

# Environmental Information Sheet

**Liberator® MAPP 15206**



A suspension concentrate formulation containing 400 g/L flufenacet (oxacetamide herbicide) and 100 g/L diflufenican (nicotinilide herbicide). A contact and residual herbicide for pre and post-crop emergence use against a wide range of annual grasses and broad-leaved weeds in winter wheat and winter barley.

**Maximum individual dose: Before 31<sup>st</sup> December - 0.6 L/ha product**

**After 31<sup>st</sup> December - 0.3 L/ha product**

**Maximum number of applications: 2 per crop**

**Latest time of application: Before 31<sup>st</sup> March in the year of harvest and for Winter wheat before third tiller stage (GS23), for Winter barley before fourth tiller stage (GS24)**

Section	Profile
<b>1. WILDLIFE</b>  <b>Mammals and Birds</b>	<p>Liberator is not classified as “Harmful to game, wild birds and animals.”</p> <p>No risk management is necessary to protect mammals and birds.</p> <p>Liberator is of moderate toxicity to mammals and birds. The risk to wild mammals and birds grazing on treated areas is low, as is the risk due to exposure from other routes, e.g. consumption of earthworms or other invertebrates such as insects.</p>
<b>2. BEES</b>	<p>No risk management necessary</p> <p>The active substances within Liberator are of low toxicity to bees.</p> <p>No risk management necessary and there is no requirement to avoid application of the product when bees may be foraging on flowering weeds.</p>
<b>3. NON TARGET INSECTS AND OTHER ARTHROPODS</b>	<p>No risk management necessary</p> <p>Flufenacet poses a low risk to the parasitic wasp (<i>Aphidius rhopalosiphii</i>), carabid beetle (<i>Poecilus cupreus</i>), lycosid spider (<i>Pardosa agrestis</i>) and ladybird beetle (<i>Coccinella septempunctata</i>). Diflufenican is of low risk to Ground beetle (<i>Poecilus cupreus</i>) and the predacious beetle (<i>Aleochara bilineata</i>). Flufenacet is potentially of high toxicity to the predatory mite <i>Typhlodromas pyri</i> but its use as a pre emergence/early post emergent autumn herbicide means that predatory mites are not a relevant test species and It can be concluded that Liberator does not pose a risk to infield non-target arthropods</p>

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<b>4. AQUATIC LIFE</b>	<p><i>"VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS."</i>  Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards or road.  Risk management is essential.</p> <p>Liberator is extremely toxic to aquatic plants and algae, therefore, risk management is essential.  <i>*DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5m of the top of the bank of a static or flowing water-body, 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.</i>  LERAP Category B. Buffer zone may be reduced</p>
<b>5. SOIL and GROUNDWATER</b>	<p>Flufenacet is moderately persistent in soil but of low to moderate mobility. Diflufenican is very persistent but of low mobility.  Field investigations have shown that use of Liberator according to the label presents a low risk to groundwater.</p> <p><b>Earthworms</b>  No risk management necessary. When used according to the label, Liberator poses no unacceptable risk to earthworms.</p> <p><b>Soil Micro-organisms</b>  Liberator is of low risk to soil micro-organisms when used according to the label. No risk management is necessary to prevent risks to the processes of soil respiration and nitrogen turnover</p>
<b>6. NON-TARGET PLANTS</b>	<p>Liberator is a herbicide and is likely to be harmful to some species of wild flowers that are found at the margins of fields. Therefore particular care should always be taken to minimise drift when applying Liberator close to conservation headlands and field boundaries, such as hedgerows, which may provide an important habitat for wild flowers.</p>

Use plant protection products safely. Always read the label and product information before use. For further product information including warning phrases and symbols refer to [www.cropscience.bayer.co.uk](http://www.cropscience.bayer.co.uk)

For further information about the environmental profile of this product contact:

**Bayer CropScience Limited**  
**230, Cambridge Science Park**  
**Milton Road**  
**Cambridge**  
**CB4 0WB**

Bayer CropScience Assist Technical Help-Line: 0808 1969522  
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