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Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4, 2.6, 3.6 Application

Application Number: 2014-4874
Application: New Guarantee, Identity of Formulants, Proportion of Formulants, New Combination and Pre-Harvest Statement
Product: Armezon Pro
Registration Number: 32148
Active ingredients (a.i.): Dimethenamid-P + Topramezone
PMRA Document Number : 2594180

Purpose of Application

The purpose of this application was to register a new herbicide end use product, Armezon Pro, for use as a post-emergent herbicide in field corn. Armezon Pro, formulated as an emulsifiable concentrate, is a combination of two registered active ingredients: dimethenamid-P at 630 g/ L and topramezone at 12.5 g/ L. Armezon Pro can be tankmixed with glyphosate and atrazine.

Chemistry Assessment

Armezon Pro is an emulsifiable concentrate containing the active ingredients topramezone and dimethenamid-P at a nominal concentration of 12.5 g/L and 630 g/l respectively. The product has a density of 1.124 g/cm³ and a pH of 5.4. The chemistry requirements for Armezon Pro have been fulfilled.

Health Assessments

Armezon Pro is of low acute oral, dermal and inhalation toxicity in rats. It is mildly irritating to the eye and the skin of the rabbit. It is a skin sensitizer in guinea pigs.

The use of the new end-use product Armezon Pro on field corn is not expected to result in potential occupational or bystander exposure over the registered uses of topramezone and dimethenamid-P. No risks of concern are expected when workers follow label directions and wear personal protective equipment as stated on the label.

Previously reviewed residue data from field trials and processing studies conducted on field corn for dimethenamid-P, topramezone, atrazine and glyphosate were reassessed in the framework of this petition.

Residues of dimethenamid-P, topramezone, atrazine and glyphosate are not expected to exceed the currently established MRLs on field corn following one post-emergent application of Armezon Pro tank mixed with atrazine and glyphosate to field corn. Therefore, the dietary exposure to the field corn raw agricultural commodity and processed fractions when treated with Armezon Pro, used alone and when tank-mixed with atrazine and glyphosate, will not pose an unacceptable risk to any segment of the population, including infants,

children, youth, seniors and females.

Environmental Assessment

Armezon Pro reflects other registered uses for the individual active ingredients (topramezone and dimethenamid-p) and did not represent an increased risk to the environment from the use of Armezon Pro as a post-emergent herbicide on field corn.

Value Assessment

Value information submitted included data from eight field trials conducted in Manitoba, Ontario, and Quebec in 2013. Efficacy of the post-emergent application of Armezon Pro + Aatrex 480 was evaluated and as well directly compared to that of the registered Frontier Max + Armezon Pro + Aatrex 480 at the same a.i./ha rates per hectare. Efficacy of the post-emergent application of Armezon Pro + Aatrex 480 + Roundup WeatherMax was also evaluated in these trials.

Mean weed control following the post-emergent application of Armezon Pro + Aatrex 480 was comparable to that of Armezon + Frontier Max + Aatrex 480 at the same a.i. rates per hectare. Therefore, it can be concluded that the efficacy of dimethenamid-P and topramezone in co-formulation was comparable to these in the tank mixture. Therefore, the weeds listed for the tank mixture of Frontier Max + Armezon are supported for inclusion on the Armezon Pro label.

As glyphosate is registered for use with the tank mixture of Armezon + Frontier Max + Aatrex 480, it is supported to be included as an option with the treatment of Armezon Pro + Aatrex 480. Data from the field trials confirmed that glyphosate is compatible with the treatment of Armezon Pro + Aatrex 480.

Crop tolerance data (i.e., percent injury and grain yield) from seven field trials demonstrated that field corn can be expected to have an adequate margin of crop safety to the post-emergent applications of Armezon Pro + Aatrex 480 and Armezon Pro + Aatrex 480 + glyphosate. Furthermore, the use pattern and rate for the post-emergent application of Armezon Pro are the same as those for the tank mixture of Frontier Max + Armezon.

In Canada, there are a wide range of herbicide options available for corn producers. Despite the many herbicide options available, corn producers continue to face challenges including: herbicide resistant weed species, rotational crop restrictions, application timing restrictions, etc.

Armezon Pro, with two distinct herbicide modes of action dimethenamid-P (Group 15) and topramezone (Group 27), and tank mix compatibility with atrazine (Group 5) and/or glyphosate (Group 9) provides corn producers with a useful pesticide solution against a broad spectrum of annual broadleaf and grassy weeds, both emerged and later flushing.

Based on the weight of evidence, the registration of Armezon Pro as a post-emergent application for weed control in field corn has value and can be supported.

Conclusion

The PMRA has reviewed the information provided in support the post-emergent application of Armezon Pro in field corn. Based on the results of this review, the post-emergent application of Armezon Pro in field corn is acceptable for full registration.

References

- 2466751 2014, BAS 677 03 H: Storage stability and corrosion characteristics in commercial type containers, DACO: 3.5.10,3.5.14
- 2466752 2014, DACO 3.5.4, 3.5.5, 3.5.12, 3.5.13 and 3.5.15, DACO: 3.5.13,3.5.15,3.5.4,3.5.5
- 2470679 2014, BAS 677 03 H: Determination of Physical Properties and Oxidation Reduction, DACO: 3.5.1,3.5.11,3.5.12,3.5.2,3.5.3,3.5.6,3.5.7,3.5.8,3.5.9
- 2470681 2014, Details of corrected reports, DACO: 3.7 CBI
- 2543313 2015, BAS 677 03 H: Storage stability and corrosion/ 1 yr report, DACO: 3.5.10,3.5.14
- 2466741 2014, Value 10- efficacy- application to register BAS 677 03 H, DACO: 10.2, 10.2.3, 10.2.3.1, and 10.2.3.3.
- 2466744 2014, Value 10- non-safety adverse effects- application to register BAS 677 03 H, DACO: 10.3, 10.3.1, and 10.3.2.

2466754	2014, BAS 677 03 H - Acute oral toxicity study in rats, DACO: 4.6.1
2466755	2014, BAS 677 03 H - Acute dermal toxicity study in rats, DACO: 4.6.2
2466758	2014, BAS 677 03 H: 4-hour acute inhalation toxicity study in the rat, DACO: 4.6.3
2466759	2014, BAS 677 03 H - Acute eye irritation in rabbits, DACO: 4.6.4
2466760	2014, BAS 677 03 H - Acute dermal irritation / corrosion in rabbits, DACO: 4.6.5
2466764	2014, BAS 677 03 H - Assessment of sensitising properties on albino guinea pig by repeated applications - Buehler test with 3 applications, DACO: 4.6.6
2505621	a-Hexylcinnamaldehyde - Skin Sensitisation in the Guinea Pig (Buehler Method), DACO: 4.6.6

2115788	2008, Data submitted by the ARTF to Support Review of Agricultural Transfer Coefficients, DACO: Memo, CBI
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