



Evaluation Report for Category B, Subcategory B.2.6 Application

Application Number: 2018-1922
Application: New End-use Product (Product Chemistry - New Combination of Technical Grade Active Ingredients)
Product: Acuron Flexi Herbicide
Registration Number: #####
Active ingredients (a.i.): S-metolachlor and R-enantiomer, Bicyclopyrone and Mesotrione
PMRA Document Number: 3001424

Purpose of Application

The purpose of this application is to register the end-use product Acuron Flexi Herbicide for use on corn (field, seed and sweet) in Eastern Canada.

Chemistry Assessment

Acuron Flexi Herbicide is formulated as a suspension containing mesotrione at a concentration of 37.8 g ai/L, bicyclopyrone at a concentration of 9.48 g ai/L, and S-metolachlor and R-enantiomer at a concentration of 340 g ai/L. This end-use product has a density of 1.090 g/cm³ and pH of 4.9. The required chemistry data for Acuron Flexi Herbicide have been provided, reviewed and found to be acceptable.

Health Assessments

Acuron Flexi Herbicide is of low acute toxicity by oral, dermal and inhalation route in rats. It is mildly irritating to the eye of rabbits. It is not a dermal irritant in rabbits. It is a potential skin sensitizer in mice.

No new residue data were submitted in support of this application. The use pattern of Acuron Flexi Herbicide was determined to be within that of the precedent product. Therefore, the previously reviewed data were reassessed in the framework of the current application, and it was confirmed that the use of Acuron Flexi Herbicide is not expected to result in an increase in the magnitude of S-metolachlor and R-enantiomer, bicyclopyrone and mesotrione residues in/on the treated crops. Therefore, the registration of Acuron Flexi Herbicide will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

The use of Acuron Flexi Herbicide to control broadleaf weeds in corn fields is not expected to result in an increase in occupational (mixer, loader, applicator and post-application entry into treated crops) and bystander exposures compared to registered products, since the application rate, number and frequency of applications, and application method are the same as those of registered products.

Environmental Assessment

No additional risk to the environment is expected from the registration of Acuron Flexi Herbicide. The use pattern for this product fits within the registered use pattern for the active ingredients. Required amendments to the label of Acuron Flexi Herbicide include buffer zones for use on corn.

Value Assessment

The availability of Acuron Flexi Herbicide will provide corn farmers in eastern Canada with an option to use a co-formulated product without atrazine to manage both grasses and broadleaf weeds in field, sweet and seed corn.

Scientific rationales, together with efficacy and host crop tolerance data from field trials conducted in Ontario between 2015 and 2017, were provided for review. The submitted trial data, together with the provided rationales, a formulation comparison and label comparisons with other precedent products, demonstrated that Acuron Flexi Herbicide applied as per label directions for the full 3.7 L/ha rate would perform as expected. At a reduced rate of 3.0 L/ha, select weed claims, including lamb's-quarters, redroot pigweed, common ragweed, velvetleaf, eastern black nightshade and proso millet, can be supported for short-season suppression. Furthermore, the existing use pattern for the precedent products, together with the provided value data, supported the use of Acuron Flexi Herbicide in tank-mixture with glyphosate as per label directions. With respect to the rotational cropping claims, all labelled rotational crops can be supported since they reflect those labelled for a similar precedent product.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the registration of Acuron Flexi Herbicide.

References

PMRA Document Number	Reference
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2882779	2018, Mesotrione/S-Metolachlor/Bicyclopyrone/Benoxacor - A20540B - Document J, DACO: 2.2,3.1.2,3.2.1,3.2.2,3.2.3,3.3.1,3.3.2,3.4.2,4.8,7.1 CBI
2882780	2018, Mesotrione/S-Metolachlor/Bicyclopyrone A20540B - Document H, DACO: 3.2.1,3.3.1,3.3.2 CBI
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2882785	2014, Protocol A20540B - Content of Active Ingredients and Corrosion Characteristics in Packaging Made of Fluorinated HDPE after Storage for 1 year at 20C, DACO: 3.5.10,3.5.14 CBI
2882786	2014, Protocol A20540B - Content of Active Ingredients and Corrosion Characteristics in Packaging Made of non-Fluorinated HDPE after Storage for 1 year at 20C, DACO: 3.5.10,3.5.14 CBI
2882787	2014, Protocol A20540B - Content of Active Ingredients and Corrosion Characteristics in Packaging Made of Stainless Steel after Storage for 1 year at 20C, DACO: 3.5.10,3.5.14 CBI
2921142	2018, Mesotrione/S-Metolachlor/Bicyclopyrone - A20540B - Physico-Chemical Studies of the Formulation Addendum to PC-15-011 - Product Chemistry Volume, DACO: 3.5.10,3.5.14 CBI
2972985	2018, Acute summary- Acuron Flexi (A20540B/D) Summary Toxicology Profile, DACO: 4.1
2972986	2014, Mesotrione/S-Metolachlor/Bicyclopyrone ZC & S:Benoxacor (A20540B) Acute Oral Toxicity - Up-And-Down Procedure in Rats Final Report, DACO: 4.6.1
2972987	2014, Mesotrione/S-Metolachlor/Bicyclopyrone ZC & S:Benoxacor(A20540B) Acute Dermal Toxicity in Rats Final Report, DACO: 4.6.2
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2882004	2015, PWC15A1B - Fleabane, Canada (Glyphosate Resistant) Control in No-Till Corn with Preplant Herbicides II, DACO: 10.2.3.3.
2882005	2016, PWC16B3 - Fleabane, Canada (glyphosate resistant) control in corn with Syngenta herbicides, DACO: 10.2.3.3.
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