



## **2,4-D**

### **Evaluation Report for Category B, Subcategory 1.3 Application (Changes in TGAI Chemistry)**

**Application Number:** 2006-7134  
**Application:** Category B, Subcategories: B.1.3, C 3.15 (Changes in chemistry)  
**Product:** 2,4-D Dry Powder Acid Herbicide  
**Registration Number:** 17134  
**Active ingredients (a.i.):** 2,4-Dichlorophenoxyacetic Acid  
**PMRA Document Number:** 1452147

#### **Background**

Summaries of the data and information reviewed by the Health Canada Pest Management Regulatory Agency (PMRA) of the lawn and turf uses of 2,4-D were published in the Proposed Acceptability for Continuing Registration (PACR) document PACR2005-01, Re-evaluation of the Lawn and Turf uses of (2,4-Dichlorophenoxy)acetic Acid [2,4-D], dated 21 February 2005. For specific details of use, precautions and restrictions, refer to the product label.

#### **Purpose of Application**

The purpose of this submission is to amend the product chemistry, address data/information regarding the intermediate transformation product chlorohydroquinone and amend label text under Toxicological Information as required in the letter dated June 12, 2006 under the Re-evaluation Program. The applicant also wishes to amend the package sizes and the submission is classified as a Category B1.3 - S-A-TGAI.

#### **Chemistry Assessment**

**Common Name:** 2,4-D  
**IUPAC Chemical Name:** (2,4-Dichlorophenoxy)acetic acid  
**CAS Chemical Name:** (2,4-Dichlorophenoxy)acetic acid

2,4-D Dry Powder Acid Herbicide has the following properties:

Property	Result
Colour and physical state	white solid
Nominal concentration	97.5%
Odour	Antiseptic
Specific Gravity	1.52
Vapour pressure	$1.1 \times 10^{-2}$ Pa
pH	3.0 (1% w/v solution)
Solubility in water	311 mg/L (pH 1, 25°C)
n-Octanol/water partition coefficient	Log Kow = 2.58-2.83 (pH 1)

The chemistry requirements for 2,4-D Dry Powder Acid Herbicide are complete.

### **Health Assessments**

No data was requested or submitted, therefore, a toxicological review was not required. As requested by the Re-evaluation decision, the toxicological information portion of the label has been amended to reflect that decision.

### **Environmental Assessment**

A Level D review of the above submission was conducted on chlorhydroquinone, a transformation product of 2,4-D, from the viewpoint of environmental protection. The 2,4-D Task Force indicates that chlorhydroquinone was formed in only one of three aerobic aquatic biotransformation studies on day 27 of the study. Since the dissipation half-life of chlorhydroquinone was 5 days, the potential exposure in the aquatic environment would be low and it is not expected to be a concern. There are no additional fate data available on this transformation product.

### **Value Assessment**

A value assessment was not required for this submission.

### **Conclusion**

The PMRA has completed an assessment of available information for 2,4-D acid herbicide and has found the information sufficient to support the amendment of the product chemistry, address data/information regarding the intermediate transformation product chlorhydroquinone and amend label text under toxicological information.

## References

- 1095781 2003, Tetra- to Hepta-Chlorinated Dioxins and Furans in Seven Batches of Technical 2,4-Dichlorophenoxyacetic Acid (2,4-D), Nufarm\_0303a, DACO: 2.13.4
- 1316240 2003, Technical 2,4-D; Content in 2,4-D and its different components; Analytical profile of 5 batches; Nufarm GmbH & Co KG; Linz (Austria), 09/C/3953, MRID: N/A, DACO: 2.13.1,2.13.2,2.13.3
- 1316245 2005, 2,4-D (Technical Grade) Acid Physico-Chemical Properties, NUF092/043755, MRID: N/A, DACO: 2.14.1,2.14.13,2.14.2,2.14.3,2.14.6,2.14.8
- 1316247 2006, 2,4-D (Technical Grade) Storage Stability (Source: Linz, Austria), NUF098/054005, MRID: N/A, DACO: 2.14.14
- 1377740 2003, Linz Manufacturing Process of 2,4-D TGAI, NP04/2003, MRID: N/A, DACO: 2.11.1
- 1377741 2007, 2,4-D Technical Acid Manufacturing Update, Linz, Austria, BK150207, MRID: N/A, DACO: 2.11.2

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