



Government of Canada Gouvernement du Canada

Nineteen Substances on the *Domestic Substances List* Associated with Pesticidal Uses

Final Screening Assessment

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Canada The wordmark for Canada, with a small red maple leaf logo integrated into the letter 'a'.

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Table of contents

Synopsis	
1. Introduction	6
2. Approach	7
2.1 Scope of assessment.....	7
2.2 Search strategy to identify potential non-pesticidal uses in Canada.....	7
3. Screening Assessment Results	8
4. Conclusion	9
References	10
Appendix A: Substances identified as not meeting the criteria under section 64 of CEPA	12

Synopsis

As part of the Government of Canada's Chemicals Management Plan (CMP), the Ministers of the Environment and Climate Change and Health have conducted a screening assessment of 19 substances that were prioritized for assessment following categorization of the Domestic Substances List (DSL). These 19 substances are registered as active ingredients in pest control products under the *Pest Control Products Act* (PCPA) and have undergone an environmental and human health risk assessment for the purposes of the PCPA by the Pest Management Regulatory Agency, as part of the product registration process.

Based on information collected in response to Notices under section 71 of the *Canadian Environmental Protection Act, 1999* (CEPA), including Phase One and Phase Two of DSL Inventory Update, in addition to evaluation of other available information on substance uses, it was determined that 19 substances have uses that are limited to pesticide applications which have been assessed under the PCPA. Given that no other uses of these 19 substances have been identified, the likelihood of exposure to these substances in Canada and potential for harm to humans or the environment resulting from non-pesticidal applications is low.

Based on available information, it is concluded that the 19 substances identified in Appendix A do not meet any of the criteria under section 64 of CEPA as they are not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, that constitute or may constitute a danger to the environment on which life depends, or that constitute or may constitute a danger in Canada to human life or health.

Although a risk to the environment or human health has not been identified, the substances in this assessment are recognized to have properties of potential concern. There may be a concern for the environment or to human health if exposures to these substances were to increase due to uses beyond those regulated under the PCPA.

1. Introduction

The *Canadian Environmental Protection Act, 1999* (CEPA) (Canada 1999) requires the Minister of the Environment and Climate Change and the Minister of Health to conduct screening assessments of substances that have met the categorization criteria set out in the Act to determine whether these substances present or may present a risk to the environment or human health¹.

Under CEPA, screening assessments focus on information critical to determining whether a substance meets the criteria for identifying a chemical as toxic as set out in section 64 of the Act, where:

"64. [...] a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that

- (a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- (b) constitute or may constitute a danger to the environment on which life depends; or
- (c) constitute or may constitute a danger in Canada to human life or health."

The Ministers of the Environment and Climate Change and Health have conducted a screening assessment of 19 substances that were prioritized for assessment following categorization of the DSL, which were known to be used as active ingredients in pesticidal applications. This assessment utilized information collected from both Phase One and Phase Two of the DSL Inventory Update (Canada 2009, Canada 2011) and a survey conducted in 2006 (Canada 2006) under section 71 of CEPA.

The 19 substances are registered as active ingredients in pest control products under the PCPA and have undergone an environmental and human health risk assessment by the Pest Management Regulatory Agency (PMRA), according to their intended use and label, as part of their registration process (PMRA 2014). As such, and as defined in subsection 2(2) of the PCPA, there is reasonable certainty that no harm to human health, future generations or the environment will result from exposure to or use of the

¹ A determination of whether one or more of the criteria of section 64 are met is based upon an assessment of potential risks to the environment and/or to human health associated with exposures in the general environment. For humans, this includes, but is not limited to, exposures from ambient and indoor air, drinking water, foodstuffs, and the use of consumer products. A conclusion under section 64 of CEPA is not relevant to, nor does it preclude, an assessment against the hazard criteria specified in the *Controlled Products Regulations*, which is part of regulatory framework for the Workplace Hazardous Materials Information System [WHMIS] for products intended for workplace use. Similarly, a conclusion based on the criteria contained in section 64 of CEPA does not preclude actions being taken under other sections of CEPA or other Acts.

pest control product, taking into account its conditions or proposed conditions of registration under the PCPA.

This screening assessment focuses on verifying whether there may be any non-pesticidal uses or releases of these substances, in order to determine whether the substances meet the criteria under section 64 of CEPA and whether further risk assessment or risk management is required under CEPA.

The following summarizes the critical information used to identify uses, or potential uses, in Canada, to determine if the use of a substance is limited to pesticide-only applications.

2. Approach

2.1 Scope of assessment

Nineteen substances were identified that were both registered under the PCPA as active ingredients and were also prioritized for assessment following categorization of the DSL. A search strategy was then implemented to determine whether any of the substances had uses outside of those regulated under the PCPA.

2.2 Search strategy to identify potential non-pesticidal uses in Canada

To efficiently search for information on potential non-pesticidal uses for the substances in both a transparent and consistent manner, a variety of sources were consulted as part of the search strategy developed for this screening assessment. This included examining the results from three mandatory surveys conducted under section 71 of CEPA : Phase One and Phase Two of the DSL Inventory Update, and a survey conducted in 2006 (Canada 2006, Canada 2009, Canada 2011). Other sources of information on substance uses were also reviewed. These sources ranged from specific (e.g. Health Canada's Lists of Permitted Food Additives; notifications submitted under the Cosmetic Regulations to Health Canada) to broad-based searches for each substance (e.g. Hazardous Substances Data Bank, Material Safety Data Sheets). A number of domestic, international and general sources of information were identified and systematically searched, including the following sources:

Domestic Sources

- Information from mandatory CEPA section 71 survey collected under Phase Two of the DSL Inventory Update (Canada 2011);
- Information from mandatory CEPA section 71 survey collected under Phase One of the DSL Inventory Update (Canada 2009);
- Information from a mandatory CEPA section 71 survey collected under Notice

with respect to selected substances identified as priority for action (Canada 2006);

- PMRA databases/sources:
 - Product Information Database (PMRA 2014);
 - List of Formulants (PMRA 2010); and
 - Proposed Registration Decisions (PRD)/Re-evaluation decisions;
- Notifications submitted under the *Cosmetic Regulations* to Health Canada;
- Health Canada's Lists of Permitted Food Additives (2013);
- Health Canada drug and health product databases:
 - Natural Health Products Ingredients Database (NHPID 2014);
 - Licensed Natural Health Products Database (LNHPD 2014); and
 - Drug Product Database (DPD 2014).

International/General Sources

- United States Environmental Protection Agency (EPA) databases/sources:
 - Pesticide Reregistration reviews and decision documents (RED/IREDS);
 - Inerts eligible for FIFRA food/non-food use;
 - Inerts (Classification list) and Inerts, once Actives lists; and
 - US High Production volume (HPV) database;
- US EPA Chemical and Product Categories Database (CPCat 2014);
- Everything Added to Food in the United States Database (EAFUS 2011);
- Inventory of indirect additives used in food contact substances (FDA 2011);
- European Commission's Food Additive database (EU 2014a);
- European Commission's Food Flavours database (EU 2014b);
- European Commission's Cosmetic Ingredient database (COSING 2014);
- Household Products Database (HPD 2014);
- Hazardous Substances Data Bank (HSDB c1993-2008);
- Material Safety Data Sheets (MSDS)- various internet sources;
- INCHEM Pesticide classification; and
- Compendium of Common Pesticide Names (www.alanwood.net).

3. Screening Assessment Results

None of the nineteen substances had reported uses that were outside of those regulated under the PCPA according to section 71 surveys conducted under CEPA, according to reporting thresholds. The reporting thresholds for the 2006 survey and Phase One and Phase Two of the DSL Inventory Update were 100 kg (Canada 2006, Canada 2009, Canada 2011).

Following further evaluation of potential non-pesticidal uses of these substances

through other information sources, For the 19 substances in this assessment, non-pesticidal products and/or applications of the products were not found in Canada. These 19 substances were identified as only having uses as active ingredients in pesticide product(s) registered under the PCPA. Therefore, the likelihood of exposure to these 19 substances in Canada, and potential for harm to humans or the environment due to non-pesticidal applications, is low.

4. Conclusion

Based on available information, it is concluded that the 19 substances listed in Appendix A do not meet any of the criteria under section 64 of CEPA as they are not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, that constitute or may constitute a danger to the environment on which life depends, or that constitute or may constitute a danger in Canada to human life or health.

Although a risk to the environment or human health has not been identified, the substances in this assessment are recognized to have properties of potential concern. There may be a concern for the environment or to human health if exposures to these substances were to increase due to uses beyond those regulated under the PCPA.

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Appendix A: Substances identified as not meeting the criteria under section 64 of CEPA

CAS RN ⁱ	Domestic Substances List Name	Common/Pesticide Name
51-03-6	1,3-Benzodioxole, 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-	Piperonyl butoxide
62-73-7	Phosphoric acid, 2,2-dichloroethenyl dimethyl ester	Dichlorvos
76-06-2	Methane, trichloronitro-	Chloropicrin
87-90-1	1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-trichloro-	Trichloro-s-triazinetriene
88-30-2	Phenol, 4-nitro-3-(trifluoromethyl)-	TFM (3-Trifluoromethyl-4-nitrophenol)
94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	2,4-D (2,4-Dichlorophenoxyacetic acid)
133-06-2	1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-	Captan
133-07-3	1H-Isoindole-1,3(2H)-dione, 2-[(trichloromethyl)thio]-	Folpet
333-41-5	Phosphorothioic acid, O,O-diethyl O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester	Diazinon
584-79-2	Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl ester	Allethrin
2921-88-2	Phosphorothioic acid, O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) ester	Chlorpyrifos
8001-58-9	Creosote	Creosote
8003-34-7	Pyrethrins and Pyrethroids	Pyrethrins
10453-86-8	Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, [5-(phenylmethyl)-3-furanyl]methyl ester	Resmethrin
10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl-, methyl ester	Carbendazim
12069-69-1	Copper, [μ-[carbonato(2-)-O:O']]dihydroxydi-	Copper carbonate, basic
13356-08-6	Distannoxane, hexakis(2-methyl-2-phenylpropyl)-	Fenbutatin-oxide
20543-04-8	Octanoic acid, copper salt	Copper Octanoate
23564-05-8	Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester	Thiophanate-methyl

ⁱ Chemical Abstracts Service Registry Number