodic ploughing is recommended to disperse residues into a greater volume of soil.

1.2 Soil types

STOMP AQUA may be used on all mineral soil types.

Do not use on soils with more than 10% organic matter.

On stony or gravely soils there is a risk of crop damage, especially if heavy rain falls soon after application.

Do not use on water logged soil or soils prone to water logging.

1.3 Seedbed preparation

Trash and straw should be incorporated evenly during seedbed preparation.

Seedbed must have a fine, firm tilth.

Consolidate loose or cloddy seedbeds before use.

Following pre-emergence applications, unconsolidated clods (especially if larger than 75 mm (3") diameter) may reduce the level of weed control and cause seed to be inadequately covered, which could result in crop damage.

1.4 Crop safety

Extreme care should be taken to avoid damage by drift onto plants outside the target area.

Do not apply STOMP AQUA to crops suffering from stress, which may be caused for example by pests, disease, water logging, poor seedbed conditions or previous chemical treatment.

Seed should be covered with a minimum of 3.2 cm of settled soil (2.5 cm for Peas and Sunflowers, 5 cm for Maize).

Shallow drilled crops should be treated post-emergence.

Do not soil incorporate.

Do not spray undersown crops.

Do not undersow crops treated with STOMP AQUA.

STOMP AQUA should not be used on protected crops, or in greenhouses.

1.5 Other Restrictions/Warnings

For professional use only.

Before using STOMP AQUA on crops to be processed please consult your processor.

Concentrated or diluted STOMP AQUA will stain. Avoid spillage.

Staining is minimised or completely removed if skin and clothes are washed immediately.

Hose down machinery immediately after use with a spray tank cleaner.

2. Weed Control

2.1 Cereals

2.1.1 STOMP AQUA applied alone

All weed susceptibility ratings in the table below are for applications made pre-emergence of the weeds.
<table>
<thead>
<tr>
<th>CROPS</th>
<th>Winter Wheat, Durum Wheat, Winter Barley, Winter Rye &amp; Triticale</th>
<th>Spring Barley</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCT</strong></td>
<td><strong>STOMP AQUA</strong></td>
<td><strong>STOMP AQUA</strong></td>
</tr>
<tr>
<td>RATE (litres/ha)</td>
<td>2.9</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>GRASS WEED CONTROL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Meadow-grass</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Awned Canary Grass</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Black-grass</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Rough Meadow-grass</td>
<td>MS</td>
<td>MS</td>
</tr>
<tr>
<td><strong>BROAD-LEAVED WEEDS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black-bindweed</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Black Nightshade</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cleavers</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Common Chickweed</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Common Fumitory</td>
<td>MS</td>
<td>–</td>
</tr>
<tr>
<td>Common Fumitory</td>
<td>MS</td>
<td>–</td>
</tr>
<tr>
<td>Common Orache</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Common Poppy</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Corn Buttercup</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Corn Marigold</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Fat-hen</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Field Forget-me-not</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Field Pansy</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Hemp-nettle (Day Nettle)</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Henbit Dead-nettle</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Knotgrass</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Mayweeds</td>
<td>MS</td>
<td>–</td>
</tr>
<tr>
<td>Parsley Piert</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Red Dead-nettle</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Redshank (early germinating)</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Scarlet Pimpernel</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Shepherd’s Purse</td>
<td>MS</td>
<td>–</td>
</tr>
<tr>
<td>Small Nettle</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Smooth Sowthistle</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Speedwells</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Volunteer Oilseed Rape (1)</td>
<td>S</td>
<td>S</td>
</tr>
</tbody>
</table>

S = Susceptible  
MS = Moderately susceptible  
(1) = Deep germinating Volunteer Oilseed Rape may not be controlled  
– = no data
2.2 Other crops

All weed susceptibility ratings in the table below are for applications made pre-emergence of the weeds.

<table>
<thead>
<tr>
<th>CROPS</th>
<th>Combining peas, Sunflowers, Carrots, Parsnips, Strawberries, Bush fruit, Cane fruit, Top fruit</th>
<th>Onions, Leeks, Transplanted Brassicas: – (Broccoli, Sprouts)</th>
<th>Forage Maize, Grain Maize</th>
<th>Potatoes: – (First Early, Second Early, Maincrop)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT</td>
<td>RATE (litres/ha)</td>
<td>Tank mix partner</td>
<td>RATE (litres/ha)</td>
<td>Tank mix partner</td>
</tr>
<tr>
<td>Annual Meadow-grass</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Black-grass</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Rough Meadow-grass</td>
<td>MS</td>
<td>MS</td>
<td>MS</td>
<td>MS</td>
</tr>
<tr>
<td>Black &amp; White Mustard</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Black bindweed</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Black Nightshade</td>
<td>–</td>
<td>S #</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Charlock</td>
<td>–</td>
<td>S</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cleavers (#)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Common Chickweed</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>MS</td>
</tr>
<tr>
<td>Common Fumitory (#)</td>
<td>*MS</td>
<td>MS</td>
<td>MS</td>
<td>MS</td>
</tr>
<tr>
<td>Common Orache</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Common Poppy</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Corn Buttercup</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Corn Marigold</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Fat-hen</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Field Forget-me-not</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Field Pansy</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Groundsel</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Hemp (Day) -nettle</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Henbit Dead-nettle</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Knotgrass</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Mayweeds (#)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Parsley Piert</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Red Dead Nettle</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Redshank (1)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Scarlet Pimpernel</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Shepherd’s Purse</td>
<td>*MS</td>
<td>MS</td>
<td>MS</td>
<td>MS</td>
</tr>
<tr>
<td>Small Nettle</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Smooth Sowthistle</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Speedwells</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Volunteer Oilseed Rape (2)</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
</tbody>
</table>

S = Susceptible
MS = Moderately susceptible
* = Control may be achieved under favourable conditions
# = If application is followed by a period of dry conditions, or in situations where very heavy populations occur, a sequence of STOMP AQUA and a product applied post-emergence may be necessary.
– = no data

2.3 Resistance management

Strains of some annual grasses (eg Black-grass, 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 produced by the Weed Resistance Action Group and copies are available from Teagasc, your distributor, crop adviser or product manufacturer.

Populations of Black-grass and Italian ryegrass with high levels of enhanced metabolism resistance will not be fully controlled.

Key elements of the resistance management strategy for STOMP AQUA:
- 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 grassweeds, always use STOMP AQUA in tank mix or sequence with other effective graminicides with different modes of action.
- Apply pre-emergence of weeds wherever possible. If applications are delayed, apply post-emergence products/mixtures to small, actively growing weeds, especially where high levels of resistance are suspected and to reduce the risk of resistance development.
- Monitor fields regularly and investigate the reasons for any poor control.

3. Crop specific information

STOMP AQUA is recommended for use on all varieties of approved crops on any mineral soil except where indicated in the table below.

### 3.1 Winter wheat including Durum wheat, winter barley

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 or 2.2 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Pre-emergence of the crop to before leaf sheath erect stage, (GS30). Do not apply pre-emergence to crops drilled after 30th November.</td>
</tr>
<tr>
<td>Seed depth</td>
<td>Seed must be covered with a MINIMUM of 3.2cm of settled soil. ONLY treat shallow drilled crops POST-EMERGENCE.</td>
</tr>
</tbody>
</table>

### 3.2 Winter rye, Triticale

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 or 2.2 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Pre-emergence of the crop to before leaf sheath erect stage, (GS30). Do not apply pre-emergence to crops drilled after 30th November.</td>
</tr>
<tr>
<td>Seed depth</td>
<td>Seed must be covered with a MINIMUM of 3.2cm of settled soil. ONLY treat shallow drilled crops POST-EMERGENCE.</td>
</tr>
</tbody>
</table>

### 3.3 Spring barley

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Pre-emergence of the crop. Apply STOMP AQUA as soon as possible after drilling and before emergence. Due to risk of dry soils, do not apply STOMP AQUA alone after the end of March unless rainfall is imminent.</td>
</tr>
<tr>
<td>Seed depth</td>
<td>Seed must be covered with a MINIMUM of 3.2 cm of settled soil.</td>
</tr>
</tbody>
</table>

### 3.4 Combining Peas

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Pre-emergence of the crop. Apply STOMP AQUA as soon as possible after sowing and final seedbed preparation. Do not apply if the plumule is less than 13mm from the soil surface. Due to risk of dry soils, do not apply STOMP AQUA alone after the end of March unless rainfall is imminent.</td>
</tr>
<tr>
<td>Soil types</td>
<td>All mineral soils except gravelly soils</td>
</tr>
<tr>
<td>Seed depth</td>
<td>Seed must be covered with a MINIMUM of 2.5cm of settled soil.</td>
</tr>
</tbody>
</table>
### 3.5 Potatoes (First early, second early & maincrops)

<table>
<thead>
<tr>
<th>Products</th>
<th>STOMP AQUA + Approved metribuzin product to give 350 g/ha metribuzin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha + appropriate rate to deliver 350g/ha metribuzin</td>
</tr>
<tr>
<td>Water volume</td>
<td>200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Pre-emergence of the crop.</td>
</tr>
<tr>
<td></td>
<td>Apply as soon as possible after planting and final ridging up.</td>
</tr>
<tr>
<td></td>
<td>Loose structured ridges must be allowed time for settlement before</td>
</tr>
<tr>
<td></td>
<td>application.</td>
</tr>
<tr>
<td></td>
<td>Do not apply later than 7 days before emergence.</td>
</tr>
<tr>
<td>Soil types</td>
<td>Do not use on Sands (S), Gravelly or Stony soils.</td>
</tr>
<tr>
<td>Variety</td>
<td>Read the Metribuzin product label carefully, particularly with regard</td>
</tr>
<tr>
<td></td>
<td>to varietal restrictions.</td>
</tr>
<tr>
<td>Application</td>
<td>STOMP AQUA should be applied in a minimum of 200 litres of water/ha.</td>
</tr>
<tr>
<td>Notes</td>
<td>Best weed control will be achieved with settled well-rounded ridges</td>
</tr>
<tr>
<td></td>
<td>with few clods.</td>
</tr>
<tr>
<td></td>
<td>If re-ridging is necessary, delay application until after the final</td>
</tr>
<tr>
<td></td>
<td>ridging is completed.</td>
</tr>
<tr>
<td></td>
<td>Slight distortion and discoloration of the initial shoots may occur</td>
</tr>
<tr>
<td></td>
<td>particularly to crops grown on very light soils. This is quickly</td>
</tr>
<tr>
<td></td>
<td>outgrown and subsequent growth is unaffected.</td>
</tr>
</tbody>
</table>

### 3.6 Sunflowers

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply as soon as possible after sowing and</td>
</tr>
<tr>
<td></td>
<td>final seedbed cultivation, before crop and</td>
</tr>
<tr>
<td></td>
<td>weed emergence.</td>
</tr>
<tr>
<td>Seedbed</td>
<td>Consolidate seedbeds after drilling to provide</td>
</tr>
<tr>
<td></td>
<td>a firm level soil.</td>
</tr>
<tr>
<td></td>
<td>Seed should be drilled so that after seedbed</td>
</tr>
<tr>
<td></td>
<td>consolidation it is covered by a minimum of</td>
</tr>
<tr>
<td></td>
<td>2.5 cm of settled soil.</td>
</tr>
</tbody>
</table>

### 3.7 Carrots and Parsnips

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply as soon as possible after drilling but</td>
</tr>
<tr>
<td></td>
<td>before crop and weed emergence.</td>
</tr>
<tr>
<td>Notes</td>
<td>If emerged weeds are present after drilling</td>
</tr>
<tr>
<td></td>
<td>but pre-emergence of the crop, STOMP AQUA</td>
</tr>
<tr>
<td></td>
<td>may be applied in tank mix with a</td>
</tr>
<tr>
<td></td>
<td>recommended approved contact herbicide.</td>
</tr>
</tbody>
</table>

### 3.8 Transplanted Brassicas (Broccoli, Brussels Sprouts, Cabbages, Calabrese, Cauliflowers)

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply after final plantbed cultivation but</td>
</tr>
<tr>
<td></td>
<td>before transplanting.</td>
</tr>
<tr>
<td></td>
<td>Do not apply STOMP AQUA post-planting as</td>
</tr>
<tr>
<td></td>
<td>crop damage may occur.</td>
</tr>
<tr>
<td></td>
<td>Do not apply STOMP AQUA to any transplanted</td>
</tr>
<tr>
<td></td>
<td>brassicas when heavy rain is forecast.</td>
</tr>
<tr>
<td>Application</td>
<td>Do not incorporate and avoid all</td>
</tr>
<tr>
<td></td>
<td>unnecessary disturbance to soil after</td>
</tr>
<tr>
<td></td>
<td>application.</td>
</tr>
<tr>
<td></td>
<td>When transplanting care must be taken not</td>
</tr>
<tr>
<td></td>
<td>to introduce treated soil into the root</td>
</tr>
<tr>
<td></td>
<td>zone.</td>
</tr>
<tr>
<td></td>
<td>If necessary, irrigation should be used</td>
</tr>
<tr>
<td></td>
<td>before application as some moisture is</td>
</tr>
<tr>
<td></td>
<td>essential for the chemical to be</td>
</tr>
<tr>
<td></td>
<td>activated.</td>
</tr>
<tr>
<td>Soil types</td>
<td>Do not use on crops grown on sands (CS, S,</td>
</tr>
<tr>
<td></td>
<td>FS, LCS), very light soils (LS, LFS, CSL),</td>
</tr>
<tr>
<td></td>
<td>as crop damage may result.</td>
</tr>
<tr>
<td>Notes</td>
<td>If emerged weeds are present at pre-</td>
</tr>
<tr>
<td></td>
<td>transplanting application, apply STOMP</td>
</tr>
<tr>
<td></td>
<td>AQUA in tank mix with a recommended approved</td>
</tr>
<tr>
<td></td>
<td>contact herbicide.</td>
</tr>
</tbody>
</table>
### 3.9 Bulb onions (Spring and autumn drilled or transplanted) and Leeks (drilled only)

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
</tbody>
</table>

**Timing**
- Drilled crops - apply STOMP AQUA as soon as possible after drilling but before crop or weed emergence.
- Transplanted crops - apply STOMP AQUA pre-transplanting.
- Do not apply STOMP AQUA to any onion or leek crop when heavy rain is forecast.

**Seed depth**
Seed should be covered with a minimum of 2.5 cm of settled soil.

**Application**
When transplanting, care must be taken not to introduce treated soil into the root zone.

**Soil types**
STOMP AQUA is not recommended for use on onions or leeks grown on sands (CS, S, FS, LCS), very light soils (LS, LFS, CSL), as crop damage may result.
- STOMP AQUA is not recommended for use on onions or leeks grown on fen soils or other soils containing in excess of 10% organic matter, as weed control may be reduced.

**Notes**
If weeds are present, these can be controlled by applying STOMP AQUA in tank mix with a recommended contact herbicide. Read tank mix partner label carefully for restrictions on transplanted multi-seeded onions or leeks.

### 3.10 Forage maize, Grain maize

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>3.3 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
</tbody>
</table>

**Timing**
- Pre-emergence to before 4th leaf of the crop.

**Notes**
Do not use on Sweetcorn or Maize grown for seed.
- Seed must be covered by a minimum of 5 cm of settled soil.
- The use of STOMP AQUA may affect the full development of crown roots which function only to anchor the plant. This has no effect on the yield of maize.
- If application is followed by a period of dry conditions or in situations where very heavy weed populations occur, a sequence of STOMP AQUA and a product applied post-emergence may be necessary.

### 3.11 Strawberries (outdoor, maiden and established crops)

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare.</td>
</tr>
</tbody>
</table>

**Maiden Beds**
- runners should be planted so that roots are well covered.
- good consolidation of the planted bed is necessary for good weed control.
- STOMP AQUA should be applied to dormant newly planted runners in the autumn or early spring immediately after planting and prior to weed emergence.
- if runners are likely to be slow in establishing due to stress conditions, such as drought, at the time of planting, the application of STOMP AQUA should be delayed until plants have established and are free of stress.
- application made after runners have started growing away may reduce the initial vigour of new foliage but this will be rapidly outgrown.
- do not apply STOMP AQUA before October to beds newly planted with cold-stored runner or beds newly planted in late summer.
- pre-planting application of STOMP AQUA is not recommended.

**Established beds**
- apply STOMP AQUA to weed-free soil from autumn to early spring during the dormant period of the crop.
- STOMP AQUA applied after the end of March or after the emergence of flower trusses in the spring may affect crop yield, particularly if conditions adverse to vigorous plant growth follow application.
- do not apply STOMP AQUA during the flower initiation period (immediately post-harvest to mid-September).

**Notes**
- Leaf growth of strawberries may be checked following applications of STOMP AQUA in the spring but, in extensive experimentation, this has been shown not to affect yield.
- Do NOT use STOMP AQUA on protected crops or crops grown in green houses.
3.12 Bush Fruit – Blackcurrants, Gooseberries

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply STOMP AQUA after final cultivation to weed-free soil from autumn to early spring during the dormant period of the crop before bud burst, either over the top or as a directed spray. STOMP AQUA is not recommended for use in the season of planting.</td>
</tr>
<tr>
<td>Tank mixes</td>
<td>If emerged weeds are present at application, STOMP AQUA may be applied as a directed spray in tank mix with a recommended approved contact herbicide.</td>
</tr>
</tbody>
</table>

3.13 Cane Fruit – Raspberries, Loganberries, Tayberries, Blackberries

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply STOMP AQUA after final cultivation to weed-free soil from autumn to early spring. STOMP AQUA is not recommended for use after the end of March unless adequate soil moisture is present as some soil moisture present is essential for the chemical to be activated. Do not apply to autumn fruiting raspberries. Newly planted crops: - STOMP AQUA should be applied immediately after planting. - a light ridging along the cane row before application is recommended to ensure roots are well covered. Established crops: - STOMP AQUA should be applied well before the emergence of the new canes.</td>
</tr>
<tr>
<td>Tank mixes</td>
<td>If emerged weeds are present at application, STOMP AQUA may be applied as a directed spray in tank mix with a recommended approved contact herbicide.</td>
</tr>
</tbody>
</table>

3.14 Top Fruit – Apples, Cherries, Pears, Plums

<table>
<thead>
<tr>
<th>Product</th>
<th>STOMP AQUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>2.9 l/ha</td>
</tr>
<tr>
<td>Water volume</td>
<td>100 to 200 litres/hectare</td>
</tr>
<tr>
<td>Timing</td>
<td>Apply STOMP AQUA to weed-free soil from autumn to early spring. STOMP AQUA is not recommended for use after the end of March unless adequate soil moisture is present as some soil moisture is essential for the chemical to be activated. STOMP AQUA is not recommended for use in the season of planting.</td>
</tr>
<tr>
<td>Tank mixes</td>
<td>If emerged weeds are present at the time of application, STOMP AQUA should be applied in tank mix with a recommended approved contact herbicide.</td>
</tr>
</tbody>
</table>

4. Following Crops

4.1 Following crops after normal harvest
Before Rye grass is drilled after a very dry season, plough or cultivate to at least 15 cm. If spring crops are to be followed by crops other than cereals plough or cultivate to at least 15 cm.

4.2 In the event of crop failure
In the event of crop failure the land must be ploughed or thoroughly cultivated to a minimum depth of 15 cm to ensure any residues are evenly dispersed throughout the soil. The minimum intervals (specified below) should elapse between application of STOMP AQUA and the sowing of one of the following crops listed below.

<table>
<thead>
<tr>
<th>Application timing</th>
<th>Minimum interval</th>
<th>In the event of crop failure, the following crops may be drilled:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn</td>
<td>5 months</td>
<td>Spring wheat, Spring barley, Spring Field beans, Broad beans, Dwarf beans, Brussels sprouts, Cabbage, Calabrese, Carrots, Cauliflower, Parsnips, Parsley, Peas, Potato, Linseed, Maize, Turnip</td>
</tr>
<tr>
<td>Spring &amp; early summer</td>
<td>2 months</td>
<td>Spring Field beans, Broad beans, Dwarf beans, Brussels sprouts, Cabbage, Calabrese, Carrots, Cauliflower, Parsnips, Parsley, Peas, Linseed, Turnip</td>
</tr>
<tr>
<td></td>
<td>5 months</td>
<td>Any crop (with the exception of Red Beet, Sugar Beet and Spinach) may be planted or sown.</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>Red Beet, Sugar Beet and Spinach</td>
</tr>
</tbody>
</table>
5. Mixing and Application

5.1 Mixing
Never prepare more spray solution than is required. Three quarters fill the tank with clean water and start the agitation. To ensure thorough mixing of the product, invert the container several times before opening. Add the required quantity of STOMP AQUA to the spray tank while re-circulating. Fill up the tank with water and continue agitation until spraying is completed. 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. When tank mixes are to be used each product should be added separately to the spray tank and fully dispersed before the addition of any further product(s). Add products to the spray tank in the following order:
1. wettable powders (WP)
2. dry flowables or water dispersible granules (WG)
3. suspensions (e.g. STOMP AQUA)
4. suspension concentrates (e.g. SC or SE)
5. emulsifiable concentrates (e.g. EW or EC)
6. soluble concentrates (SL)
Maintain agitation at all times.
Spray out as soon as possible after mixing.
Do not let the mixture stand.

5.2 Application
Ensure good, even spray cover of the target using a FINE or MEDIUM quality spray, as defined by BCPC. Do not use less than 50 mesh inline boom or nozzle filters.

For boom sprayers
Apply STOMP AQUA in 100-200 l/ha. For potatoes apply STOMP AQUA in minimum 200 l/ha water. When tank mixing with other products use a minimum water volume of 150-200 l/ha depending on the tank mix partner.

For knapsack sprayers
Use a maximum of 15 mls of STOMP AQUA per litre of water and ensure a good, fine coverage of the target.

5.3 Sprayer cleaning
After spraying, thoroughly clean and flush out application machinery with a minimum of three rinses, to ensure that all traces of product are removed to avoid sticking of dried material to spray tank walls or spray lines, etc.

6. Tank Mixtures
Please contact your agronomist, supplier or BASF Ireland Limited (tel:01 825 5701) for up to date information on the compatibility of Stomp Aqua.

6.1 Sequential Treatments
STOMP AQUA may be used in sequence with any other approved product. Leave a minimum interval of 24 hours unless longer is specified on the label.

STOMP AQUA may be applied in sequence with Avadex BW granular provided only one product is applied pre-emergence of the crop.

7. Trademark acknowledgements
STOMP is a registered trademark of BASF.
Avadex is a registered trademark of Gowan Internacional Limitada.

The following does not form part of the product label under S.I. No. 159 of 2012:

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many crop and use connected ways of influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the BASF recommended rate should in all events be adhered to.

Numerous, particularly regional or regionally attributable, factors can influence the activity of the product. Examples include weather and soil conditions, crop plant varieties, crop rotation, treatment times, application amounts, admixture with other products, appearance of organisms resistant to active ingredients and spraying techniques. Under particular conditions a change in activity or damage to plants cannot be ruled out. The manufacturer or supplier is therefore unable to accept any liability in such circumstances. All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their mixing or use or the weather conditions during and after application, which may affect the performance of the material, 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; but nothing should be deemed to exclude or restrict any liability upon us which cannot be excluded or restricted under the provisions of the Unfair Contract Terms Act 1977 or any similar applicable law.
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

STOMP AQUA

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: crop protection product, herbicide

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen GERMANY

Contact address:
BASF Ireland Ltd.
Inchera Industrial Estate, Little Island County Cork, REPUBLIC OF IRELAND

Telephone: +353 21 451-7100
E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number: Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]
Skin Sens. 1B Aquatic Chronic 1

According to Directive 67/548/EEC or 1999/45/EC
Possible Hazards:
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word: Warning

Hazard Statement:
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statements (Prevention):
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Precautionary Statements (Response):
P303 + P352 IF ON SKIN (on hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.
According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: PENDIMETHALIN

According to Directive 67/548/EEC or 1999/45/EC

EEC Directives

Hazard symbol(s)

Xi Irritant.
N Dangerous for the environment.

R-phrase(s)
R38 Irritating to skin.
R43 May cause sensitization by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
S2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S20/21 When using do not eat, drink or smoke.
S24 Avoid contact with skin.
S29/35 Do not empty into drains, this material and its container must be disposed of in a safe way.
S37 Wear suitable gloves.
S35 This material and its container must be disposed of in a safe way.
S36 Wear suitable protective clothing.
S46 If swallowed, seek medical advice immediately and show this container or label.
S57 Use appropriate container to avoid environmental contamination.

Classification/labelling in accordance with Irish regulations.

Hazard symbol(s)
N Dangerous for the environment.

R-phrase(s)
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
S2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S35 This material and its container must be disposed of in a safe way.
S57 Use appropriate container to avoid environmental contamination.

Hazard determining component(s) for labelling: PENDIMETHALIN

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 – Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

crop protection product, herbicide, capsule suspension (CS)

Hazardous ingredients (GHS)
accoring to Regulation (EC) No. 1272/2008

pendimethalin (ISO): N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine

Content (W/W): 38.7 %  Skin Sens. 1
CAS Number: 40487-42-1  Aquatic Acute 1
EC-Number: 254-938-2  Aquatic Chronic 1
INDEX-Number: 609-042-00-X  H317, H400, H410
<table>
<thead>
<tr>
<th>Substance</th>
<th>Content (W/W):</th>
<th>CAS Number:</th>
<th>EC-Number:</th>
<th>REACH registration number:</th>
<th>INDEX-Number:</th>
<th>Hazard symbol(s):</th>
<th>R-phrase(s):</th>
<th>Carc. Cat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-METHYLENEDIIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DIISOCYANATE</td>
<td>&lt; 1 %</td>
<td>101-68-8</td>
<td>202-966-0</td>
<td>01-2119457014-47</td>
<td>615-005-00-9</td>
<td>Xn</td>
<td>20, 36/37/38, 40, 42/43, 48/20</td>
<td>3</td>
</tr>
<tr>
<td>methylenediphenyl diisocyanate</td>
<td>&lt; 1 %</td>
<td>26447-40-5</td>
<td>247-714-0</td>
<td>01-2119457015-45</td>
<td>615-005-00-9</td>
<td>Xn</td>
<td>20, 36/37/38, 40, 42/43, 48/20</td>
<td>3</td>
</tr>
<tr>
<td>Isocyanic acid, polymethylenepolyphenylene ester</td>
<td>&lt; 1 %</td>
<td>9016-87-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid magnesium salt (1:1)</td>
<td>&lt; 20 %</td>
<td>10034-99-8</td>
<td>251-238-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous ingredients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Xi, N</td>
<td>43, 50/53</td>
<td></td>
</tr>
<tr>
<td>according to Directive 1999/45/EC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine</td>
<td>38.7 %</td>
<td>40487-42-1</td>
<td>254-938-2</td>
<td>609-042-00-X</td>
<td></td>
<td>Xi, N</td>
<td>43, 50/53</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: First-Aid Measures

4.1. Description of first aid measures
Remove contaminated clothing.
If inhaled: Keep patient calm, remove to fresh air, seek medical attention.
On skin contact: Wash thoroughly with soap and water.
On contact with eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
On ingestion: Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media: water spray, foam, dry powder, carbon dioxide

5.2. Special hazards arising from the substance or mixture
Carbon monoxide, Carbon dioxide, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters
Special protective equipment: Wear self-contained breathing apparatus and chemical-protective clothing.
Further information: Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

6.2. Environmental precautions
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.
Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environmental Protection Agency if it enters surface or ground waters. Keep people and animals away.

6.3. Methods and material for containment and cleaning up
For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Pump off product.
Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.
6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

7.2. Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds.
Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:
Storage duration: 36 Months
Protect from temperatures below: -5 °C
Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

7.3. Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters
Components with occupational exposure limits
Refer to the current schedule of occupational exposure standards published by the Irish HSA. For normal use and handling refer to the product label/leaflet. In all other cases the following apply.

101-68-8: 4,4’-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4’- DIISOCYANATE
STEL value 0.07 mg/m³ (OEL (IE)) Measured as: NCO
TWA value 0.02 mg/m³ (OEL (IE)) Measured as: NCO

9016-87-9: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
STEL value 0.07 mg/m³ (OEL (IE)) Measured as: NCO
TWA value 0.02 mg/m³ (OEL (IE)) Measured as: NCO

26447-40-5: methylenediphenyl diisocyanate
TWA value 0.02 mg/m³ (OEL (IE)) Measured as: NCO
STEL value 0.07 mg/m³ (OEL (IE)) Measured as: NCO

8.2. Exposure controls
Personal protective equipment
Respiratory protection: Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).
Hand protection: Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other
Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)
Body protection: Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.
SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form: suspension
Colour: yellow to brown
Odour: faint odour, nutty
Odour threshold: Not determined due to breath way sensitizing properties.
pH value: approx. 8 – 10
(CIPAC standard water D, 1%(m), 21 °C)
Melting point: approx. 0 °C
Boiling point: approx. 100 °C
Flash point: No flash point – Measurement made up to the boiling point.
Evaporation rate: not applicable
Flammability: not highly flammable
Lower explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Ignition temperature: 354 °C (DIN EN 14522)
Vapour pressure: approx. 23 hPa (20 °C)
Density: approx. 1.18 g/cm³ (20 °C)
Relative vapour density (air): not determined
Solubility in water: dispersible
Partitioning coefficient n-octanol/water (log Kow): not applicable
Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic: 128 mPa.s (20 °C, 100 1/s) (OECD 114)
Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

9.2. Other information
Other Information: If necessary, information on other physical and chemical parameters is indicated in this section.

SECTION 10: Stability and Reactivity

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to avoid
See MSDS section 7 – Handling and storage.

10.5. Incompatible materials
Substances to avoid: strong acids, strong bases, strong oxidizing agents

10.6. Hazardous decomposition products
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:
LD₅₀ rat (oral): > 5,000 mg/kg (OECD Guideline 401)
LC₅₀ rat (by inhalation): > 5.23 mg/l 4 h (OECD Guideline 403) No mortality was observed. An aerosol was tested.
LD₅₀ rat (dermal): > 5,000 mg/kg (OECD Guideline 402)

Irritation
Assessment of irritating effects: Not irritating to the eyes. Skin contact causes slight irritation.
Experimental/calculated data: Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization
Assessment of sensitization: Sensitization after skin contact possible.
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) guinea pig: sensitizing (OECD Guideline 406)

Germ cell mutagenicity
Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity
Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment of carcinogenicity: In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity
Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYL METHANE-4,4'-DIISOCYANATE
Assessment of teratogenicity:
The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Information on: methylenediphenyl disocyanate
Assessment of teratogenicity:
The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment of repeated dose toxicity: No substance-specific organotoxicity was observed after repeated administration to animals. Adaptive effects were observed after repeated exposure in animal studies.

Information on: 4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYL METHANE-4,4'-DIISOCYANATE
Information on: methylenediphenyl disocyanate Assessment of repeated dose toxicity:
After repeated exposure the prominent effect is local irritation. The substance may cause damage to the olfactory epithelium after repeated inhalation.

Other relevant toxicity information
Misuse can be harmful to health.

SECTION 12: Ecological Information

12.1. Toxicity
Assessment of aquatic toxicity: Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Toxicity to fish:
LC₅₀ (96 h) 20.36 mg/l, Oncorhynchus mykiss (OECD Guideline 203, static)
LC₅₀ (96 h) 88.4 mg/l, Cyprinus carpio (OECD Guideline 203, static)
Aquatic invertebrates:
EC$_50$ (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants:
EC$_50$ (72 h) 1.49 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)
EC$_50$ (72 h) 19.25 mg/l (growth rate), Lemna gibba (OECD guideline 221)

12.2. Persistence and degradability
Assessment biodegradation and elimination (H$_2$O): The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment biodegradation and elimination (H$_2$O): Not readily biodegradable (by OECD criteria).

12.3. Bioaccumulative potential
Assessment bioaccumulation potential: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Bioaccumulation potential: Bioconcentration factor: 5,100
Based on a weight of evidence, the compound will not bioaccumulate.

12.4. Mobility in soil
Assessment transport between environmental compartments: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment transport between environmental compartments: The substance will slowly evaporate into the atmosphere from the water surface. Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

12.5. Results of PBT and vPvB assessment
The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects
The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information
Other ecotoxicological advice: Do not discharge product into the environment without control.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods
Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

SECTION 14: Transport Information

**Land transport**

<table>
<thead>
<tr>
<th>ADR</th>
<th>UN number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packing group</th>
<th>Environmental hazards</th>
<th>Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UN3082</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)</td>
<td>9, EHSM</td>
<td>III</td>
<td>yes</td>
<td>Tunnel code: E</td>
</tr>
</tbody>
</table>
RID
UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Inland waterway transport
ADN
UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known
Transport in inland waterway vessel: Not evaluated

Sea transport
IMDG
UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Marine pollutant: YES
Special precautions for user: None known

Air transport
IATA/ICAO
UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Regulation: Not evaluated
Shipment approved: Not evaluated
Pollution name: Not evaluated
Pollution category: Not evaluated
Ship Type: Not evaluated
SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Prohibitions, Restrictions and Authorizations

For the user of this plant-protective product applies: ‘To avoid risks to man and the environment, comply with the instructions for use.’ (Directive 1999/45/EC, Article 10, No. 1.2)

This product may be subject to the Seveso II Directive and amendments if specific threshold tonnages are exceeded. For further medical advice Doctors should contact the National Poisons Information Centre at Beaumont Hospital, Dublin.

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

- Xi: Irritant.
- N: Dangerous for the environment.
- Xn: Harmful.
- 43: May cause sensitization by skin contact.
- 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 20: Harmful by inhalation.
- 36/37/38: Irritating to eyes, respiratory system and skin.
- 40: Limited evidence of a carcinogenic effect.
- 42/43: May cause sensitization by inhalation and skin contact.
- 48/20: Harmful: Danger of serious damage to health by prolonged exposure through inhalation.

Skin Sens. Skin sensitization
Aquatic Chronic Hazardous to the aquatic environment – chronic
Aquatic Acute Hazardous to the aquatic environment – acute
Acute Tox. Acute toxicity
Skin Corr./Irrit. Skin corrosion/irritation
Eye Dam./Irrit. Serious eye damage/eye irritation
Resp. Sens. Respiratory sensitization
Carc. Carcinogenicity
STOT SE Specific target organ toxicity — single exposure
STOT RE Specific target organ toxicity — repeated exposure
Carc. Cat. 3 Carcinogenic substances Category 3: Substances which cause concern for man owing to possible carcinogenic effects.
H317: May cause an allergic skin reaction.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H319: Causes serious eye irritation.
H315: Causes skin irritation.
H332: Harmful if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.
H373: May cause damage to organs (through prolonged or repeated exposure).
H373: May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product’s properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

(Version: 0.0)