



## Evaluation Report for Category B, Subcategory 1.2 Application

**Application Number:** 2016-3080  
**Application:** New Technical Grade Active Ingredient Product Chemistry – New Source (Site) New Registrant  
**Product:** Advantage Technical Glufosinate  
**Registration Number:** 32787  
**Active ingredients (a.i.):** Glufosinate-ammonium  
**PMRA Document Number:** 2712165

### Purpose of Application

The purpose of this application was to register Advantage Technical Glufosinate, a new source of the active glufosinate-ammonium.

### Chemistry Assessment

**Common Name:** Glufosinate-ammonium  
**IUPAC\* Chemical Name:** ammonium (2RS)-2-amino-4-(methylphosphinato)butyric acid  
**CAS† Chemical Name:** 2-amino-4-(hydroxymethylphosphinyl)butanoic acid monoammonium salt

\* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Advantage Technical Glufosinate has the following properties:

| Property                              | Result                     |
|---------------------------------------|----------------------------|
| Colour and physical state             | Off-white solid            |
| Nominal concentration                 | 99.5%                      |
| Odour                                 | Slightly pungent odour     |
| Specific gravity                      | 1.4                        |
| Vapour pressure                       | $<3.1 \times 10^{-5}$ Pa   |
| pH                                    | 3.7 – 4.0                  |
| Solubility in water                   | > 500 g/L (pH 5-9)         |
| n-Octanol/water partition coefficient | Log $K_{ow}$ = <0.1 (pH 7) |

The required chemistry data for Advantage Technical Glufosinate have been provided, reviewed, and found to be acceptable.

### **Health, Environmental and Value Assessments**

Health, environmental and value assessments were not required for this application.

### **Conclusion**

The Pest Management Regulatory Agency has completed a review of the available information and is able to support the full registration of Advantage Technical Glufosinate, a new source of the active glufosinate-ammonium.

## References

| PMRA Document Number | References  |
|----------------------|---|
| 2650583              | 2011, Appearance (Colour, Physical State and Odour) of Glufosinate-ammonium Technical, DACO: 2.14.1,2.14.2,2.14.3 CBI   |
| 2650580              | 2011, Preliminary Analysis and Enforcement Analytical Methods for Glufosinate Ammonium TGAI: Selected Studies to Fulfill the Requirements of OPPTS Guideline 830.1700 and 830.1800 and EC Council Directive 94/37/EC Article 1.9 to 1.11, DACO: 2.12,2.12.1,2.13,2.13.1,2.13.2,2.13.3 CBI |
| 2650586              | 2011, Specific Gravity of Glufosinate-ammonium Technical, DACO: 2.14.6 CBI  |
| 2650584              | 2011, pH of Glufosinate-ammonium Technical, DACO: 2.14.15 CBI   |
| 2650585              | 2014, Melting Point and range of Glufosinate Ammonium Technical Material, DACO: 2.14.4 CBI  |
| 2650587              | 2016, Determination of the Ultraviolet-Visible Absorption Spectrum of Glufosinate Technical Grade Active Ingredient (TGAI), DACO: 2.14.12 CBI   |
| 2650578              | 2016, Manufacturing Process for Technical Glufosinate ammonium, DACO: 2.11,2.11.1,2.11.2,2.11.3,2.11.4 CBI  |
| 2650581              | 2016, Rationale for No Contaminants of Toxicological Concern, DACO: 2.13.4 CBI  |
| 2650582              | 2016, Summary of Advantage Technical Glufosinate Product Chemistry Test Guidelines, DACO: 2.14,2.14.1,2.14.10,2.14.11,2.14.12,2.14.13,2.14.14,2.14.15,2.14.2,2.14.3,2.14.4,2.14.6,2.14.7,2.14.8,2.14.9 CBI  |
| 2650577              | 2016, Summary of Advantage Technical Glufosinate, DACO: 2.0,2.1,2.2,2.3,2.3.1,2.4,2.5,2.6,2.7,2.8,2.9 CBI   |

ISSN: 1911-8082

**8 Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services Canada 2016**

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 the Minister of Public Works and Government Services Canada, Ottawa, Ontario K1A 0S5.