

Environmental Information Sheet

KINGDOM MAFF/MAPP 15240



An oil dispersion containing 140 g/litre boscalid (anilide fungicide in the carboxamide group) and 50 g/litre epoxiconazole (a triazole fungicide) for use in wheat, rye, triticale, barley and oats.

Maximum individual dose: 2.5 l/ha (350 + 125 g a.i./ha)

Maximum total dose: 5.0 l/ha

Section	Profile
<p>1. WILDLIFE</p> <p>Mammals and Birds</p>	<p>Kingdom is not classified as '<i>Harmful to game, wild birds and animals</i>'. No risk management necessary to protect wild mammals and birds. Boscalid and epoxiconazole, the active substances in Kingdom, are of low toxicity to mammalian and bird species. 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>
<p>2. BEES</p>	<p>No risk management necessary. Kingdom is of low risk to bees.</p>
<p>3. NON TARGET INSECTS AND OTHER ARTHROPODS</p>	<p>No risk management necessary. Kingdom poses a low risk to a range of arthropod species commonly found in and around treated fields, including predatory mites, aphid parasitoids and lacewings.</p>
<p>4. AQUATIC LIFE</p>	<p>Kingdom is '<i>VERY TOXIC TO AQUATIC ORGANISMS, may cause long term adverse effects in the aquatic environment</i>'.</p> <p>Kingdom is of moderate toxicity to fish, high toxicity to aquatic invertebrates, e.g. water flea and of extreme toxicity to aquatic plants, e.g. duckweed.</p> <p>Risk management is essential. Kingdom can be used safely providing care is taken to prevent spray drift reaching surface waters. <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 and roads. To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements"</i>.</p> <p>The following risk management practices must be carried out in order to ensure that there is adequate protection of aquatic species: <i>'DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water'</i> LERAP Category B. Buffer zones maybe reduced (see LERAP Guidelines).</p>

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<p>5. SOIL and GROUNDWATER</p> <p>Earthworms</p> <p>Soil Micro-organisms</p>	<p>No risk management necessary. Boscalid and epoxiconazole are very persistent in soil with low mobility. Epoxiconazole has been shown to remain in the top 10cm of soil and modelling studies with boscalid have shown there is a low risk of ground water contamination from the use of Kingdom.</p> <p>No risk management necessary. Kingdom is of moderate toxicity to earthworms. Field studies have also demonstrated that Kingdom is unlikely to have any adverse effect on earthworm populations in the long-term.</p> <p>No risk management necessary. At the recommended application rate Kingdom has a negligible effect on soil microbial processes and therefore the risk to soil microbial activity is low.</p>
<p>6. NON-TARGET PLANTS</p>	<p><i>"Kingdom may cause damage to broad-leaved plant species".</i> <i>"Avoid spray drift on to neighbouring crops".</i></p> <p>Care should be taken to minimise the drift of Kingdom into conservation headlands, beetle banks and field boundaries such as hedgerows, which may provide an important habitat for wild flowers.</p>

ALWAYS READ THE LABEL: USE PESTICIDES SAFELY

Care must be taken to minimise the risk of surface water contamination from farmyard and field sources.

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

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This Environmental Information Sheet was prepared in accordance with CPA Guidance Notes Version 4.

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