

## Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4 and C.8.1 Application

**Application Number:** 2011-5359  
**Application:** Product Chemistry: Guarantee, Identity of Formulants and Proportion of Formulants  
**Product:** ARY 0454-113 Herbicide  
**Registration Number:** 31242  
**Active ingredients (a.i.):** Flucarbazone (present as flucarbazone-sodium)  
**PMRA Document Number :** 2157143

### Purpose of Application

The purpose of this application was to register a new end-use product, ARY 0454-113 Herbicide containing 40% flucarbazone (flucarbazone present as flucarbazone-sodium at 42%) with 8.7% cloquintocet mexyl as a safener, intended for post-emergence application on spring wheat (including durum wheat) for control of wild oats, green foxtail, volunteer tame oats, and certain broadleaf weeds in the Prairie Provinces and Peace River Region of British Columbia. The applicant has cited Everest 70 WDG (Registration Number 26447) as a precedent product. The proposed use pattern for ARY 0454-113 Herbicide, which includes a safener in the formulation, was based on the post-emergence use pattern of Everest 70 WDG.

### Chemistry Assessment

ARY 0454-113 Herbicide is formulated as wettable granules containing flucarbazone (present as flucarbazone-sodium) at a nominal concentration of 40%. This end-use product has a density of 0.62-0.66 g/cm<sup>3</sup> and pH of 6.0-7.8. With the exception of the storage stability study and complete validation data, the chemistry requirements for ARY 0454-113 Herbicide are complete.

### Health Assessments

ARY 0454-113 Herbicide is of low acute toxicity via the oral, dermal and inhalation routes in rats. It is minimally irritating to the eyes and skin of rabbits and was not a skin sensitizer in guinea pigs.

No new residue data were submitted to support the registration of ARY 0454-113 Herbicide containing active ingredient flucarbazone for use on wheat. Since the proposed application rates or use pattern for flucarbazone are the same as those currently registered use on wheat, the proposed use of ARY 0454-113 Herbicide is not expected to increase the magnitude of flucarbazone residues in/on wheat. Therefore, as a result of the proposed use of ARY 0454-113 Herbicide, the dietary exposure is not expected to increase and will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

The use of ARY 0454-113 Herbicide on spring and durum wheat to control broadleaf weeds fits within the registered use pattern for flucarbazone-sodium. The potential exposure for mixers, loaders, applicators and post-application re-entry workers is not expected to exceed the current exposure to registered products provided all label statements and precautions are followed.

### **Environmental Assessment**

The application rate for ARY 0454-113 herbicide results in an active ingredient rate that is the same as the currently registered maximum use rate. Although the environmental exposure from use of ARY 0454-113 Herbicide is not expected to increase, the environmental risk of this product with cloquintocet-mexyl as a safener cannot be determined and more data are required in order to characterize the potential risk to non-target organisms. Additional mitigation measures may be added on the product label, once the environmental assessment is complete.

### **Value Assessment**

Confirmatory data from a total of 15 field trials conducted in Alberta, Manitoba, and Saskatchewan in 2010 were submitted to support registration of ARY 0454-113 Herbicide. Efficacy and crop safety of ARY 0454-113 Herbicide applied alone or in tank mix with Buctril M, Infinity, or Refine SG were directly compared to the cited precedent product Everest 70 WDG applied alone or in tank mix with the same herbicides. The use pattern for ARY 0454-113 Herbicide, which includes a safener in the formulation, was based on the post-emergence use pattern of Everest 70 WDG.

The efficacy of ARY 0454-113 Herbicide for control of wild oats, green foxtail, volunteer canola, wild mustard, and redroot pigweed was visually assessed 2-3 times during the growing season. The level of control of these weeds following the application of the ARY 0454-113 Herbicide treatments was comparable to that of the Everest 70 WDG treatments.

Tolerance of 4 spring wheat varieties in 14 trials to ARY 0454-113 Herbicide applied alone at the labeled maximum rate and the exaggerated 2 x rate or in tank mix with Buctril M, Infinity, or Refine SG was reported 2-3 times during the growing season. Crop injury following the application of the ARY 0454-113 Herbicide treatments was lower than that of the Everest 70 WDG treatments. Grain yield with the ARY 0454-113 Herbicide treatments was slightly greater than that with the Everest 70 WDG treatments.

Based on the weight of evidence, ARY 0454-113 Herbicide is effective.

### **Conclusion**

The Pest Management Regulatory Agency has completed an assessment of the information provided in support of the product, ARY 0454-113 Herbicide, and has found the information sufficient to support conditional registration of this product.

<b>PMRA Document Number</b>	<b>Reference</b>
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