



Evaluation Report for Category B, Subcategory 2.6 Application

Application Number: 2021-3696
Application: New End-Use Product Chemistry-New Combination of Technical Grade Active Ingredients
Product: AUTHORITY STRIKE
Registration Number: 34867
Active ingredients (a.i.): Sulfentrazone, Carfentrazone-ethyl
PMRA Document Number : 3457338

Purpose of Application

The purpose of this application was to register a new end-use product for pre-plant and pre-emergent burndown of a broad spectrum of broadleaf weeds with soil residual activity in chickpeas, faba beans, field peas, flax, mustard, soybean, sunflower, and wheat (spring and durum).

Chemistry Assessment

AUTHORITY STRIKE Herbicide is formulated as suspension containing sulfentrazone at a concentration of 380 g/L and carfentrazone-ethyl at a concentration of 42 g/L. This end-use product has a density of 1.197 g/mL and pH of 4.29 – 4.38. The required chemistry data for AUTHORITY STRIKE Herbicide have been provided, reviewed and found to be acceptable.

Health Assessments

AUTHORITY STRIKE Herbicide is of low acute toxicity via the oral, dermal, and inhalation routes of exposure. It is minimally irritating to the eyes and to the skin. It is not a dermal sensitizer.

Use of AUTHORITY STRIKE Herbicide is acceptable from an occupational exposure perspective. The use pattern with respect to carfentrazone-ethyl is comparable to the registered use pattern of registered products containing this active ingredient. Applicable risk assessments are on file for sulfentrazone that adequately cover the use with respect to this active ingredient. Therefore, potential exposure for mixers, loaders, applicators, bystanders and postapplication workers is not expected to exceed the current exposure to the registered products of these active ingredients. No health risks of concern are expected for workers and bystanders when label directions, precautions and restrictions are followed.

No new residue data for carfentrazone-ethyl and sulfentrazone in chickpeas, faba beans, field peas, flax, mustard, soybeans, sunflowers, and wheat (spring and durum) were submitted to support the registration of AUTHORITY STRIKE Herbicide. Previously reviewed residue data from field trials conducted in/on soybeans, beans and peas, wheat, canola, flax, and sunflowers were reassessed in the framework of this application. In addition, processing studies in treated soybeans, sunflowers, flax, and wheat were reassessed to determine the

potential for concentration of residues of carfentrazone-ethyl and sulfentrazone into processed commodities.

Maximum Residue Limit

The recommendation for the proposed maximum residue limit (MRL) for carfentrazone-ethyl was based upon previously-reviewed field trial data, and the guidance provided in the [OECD MRL Calculator](#). The MRL to cover residues of carfentrazone-ethyl and carfentrazone-chloropropionic acid (F8426-Cl-Pac) in/on crops and processed commodities is proposed as shown in Table 1. Residues in processed commodities not listed in Table 1 are covered under the proposed MRL for the raw agricultural commodity (RAC).

TABLE 1. Summary of Field Trial and Processing Data Used to Support the Maximum Residue Limit (MRL) for Carfentrazone-Ethyl							
Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL (ppm)	Proposed MRL (ppm)
			LAFT	HAF T			
Rapeseed (canola)	Broadcast soil preplant application + hooded spray application in row middles/ 62.7-360	1	<0.1	<0.1	None	None	0.1 for mustard seeds (condiment type)*

*Data translated from rapeseeds (canola) to mustard seeds (condiment type).

Following the review of all available data, the MRLs proposed in Table 1 are recommended to cover residues of carfentrazone-ethyl. Dietary risks from exposure to residues of carfentrazone-ethyl in these crop commodities at the proposed MRLs were shown to be acceptable for the general population and all subpopulations, including infants, children, adults and seniors. Thus the foods that contain residues as listed in Table 1 are considered safe to eat.

Environmental Assessment

A scientific review of the available information demonstrated that the environmental risks associated with the use of AUTHORITY STRIKE Herbicide are acceptable when the product is used according to the label directions.

Value Assessment

The registration of AUTHORITY STRIKE Herbicide provides users with a useful solution to provide burndown control of a broad spectrum of broadleaf weeds with soil residual activity early in the field season in chickpeas, faba bean, field peas, flax, soybeans, and sunflowers.

Value information submitted for review consisted of scientific rationales, precedent registrations, and data from replicated field trials. This information collectively demonstrated that the application of AUTHORITY STRIKE Herbicide could provide acceptable burndown control of

the weeds controlled by carfentrazone and residual control of the weeds controlled by sulfentrazone and all listed host and rotational crops could exhibit adequate margins of tolerance to AUTHORITY STRIKE Herbicide when applied as per the label instructions.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information acceptable to register AUTHORITY STRIKE Herbicide.

References

PMRA

Document

Number	Reference
3256174	2007, Determination of Physical-Chemical Characteristics of F7127 3.5 SE - Confidential Attachment, DACO: 3.2.1,3.2.2 CBI
3256175	2021, Product Identity and Composition of End-Use Product F7127 3.5 SE - Confidential Attachment, DACO: 3.2.1,3.2.2,3.2.3,3.3.1 CBI
3256176	2021, Product Identity and Composition of End-Use Product F7127 3.5 SE, DACO: 3.2.1,3.2.2,3.2.3,3.3.1
3256177	2007, Determination of Physical-Chemical Characteristics of F7127 3.5 SE, DACO: 3.2.1, 3.2.3, 3.3.1, 3.4.1, 3.5.1, 3.5.10, 3.5.11, 3.5.12, 3.5.13, 3.5.14, 3.5.15, 3.5.2, 3.5.3, 3.5.4, 3.5.6, 3.5.7, 3.5.8, 3.5.9
3345210	2022, Characterization of [CBI Removed] and Method Validation of the Analytical Methods for the Determination of Sulfentrazone and Carfentrazone-ethyl in [CBI Removed] End-Use Products, DACO: 3.4.1, 3.5.1, 3.5.10, 3.5.14, 3.5.3 CBI
3256181	2007, Acute oral toxicity study (UDP) in rats with F7127-2 SE, DACO 4.6.1
3256182	Acute dermal toxicity study in rats with F7127-2 SE, DACO 4.6.2
3256183	Acute inhalation toxicity study in rats with F7127-2 SE, DACO 4.6.3
3256184	Acute eye irritation study in rabbits with F7127-2 SE, DACO 4.6.4
3256185	Acute dermal irritation study in rabbits with F7127-2 SE, DACO 4.6.5
3256186	Skin sensitization study in guinea pigs with F7127-2 SE, DACO 4.6.6
3321923	2022, AUTHORITY FTC Herbicide: Value summary, DACO: 10.1, 10.2.1, 10.2.2, 10.2.3.1, 10.2.4, 10.3.2, 10.3.3, 10.4, 10.5.1, 10.5.2, 10.5.3, 10.5.4, 10.5.5.
3321926	2022, AUTHORITY FTC Herbicide: All inclusive trial reports, DACO: 10.2.3.3.
3256170	2021, AUTHORITY FTC Herbicide: Value Summary - New Product, DACO: 10.1,10.2.1,10.2.2,10.2.3.1,10.2.3.3,10.3.2,10.3.3,10.4,10.5,10.5.1,10.5.2,10.5.3,10.5.4,10.5.5

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