

Evaluation Report for Category B, Subcategory 2.3, 2.4, 2.5, 3.2 Application

Application Number: 2018-2176
Application: New End-Use Product Product Chemistry – Identify of Formulants, Proportion of Formulants and Formulation Type
New Product Label – Application Timing
Product: Flumioxazin EZ Herbicide
Registration Number: 33524
Active ingredient (a.i.): Flumioxazin
PMRA Document Number: 3012386

Purpose of Application

The purpose of this application was to register Flumioxazin EZ Herbicide for use as a pre-emergence weed control treatment on soybeans, field corn, spring wheat, chickpeas, field peas, lentils (small red and large green varieties) and sunflowers; as a harvest aid for dried shelled peas and beans (except soybeans) and wheat; and as vegetation control on bare ground areas.

Chemistry Assessment

Flumioxazin EZ Herbicide is formulated as a suspension containing flumioxazin at a concentration of 479.2 g/L. This end-use product has a density of 1.16-1.17 g/cm³ and pH of 6.8-7.0. The required chemistry data for Flumioxazin EZ Herbicide have been provided, reviewed and found to be acceptable.

Health Assessments

Flumioxazin EZ Herbicide is of low acute toxicity by oral, dermal and inhalation routes in rats. It is not an irritant to the eye of rabbit. It is minimally irritating to the skin of rabbit. It is not a potential skin sensitizer in mice.

The use of Flumioxazin EZ Herbicide as a pre-emergence weed control treatment on soybeans, field corn, spring wheat, chickpeas, field peas, lentils (small red and large green varieties) and sunflowers; as a harvest aid for dried shelled peas and beans (except soybeans) and wheat; and as vegetation control on bare ground areas does not fit within the previously registered use pattern of flumioxazin. The product is formulated as a suspension concentrate, which required an updated mixer/loader/applicator quantitative risk assessment. No health risks of concern were identified for mixers, loaders and applicators, provided that workers wear the required personal protective equipment and use the required engineering controls.

For postapplication workers, the new formulation will not affect exposure and the use pattern fits within the previously registered use pattern of flumioxazin and is not expected to exceed the current exposure to registered uses. Previous quantitative postapplication worker exposure assessments are considered adequate to cover potential risks associated with the use of Flumioxazin EZ Herbicide.

No health risks of concern for workers handling Flumioxazin EZ Herbicide are expected when label directions, precautions and instructions are followed.

No residue data for flumioxazin in soybean, field corn, spring wheat, chickpea, field pea, lentil (small red and large green varieties), and sunflower were submitted to support the registration of Flumioxazin EZ Herbicide. Previously reviewed residue data from field trials conducted in/on the aforementioned crops and a confined crop rotation study were reassessed in the framework of this petition. In addition, processing studies in treated soybean, field corn, wheat, and sunflower were reassessed to determine the potential for concentration of residues of flumioxazin into processed commodities.

Flumioxazin residues in/on the proposed crops treated with Flumioxazin EZ Herbicide will be covered by the currently established MRLs and the registration of this end-use product will not pose a risk from dietary exposure to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

The registration of Flumioxazin EZ Herbicide is supported from an environmental perspective provided that environmental risk reduction and hazard statements included on the label are followed.

Value Assessment

The availability of Flumioxazin EZ Herbicide will provide farmers across Canada with an option to use liquid flumioxazin formulations that will be more convenient than dry formulations to handle and apply.

Data from replicated efficacy / crop tolerance field trials conducted in eastern and western Canada between 2016 and 2017 were provided for review. The data, together with scientific rationales and label comparisons with other precedent products, demonstrated that Flumioxazin EZ Herbicide applied as per label directions would perform as expected. Furthermore, the use pattern for the precedent products, together with the provided value data, supports the use of Flumioxazin EZ Herbicide in tank-mixture with glyphosate. With respect to the rotational cropping claims, all labelled rotational crops can be supported since they reflect those labelled for a similar precedent product and residual soil carryover of flumioxazin is not typically influenced by formulation differences.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the available information and has found it sufficient to support the registration of Flumioxazin EZ Herbicide.

References

PMRA Document Number	References
2891841	2014, Description Of Starting Materials, DACO: 3.0,3.1,3.1.1,3.1.2,3.1.3,3.1.4,3.2,3.2.1,3.2.2,3.2.3,3.3.1,3.4,3.4.1 CBI
2891842	2014, PH, DACO: 3.5,3.5.1,3.5.2,3.5.3,3.5.4,3.5.6,3.5.7,3.5.8,3.5.9 CBI
2891843	2017, Enforcement Analytical Method, DACO: 3.4.1 CBI
2891849	2015, Corrosion Characteristics, DACO: 3.5.10,3.5.14 CBI
2965109	2019, Description of the Formulation Process, DACO: 3.2.2 CBI
2891844	2014, NUP-14027: Acute Oral Toxicity - Up-And-Down Procedure In Rats, DACO: 4.6.1
2891845	2014, NUP-14027: Local Lymph Node Assay (LLNA) in Mice, DACO: 4.6.6
2891846	2014, NUP-14027: Acute Inhalation Toxicity in Rats, DACO: 4.6.3
2891847	2014, NUP-14027: Primary Eye Irritation In Rabbits, DACO: 4.6.4
2891848	2014, NUP-14027: Primary Skin Irritation In Rabbits: 4.6.5
2888819	2018, Appendix 1: Efficacy Trial Reports for "Summary of Value for Valtera EZ Herbicide, containing Flumioxazin", DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.1, 10.2.3.3(B), 10.3.1, 10.3.2(A), 10.3.3, 10.5.1, 10.5.2, 10.5.3, 10.5.4.
2888820	2018, Appendix 2: Crop Tolerance Trial Reports for "Summary of Value for Valtera EZ Herbicide, containing Flumioxazin", DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.1, 10.2.3.3(B), 10.3.1, 10.3.2(A), 10.3.3, 10.5.1, 10.5.2, 10.5.3, 10.5.4.

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