Health Canada Santé Canada

Evaluation Report for Category B, Subcategory 2.1, 2.3, & 2.4 Application

Application Number: 2014-0874
Application: New/Chanted EP or MA Product Chemistry – Guarantee, Identity of Formulants, and Proportion of Formulants
Product: Nuance PRO Herbicide
Registration Number: 31873
Active ingredients (a.i.): Metsulfuron-methyl, tribenuron-methyl
PMRA Document Number : 2515534

Purpose of Application

The purpose of this application was to register a new end-use product, Nuance PRO Herbicide, for summer fallow and pre-seed use in small grains based on a currently registered tank mix.

Chemistry Assessment

Common Name : Tribenuron-methyl
IUPAC Chemical Name : methyl 2-{[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylcarbamoyl]sulfamoyl}benzoate
CAS Chemical Name : methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate

Common Name : Metsulfuron-methyl
IUPAC Chemical Name : methyl 2-{[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)carbamoyl]sulfamoyl}benzoate
CAS Chemical Name : methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate

Nuance PRO Herbicide has the following properties:

Property	Result
Colour and Physical state	Off-white granules
Nominal guarantee	Tribenuron-methyl at 42.9% Metsulfuron-methyl at 8.6%
Odour	Odourless
Density at 20°C	0.5 – 0.7 g/ml

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Property	Result
pH	5.5 – 7.5

The chemistry requirements for Nuance PRO Herbicide have been fulfilled.

Health Assessments

Nuance PRO Herbicide was of low acute toxicity via the oral, dermal and inhalation routes in the rat. It was minimally irritating to the eye and non-irritating to the skin of rabbits. It was not a dermal sensitizer in mice.

The use of the new end-use product, Nuance PRO Herbicide, as a ground application to summer fallow land and as a pre-seed treatment where wheat (spring, durum and winter) and spring barley will be planted, is not expected to result in potential occupational or bystander exposure over the registered uses of tribenuron-methyl and metsulfuron-methyl. No risks of concern are expected when workers follow label directions and wear personal protective equipment as stated on the label.

No new residue data were submitted in support of the registration of Nuance PRO Herbicide, containing active ingredients tribenuron-methyl and metsulfuron-methyl, for use as treatment on summer fallow land and fields to be planted with wheat (spring, durum and winter) and spring barley. Data on file support the uses of Nuance PRO Herbicide. Labelled uses of Nuance PRO Herbicide are not expected to increase the magnitude of tribenuron-methyl and metsulfuron-methyl residues in/on spring wheat, durum wheat and spring barley. Therefore, the dietary exposure to tribenuron-methyl and metsulfuron-methyl is not expected to increase and will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

Potential risks to aquatic organisms and non-target terrestrial plants from the premix formulation of Nuance PRO Herbicide may be mitigated through spray buffer zones. Spray buffer zones were determined for Nuance PRO Herbicide based on the most recent risk assessment and buffer zone calculation models used for each of the active ingredients in the formulation, and are indicated on the product label.

Value Assessment

Value information included data from eight replicated small-scale herbicide field trials conducted in Saskatchewan (4; Josephburg) and Alberta (4; Dunurn) in 2013, of which two were pre-seed to wheat, two were pre-seed to barley and four were fallow applications (two each preceding wheat and barley planting the following year). Data from these trials included efficacy data for a subset of the weeds listed for inclusion on the Nuance PRO Herbicide label, as well as crop tolerance (phytotoxicity and yield) data for spring wheat and spring barley. Rationales were also provided to help support claims not covered by the trial data. Furthermore, data were provided from field

trials conducted in the United Kingdom in support of the rotational cropping claims. Based on the weight of evidence available, Nuance PRO Herbicide has been shown to have acceptable value.

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 the new end-use product Nuance PRO Herbicide.

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ISSN: 1911-8082