



Evaluation Report for Category B, Subcategory 2.2 Application

Application Number: 2014-1075
Application: New end use product, chemistry-form of technical grade active ingredient
Product: Banvel VM PRO
Registration Number: 32221
Active ingredients (a.i.): Dicamba (present as N,N-Bis-(3-aminopropyl)methylamine salt (BAPMA))
PMRA Document Number : 2613225

Purpose of Application

The purpose of this application was to register a new end use product containing a new salt form of dicamba for use as a herbicide on pasture, rangeland, non-crop land areas and turf.

Chemistry Assessment

Banvel VM PRO is formulated as a solution containing dicamba (present as N,N-Bis-(3-aminopropyl)methylamine salt (BAPMA)) at 600 g/L. This end-use product has a pH of 5.0 – 8.0 and a density of 1.23 – 1.25 g/mL. The chemistry requirements for this product have been fulfilled.

Health Assessments

Banvel VM PRO was of low acute toxicity by the oral and dermal routes, and of moderate toxicity by the inhalation route in rats. It was mildly irritating and non-irritating to the eyes and skin of rabbits, respectively. Banvel VM PRO was a positive skin sensitizer in mice by the LLNA method.

The use of Banvel VM PRO is within the currently registered use patterns for dicamba, present as the diglycolamine salt. Since the diglycolamine salt was considered toxicologically equivalent to BAPMA salt, exposure to Banvel VM PRO is not expected to increase over the exposure from the currently registered products.

Residue data from bridging field trials conducted in the United States, including regions representative of Canada, were submitted to support the domestic use of Banvel VM PRO. Three formulations of dicamba (BAPMA; diglycolamine salt, or DGA; and diethylenetriamine salt, or DETA) were applied to corn, soybean, wheat, and pasture grass in side-by-side trials at various rates to assess the effects of formulation on residue levels.

Following review of all available data, it has been concluded that the change in formulation will not result in an increase in dicamba residues in either food or feed items.

Consequently, no revisions to the currently established MRLs are required. Therefore, there is no health risk associated with this formulation change of dicamba to any segment of the population.

Maximum Residue Limits

Based on the bridging trial data, the magnitude of residues generated for three different salt formulations show that the BAPMA salt formulation would result in similar, or lower, residues than the currently registered DGA salt formulation. Therefore, the MRLs that are currently established for dicamba are sufficient.

| Commodity | Application Method/ Total Application Rate (kg a.i./ha) | Dicamba Formulation | PHI (days) | Residues (ppm) | |
|--------------|--|---------------------|------------|----------------|-------|
| | | | | LAFT | HAFT |
| Corn Grain | One pre-plant and two foliar/ 1.37-1.43 | BAPMA | 90-99 | <0.02 | <0.02 |
| | | DGA | | <0.02 | <0.02 |
| | | DETA | | <0.02 | 0.02 |
| Soybean Seed | One pre-plant and one late foliar season/ 1.63-1.73 | BAPMA | 7 | <0.03 | 1.42 |
| | | DGA | | <0.03 | 5.82 |
| | | DETA | | <0.03 | 6.84 |
| Wheat grain | One pre-plant and two foliar/ 0.69-0.73 | BAPMA | 6-7 | 0.098 | 0.91 |
| | | DGA | | 0.016 | 1.73 |
| | | DETA | | 0.089 | 0.86 |

BAPMA: N,N-bis-(3-aminopropyl)methylamine salt; DGA: diglycolamine salt; DETA: diethylenetriamine salt; LAFT = Lowest Average Field Trial; HAFT = Highest Average Field Trial; PHI = Pre-Harvest Interval

Environmental Assessment

The risk to the environment from the use of Banvel VM PRO, containing BAPMA salt of dicamba, is not expected to be greater than that of the currently registered products containing diglycolamine salt of dicamba, as these products are expected to have similar environmental profile and have identical use pattern and application rates.

Value Assessment

Efficacy of Banvel VM PRO applied alone or in tank mix with Aatrex Liquid 480 Herbicide (registration number 184750), Prowl H₂O Herbicide (registration number 29542), and Roundup WeatherMax with Transorb 2 Technology Liquid Herbicide (registration number 27487) was

compared to that of Banvel VM Herbicide (registration number 29249) applied alone or in tank mix with the same herbicides at the same rates for control of a number of weed species in 40 field trials conducted on corn and non-cropland in Manitoba and Ontario in 2011, 2012, and 2013.

Mean weed control following applications of the Banvel VM PRO treatments was comparable to that of the Banvel VM treatments. Therefore, all efficacy claims and herbicide tank mix partners that are labelled for Banvel VM are supported for inclusion on the Banvel VM PRO label.

Crop safety information demonstrated that small grain cereals exhibited a comparable margin of crop safety to the Banvel VM PRO treatments over the Banvel VM Herbicide treatments. The result observed on small grain cereals can be extrapolated to support the use of Banvel VM PRO in pasture and rangeland and established turfgrass.

Banvel VM PRO contains dicamba present as the BAPMA salt, which provides strong and effective binding of dicamba spray residues, thus, suppressing potential volatilization of the herbicide application.

Based on the weight of evidence, the registration of Banvel VM PRO is supported from a value standpoint.

Conclusion

Following review of the application, Banvel VM PRO was granted registration for use as a herbicide on pasture, rangeland, non-crop land areas and turf.

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PMRA

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Additional Information Used

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