

Evaluation Report for Category B, Subcategories 2.1, 2.3, 2.4 Application

Application Number: 2022-2023
Application: New End-use Product (Product Chemistry) – Guarantee, Identity of Formulants, and Proportion of Formulants
Product: Liberty 180 SN Herbicide MP
Registration Number: 35073
Active ingredient (a.i.): Glufosinate-ammonium
PMRA Document Number: 3537364

Purpose of Application

The purpose of this application was to register a new end-use product, Liberty 180 SN Herbicide MP, for post-emergent use for control of a broad spectrum of grassy and broadleaf weeds in canola and soybean varieties or hybrids that are tolerant to glufosinate-ammonium.

Chemistry Assessment

Liberty 180 SN Herbicide MP is formulated as a solution containing glufosinate-ammonium at a concentration of 180 g/L. This end-use product has a density of 1.08-1.104 g/mL and pH of 6.5-8.5. The required chemistry data for Liberty 180 SN Herbicide MP have been provided, reviewed and found to be acceptable.

Health Assessments

Liberty 180 SN Herbicide MP is of low acute toxicity via the oral, dermal, and inhalation routes of exposure. It is extremely irritating to the eyes, mildly irritating to the skin and it is a dermal sensitizer.

The use pattern of Liberty 180 SN Herbicide MP containing glufosinate-ammonium is comparable to the registered use pattern of the precedent product. Potential exposure for mixers, loaders, applicators, bystanders and postapplication workers is not expected to exceed the current exposure to the registered products of this active ingredient. No health risks of concern are expected for workers and bystanders when label directions, precautions and restrictions are followed.

No new residue data for glufosinate-ammonium in canola and soybeans were submitted or were required to support the registration of Liberty 180 SN Herbicide MP. Previously reviewed residue data from field trials conducted in/on canola and soybeans were reassessed in the framework of this application. In addition, processing studies in treated canola and soybeans were also reassessed to determine the potential for concentration of residues of glufosinate-ammonium into processed commodities.

The use directions on the Liberty 180 SN Herbicide MP label, including the target crops canola and/or soybeans, method (ground and aerial), rates and timing of application, geographic restrictions, preharvest intervals, feeding restrictions, and crop rotation restrictions are comparable to those on the label of the precedent end-use product.

Residues of glufosinate-ammonium in treated canola and soybeans as a result of these uses will be covered by the established maximum residue limit (MRL) for these crop commodities. Consequently, dietary exposure to residues of glufosinate-ammonium is not expected to increase with the registration of Liberty 180 SN Herbicide MP and will not pose health risks of concern to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

The registration of Liberty 180 SN Herbicide MP for post-emergent control of a broad spectrum of grassy and broadleaf weeds in canola and soybean varieties or hybrids that are tolerant to glufosinate-ammonium does not pose any additional risk to the environment when used according to the label directions.

Value Assessment

The registration of Liberty 180 SN Herbicide MP provides users with a higher concentrated formulation of glufosinate-ammonium, which allows a reduction in product volume while applying the same amount of active ingredient per hectare. The reduction in product volume reduces plastic containers, costs of product transportation, and spaces for product storage contributing to agricultural sustainability.

Value information submitted for review consisted of scientific rationales, a precedent registration, and data from replicated field trials. This information collectively demonstrated that efficacy and crop tolerance of Liberty 180 SN Herbicide MP are equivalent to the precedent product and the registration of this product has acceptable value.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information acceptable to support the registration of Liberty 180 SN Herbicide MP.

References

PMRA

Document

Number	Reference
3353986	2021, BAS 1000 47 H: Determination of physico-chemical properties according to UN Transport Regulation and Directive 94/37/EC (Regulation (EC) No. 440/2008), DACO: 3.5.11,3.5.12,3.5.8
3353987	2021, Validation of the Analytical Method AFL1056/01: Quantitative Determination of the Active Ingredient Glufosinate-Ammonium in BAS 1000 47 H by Liquid Chromatography, DACO: 3.4.1
3353988	2021, Analytical Method AFL1056/01 - Quantitative Determination of the Active Ingredient Glufosinate-Ammonium in BAS 1000 47 H by Liquid Chromatography, DACO: 3.4.1
3353989	2021, BAS 1000 47 H: Determination of physico-chemical properties according to EPA Product Properties Test Guidelines, DACO: 3.5.8
3353992	2022, Physical and chemical properties of formula BAS 1000 47 H including Low temperature stability (7 days at 0C) and Accelerated storage stability (14 days at 54C), DACO: 3.5.1,3.5.10,3.5.14,3.5.2,3.5.3,3.5.6,3.5.7,3.5.9
3354008	2022, Miscibility, DACO: 3.5.13
3354009	2022, Dielectric Breakdown Voltage, DACO: 3.5.15
3354010	2022, Formulation Type of Liberty 180 SN Herbicide MP, DACO: 3.5.4
3354011	2022, Container Material and Description, DACO: 3.5.5
3511039	2023, LIBERTY(tm) SL 180 and LIBERTY(tm) SN 180 Amended Group A - Product Identity, Composition and Analysis, DACO: 3.2.1,3.2.2,3.2.3,3.3.1 CBI
3511040	2023, List of Report Amendments: LIBERTY(tm) SL 180 and LIBERTY(tm) SN 180: Amended Group A - Product Identity, Composition and Analysis. Amended Final Report Reg. Doc. No. 2023/2045557 , DACO: 3.2.1,3.2.2,3.2.3,3.3.1 CBI
3353994	2022, BAS 1000 47 H - Acute oral toxicity study in rats, DACO: 4.6.1
3353996	2022, BAS 1000 47 H - Acute dermal toxicity study in rats, DACO: 4.6.2
3353990	2022, BAS 1000 47 H - Acute inhalation toxicity study in Wistar rats - 4-hour liquid aerosol exposure (nose-only), DACO: 4.6.3
3353995	2022, BAS 1000 47 H - Acute eye irritation in rabbits, DACO: 4.6.4
3353997	2022, BAS 1000 47 H - Acute dermal irritation / corrosion in rabbits, DACO: 4.6.5
3353993	2022, BAS 1000 47 H - BUEHLER Test in guinea pigs, DACO: 4.6.6
3353985	2022, Application to Register Liberty 180 SN for Control of Grasses and Broadleaf Weeds in LibertyLink Canola and LibertyLink Soybean, DACO: 10.1, 10.2, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.3, 10.3.1, 10.3.2(A), 10.3.3, 10.4, 10.5.1, 10.5.2, 10.5.3, 10.5.4, 10.5.5, 10.6
3354015	2022, Efficacy trials - Individual trial reports, DACO: 10.2.3.3(B)
3354031	2022, Tolerance trials - Individual trial reports, DACO: 10.3.2

© His Majesty the King in Right of Canada, as represented by the Minister of Health Canada, 2024

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of Health Canada, Ottawa, Ontario K1A 0K9.