

## Evaluation Report for Category B Subcategory 2.1, 3.12 Application

**Application Number:** 2013-2334  
**Application:** B.2.1 New / Changes EP or MA Product Chemistry-  
Guarantee  
B.3.12 New or Changes to Product Labels-New Site or Host  
**Product:** H02 Moss Killer Consumer Concentrate  
**Registration Number:** #####  
**Active ingredients (a.i.):** Potassium soap of fatty acids (SOC) / Herbicide  
**PMRA Document Number :** 2316274

### Purpose of Application

The purpose of this application is to register a new domestic end-use product, H02 Moss Killer Consumer Concentrate, for control of mosses, algae, lichens, and liverworts on various sites, including lawns, ornamental gardens and motor homes/boats.

### Chemistry Assessment

H02 Moss Killer Consumer Concentrate is a formulation containing potassium salts of fatty acids at 22.11% each. This product has a density of  $1.04 \pm 0.03$  g/mL and a pH of  $10.00 \pm 0.25$ . The chemistry requirements for H02 Moss Killer Consumer Concentrate have been fulfilled.

### Health Assessments

The new domestic end-use product, H02 Moss Killer Consumer Concentrate, is used for the control of mosses, algae, lichens and liverworts on various sites, including lawns, ornamental gardens and motor homes/boats.

H02 Moss Killer Consumer Concentrate is expected to have low acute toxicity by oral and dermal route, however, it is a skin and eye irritant. The current label statements for H02 Moss Killer Consumer Concentrate are considered adequate to address any potential risk due to exposure of the mixer, loader, applicator and/or bystander to the end-use product. Occupational exposure when applying H02 Moss Killer Consumer Concentrate is not expected to result in unacceptable risk when the product is used according to label directions.

### Environmental Assessment

The uses of the proposed formulations of H02 Moss Killer products containing potassium salts of fatty acids are not expected to increase the environmental exposure relative to other approved fatty acids-based soap salts (e.g., Registration Numbers 27882 and 27883). Therefore, negligible risk is expected. Environmental concerns have been mitigated through adequate statements on

the product label.

## **Value Assessment**

Potassium salts of fatty acids is one of the few pesticides presently available to domestic users in certain jurisdictions that have enacted legislation restricting pesticide availability for non-essential or cosmetic use. There are a few end use products containing potassium salts of fatty acids in the Canadian market for control of mosses, algae, lichens, and liverworts; two of them include uses on turf. The availability of H02 Moss Killer Consumer Concentrate from a different manufacturer may be expected to increase market competitiveness.

The value information provided included data from field research trials, scientific rationales, and use history information. Efficacy data demonstrated that the application of H02 Moss Killer Consumer Concentrate at the labeled rate provided acceptable control of mosses and algae. The level of control of these pests was comparable to that of commercial standard treatments, e.g., ammonium salts of fatty acids and Safer's De-Moss (potassium salts of fatty acids). Based on the historic use and scientific rationale, efficacy claims for moss and algae control can be extrapolated to support claims for lichen and liverwort control.

Tolerance of grass species, including perennial ryegrass, chewing/creeping/fine fescue, Kentucky/annual bluegrass, and bentgrass, was reported for H02 Moss Killer Consumer Concentrate at the labeled rates. Injury to these grasses was high at the early rating. Potassium salts of fatty acids are known as non-selective contact pesticides. To alleviate the injury to turf grass, "Use Directions" on the H02 Moss Killer Consumer Concentrate label included a statement that read as "lightly rinse treated areas with water (50 mL/m<sup>2</sup> or less) 15 to 30 minutes after treatment to avoid grass/turf and plant damage", which was consistent with the labels for other currently registered products containing potassium salts of fatty acids. Information from dedicated tolerance trials demonstrated that irrigation at 30 minutes after application of H02 Moss Killer Consumer Concentrate reduced turf injury to an acceptable level. Turf grasses were fully recovered after two to three mowings.

Tolerance of ornamentals was not reported for H02 Moss Killer Consumer Concentrate. A use claim for ornamental gardens was supported for the following reasons:

- (1) A similar formulation, H02 Moss Killer Concentrate (USEPA Registration Number 67702-12; owned by W. Neudorff GmbH KG), has been registered for use on ornamental gardens in the United States since 2003. The labelled application rates are the same as requested for labelling in Canada.
- (2) H02 Moss Killer Consumer Concentrate was determined to be substantially similar to other Neudorff's products that are registered as insecticides in Canada, e.g., Registration Numbers 27883, 27886 and 28381 (PMRA #2297786), which are labelled for use on ornamentals.

## **Conclusion**

The Pest Management Regulatory Agency (PMRA) has carried out an evaluation of available information and has concluded that the registration of a new domestic end-use product, H02

Moss Killer Consumer Concentrate, for control of mosses, algae, lichens, and liverworts on various sites, including lawns, ornamental gardens and motor homes/boats can be supported.

## References

### Chemistry

2297792 2013, Binder #1, DACO: 3.0, 3.1, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.2, 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.4, 3.4.1, 3.4.2, 3.5, 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, 3.5.5, 3.5.6, 3.5.7, 3.5.8, 3.5.9 CBI

### Health

2297793 2013, Part 5, Exposure (Occupational and/or Bystander), DACO 5.2

### Value

2297794 2013, Binder #3, DACO: 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.2, 10.2.3.3(B), 10.3, 10.3.1, 10.3.2(A), 10.3.3, 10.4, 10.5, 10.5.1, 10.5.2, 10.5.3, 10.5.4

2297795 2013, Non-safety Adverse Effects - Summaries, DACO: 10.3.2.

2297796 2013, Efficacy Summaries, DACO: 10.2.3.1.

2297797 2012, The Evaluation of Moss Reduction Products on Bentgrass Turf, DACO: 10.2.3.3(B).

2297798 2008, Evaluation of Efficacy of Citrus Oil (d-limonene) Applications to Control Lawn Moss as Compared to Commercial Standards, DACO: 10.2.3.3(B).

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2297803 2000, Putting Green Moss Control Trial, DACO: 10.2.3.3(B).

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2297806 2012, 2011 Evaluation of Turf-grass Phytotoxicity Resulting from Repeated Applications of Fiesta, Moss-Aside, Lilly Miller Moss-Out, and Iron Sulfate Heptahydrate on an Annual Bluegrass Putting Green, DACO: 10.2.3.3(B).

2297807 2008, Perennial Ryegrass and Annual Bluegrass Tolerance to Citrus Oil (d-limonene) Applications to Control Lawn Moss as Compared to Commercial Standards, DACO: 10.2.3.3(B).

2297808 2001, Moss Control on Putting Greens Using Potassium Salt of Fatty Acids, DACO: 10.2.3.3(B).

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