



Evaluation Report for Category B, Subcategory 2.6 Application

Application Number: 2010-0878
Application: New EP Product Chemistry-New combination of TGIAs
Product: Raid Max Crawling Insect Bug Killer 3
Registration Number: 30357
Active ingredients (a.i.): Pyrethrins (PYR), Piperonyl butoxide (PBU) and Cyfluthrin (CXF)
PMRA Document Number : 2122317

Purpose of Application

The purpose of this application was to register a new end-use product, Raid Max Crawling Insect Bug Killer 3, with a new combination of registered active ingredients, pyrethrins, piperonyl butoxide and cyfluthrin. Raid Max Crawling Insect Bug Killer 3 was proposed for indoor use as direct kill and residual control of ants, cockroaches, earwigs, spiders, multi-coloured Asian lady beetles, centipedes, silverfish and crickets.

Chemistry Assessment

Raid Max Crawling Insect Bug Killer 3 is formulated as a pressurized product containing pyrethrins at a nominal concentration of 0.20%, piperonyl butoxide at a nominal concentration of 0.48%, and cyfluthrin at a nominal concentration of 0.05%. This end-use product has a density of 0.915 g/cm³ and pH of 5.92. The chemistry requirements for Raid Max Crawling Insect Bug Killer 3 are complete.

Health Assessments

Raid Max Crawling Insect Bug Killer 3 is of low acute toxicity to rats via the oral, dermal, and inhalation routes of exposure. It is minimally irritating to the eye and mildly irritating to the skin of rabbits. It is not a dermal sensitizer in guinea pigs.

A human health risk assessment was completed for the new end-use product, Raid Max Crawling Insect Bug Killer 3. Domestic indoor use of this aerosol product would not result in unacceptable risks to users or bystanders.

Environmental Assessment

The use pattern proposed for Raid Max Crawling Insect Bug Killer 3 would result in limited environmental exposure. Environmental concerns are mitigated with the addition of the hazard statements on the products labels.

Value Assessment

Efficacy data from four laboratory trials and a precedent product supported the label claims of Raid Max Crawling Insect Bug Killer 3. One trial demonstrated 100% mortality of pavement ants for up to two weeks when the tested product was applied on vinyl or plywood. However, a precedent product supported the long-lasting control of ants, cockroaches, earwigs, spiders and crickets for up to 10 days. Three trials demonstrated 100% mortality of cockroaches, silverfish, crickets, centipedes, spiders, ants, earwigs and multi-coloured Asian ladybird beetles when the tested product was applied directly to the targeted pest.

Conclusion

The PMRA has conducted a review of the available information and has determined that the claim for control of ants, cockroaches, earwigs, spiders, multi-coloured Asian ladybird beetles, centipedes, silverfish and crickets by direct contact can be supported. However, the residual control claim is only supported for ants, cockroaches, earwigs, spiders and crickets in this application. Raid Max Crawling Insect Bug Killer 3 is acceptable for full registration.

References

Studies/Information Provided by Applicant/Registrant

PMRA No	Title
1869179	Confidential Business Information Reference Document - Title: 3.2.2 – Description of the Formulation Process, DACO: 3.2.2 CBI
1869181	Confidential Business Information Reference Document - Title: 3.2.3 – Description of the Formation of Impurities of Toxicological Concern, DACO: 3.2.3 CBI
1877950	Updated document: starting materials, DACO: 3.2.1 CBI
1919857	Updated formulation process, DACO: 3.2.2 CBI
1987156	Updated Description of the Formulation Process (modified November 2010) - CBI reference doc., DACO: 3.2.2 CBI
1869184	2009, Method Validation of Quantitative Analytical Method ARTM-W-90003924C to Determine the Concentration of Pyrethrins, Piperonyl Butoxide, and Cyfluthin in AK2C, DACO: 3.4.1 CBI
1919859	3.4.1 information request, DACO: 3.4.1
1869186	2009, Physical and Chemical Properties Testing of AK2C, DACO: 3.5.1
1869191	Container Material and Description, DACO: 3.5.5
1869195	Oxidizing or Reducing Action (Chemical Incompatibility), DACO: 3.5.8
1869197	Storage Stability, DACO: 3.5.10
1869199	Explosibility, DACO: 3.5.12
1869200	Miscibility, DACO: 3.5.13
1869201	Corrosion Characteristics, DACO: 3.5.14
1869202	Dielectric breakdown voltage, DACO: 3.5.15
1987157	3.5.10 12 month storage stability data, DACO: 3.5.10,3.5.14 CBI
1869209	Toxicology Summary, DACO: 4.1
1869211	2009, Acute Oral Toxicity Up and Down Procedure in Rats (AK2C), DACO:

- 4.2.1,4.6.1
- 1869212 2009, Acute Dermal Toxicity in Rats (AK2C), DACO: 4.2.2,4.6.2
- 1869213 2009, Acute Inhalation Toxicity Study in Rats (AK2C), DACO: 4.2.3,4.6.3
- 1869215 2009, Primary Eye Irritation Study in Rabbits (AK2C), DACO: 4.2.4,4.6.4
- 1869216 2009, Primary Skin Irritation Study in Rabbits (AK2C), DACO: 4.2.5,4.6.5
- 1869217 2009, Dermal Sensitization Study in Guinea Pigs (Buehler Method) (AK2C), DACO: 4.2.6,4.6.6
- 1881639 2006, Reregistration Eligibility Decision for Pyrethrins. US EPA, DACO: 12.5
- 1893993 2006, Reregistration Eligibility Decision for Piperonyl Butoxide (PBO), US EPA, DACO: 12.5
- 1869219 Efficacy Summary, DACO: 10.1
- 1869225 2110, Residual efficacy of AK2C against various arthropods, DACO: 10.2.3.2 (A)
- 1869229 2010, Direct spray efficacy of AK2C against Various crawling arthropods, DACO: 10.2.3.2(A)
- 1869230 2009, Insecticide efficacy of an aerosol (AK2C) against earwigs, DACO: 10.2.3.2 (A)
- 1869231 2009, Efficacy testing with multi-colored Asian lady beetles, DACO: 10.2.3.2(A)
- 1987164 2010, Unforced residual efficacy of AK2C against ants, DACO: 10.2.3.2

ISSN: 1911-8082

**8 Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services
Canada 2014**

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.