Special Review Decision SRD2022-03

Special Review Decision: Diodofon and Its Associated End-use Products

Final Decision

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Special Review Decision for Diodofon and Associated End-use Products

Under the authority of the *Pest Control Products Act*, pesticides are regulated by Health Canada's Pest Management Regulatory Agency (PMRA) on behalf of the Minister of Health. The *Pest Control Products Act* prescribes both the pre-market and post-market assessment (re-evaluations and special reviews) of pesticides to determine the acceptability or continued acceptability of human health and environmental risks, and, acceptable value of a pesticide in Canada. Unlike a re-evaluation, a special review is triggered only under certain circumstances, as described in section 17 of the *Pest Control Products Act*, and the intent of a special review is to specifically address the identified aspect(s) of concern. The special review approach is described in the *PMRA Guidance Document: Approach to Special Reviews of Pesticides*.[1] More details on the legislative framework are provided under the section Legislative Framework of this document.

Health Canada evaluates the aspects of concern that prompted the special review in accordance with subsection 18(4) of the *Pest Control Products Act*. The internationally accepted science-based approach is used for the assessment of the aspect(s) of concern, similar to all other scientific assessments (for example, new product registrations, re-evaluations). This step includes both risk (or value, if applicable) assessments and risk management to address the concerns identified. Health Canada's approach to risk and value assessments as well as risk management is outlined in the Framework for Risk Assessment and Risk Management of Pest Control Products.[2]

Pursuant to subsection 17(1) of the *Pest Control Products Act*, Health Canada conducted a special review of all registered pest control products containing diodofon, based on the toxicology and exposure information submitted under section 12 of the *Pest Control Products Act*, following the re-evaluation of diodofon (RVD2010-13). The identified aspects of concern for this special review are potential risks to workers using products containing diodofon and were assessed as per subsection 18(4) of the *Pest Control Products Act*.

Diodofon is an antimicrobial active ingredient used as a material preservative in a variety of aqueous based products and building materials (for example, pigment dispersions, caulks and adhesives (ceramic tile adhesives, vinyl wallpaper pastes), wallboard joint compound, mastics, and latex exterior and interior paints) to provide protection against bacterial and fungal degradation of the finalized products. It is also used in leather tanning to protect tanned leather from mould and mildew during in-tanning wet processing and during storage and transportation.

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[1] *Canada. Health Canada. PMRA Guidance Document: Approach to Special Reviews of Pesticides. Ottawa, 2021. (Internet: https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/approach-special-reviews-pesticides.html; cited October 2022.)*

[2] *Canada. Health Canada. PMRA Guidance Document, A Framework for Risk Assessment and Risk Management of Pest Control Products. Ottawa, 2021. (Internet: https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/risk-management-pest-control-products.html; cited October 2022.)*

All currently registered pest control products containing diodofon (Appendix I) are considered in this special review.

This document presents the final regulatory decision[3] for the special review of diodofon. All pest control products containing diodofon that are registered in Canada are subject to this special review decision. Prior to finalizing this decision, Health Canada published the Proposed Special Review Decision PSRD2020-01, *Special Review of Diodofon and Its Associated End-use Products*[4] on 9 July 2020 for a 90-day consultation period. An additional 60 days for consultation was provided in response to requests from stakeholders to accommodate time constraints imposed by pandemic measures; the 150-day consultation period ended on 6 December 2020.

Comments were received during the public consultation period conducted in accordance with section 28 of the *Pest Control Products Act*. Commenters are listed in Appendix II. These comments are summarized in Appendix III with the responses from Health Canada. The comments were considered and did not result in a change to the risk assessments in PSRD2020-01. Therefore, this decision is consistent with the proposed special review decision as described in PSRD2020-01.

A reference list of information used as the basis for the proposed special review decision is included in PSRD2020-01; no further information was used in the final special review decision. Therefore, the complete reference list of all information used in this final special review decision is set out in PSRD2020-01.

Special review decision for diodofon

Health Canada has completed the special review for diodofon. Under the authority of the *Pest Control Products Act*, Health Canada has determined that continued registration of some uses of diodofon are acceptable with additional risk mitigation measures. The assessments of the aspects of concern from this special review indicated that the risks to human health from the use of diodofon as a material preservative for interior paint and all building material uses, except wallboard joint compounds, are shown to be acceptable provided that the label amendments, as summarized below and listed in Appendix IV, are implemented. Environmental exposure from the registered use of diodofon is expected to be minimal.

The assessments of the aspects of concern from this special review indicated that the risk to human health from the uses of diodofon in exterior paints, wallboard joint compounds and leather tanning were not shown to be acceptable; therefore, these uses are cancelled.

[3] *"Decision statement" as required by subsection 28(5) of the Pest Control Products Act.*

[4] *"Consultation statement" as required by subsection 28(2) of the Pest Control Products Act.*

Risk mitigation measures

Registered pesticide product labels include specific directions for use. Directions include risk mitigation measures to protect human health and the environment and must be followed by law. The required amendments, including any revised/updated label statements and/or mitigation measures, as a result of the special review of diodofon, are summarized below. Refer to Appendix IV for details.

Risk mitigation

To mitigate risks to individuals using diodofon as a material preservative or handling diodofon-treated products:

For primary handlers (mixers/loaders) working in manufacturing facilities:

- Require closed transfer systems for liquid formulations
- Require additional personal protective equipment (chemical-resistant coveralls and a respirator) for solid formulations and a reduction in the maximum amount of product handled per person per day to 1.045 kg a.i./person/day

For secondary professional handlers applying interior paints using an airless sprayer:

- Require additional protective equipment (cotton coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, a painter's hat, and a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides)

For secondary handlers (professional and residential):

- Reduction of the maximum application rate for uses in building materials (except caulks and mastics) to 0.391 g a.i./kg product and to 0.50 g a.i./kg product for caulks and mastics
- Cancel the use of diodofon in wallboard joint compound
- Cancel the use of diodofon in exterior paints
- Cancel the use of diodofon in leather tanning

Implementation of product stewardship/outreach plan for paint use.

Next steps

Pest control products requiring label amendments

To comply with this decision, the required amendments (Appendix IV) must be implemented no later than 24 months after the publication date of this decision document. Accordingly, both registrants and retailers will have up to 24 months from the date of this decision document to transition to selling the product with the newly amended labels. Similarly, users will also have

the same 24-month period from the date of this decision document to transition to using the newly amended labels, which will be available on the Public Registry. This 24-month period also applies to the requirement that manufactured paint products containing the preservative diodofon must be labelled with the stipulation that professional painters wear personal protective equipment when using an airless sprayer (refer to Appendix IV).

Health Canada has determined that the identified risks from the use of diodofon as a material preservative under the current conditions of use were from longer-term exposure durations and therefore, the potential risks to human health are considered acceptable during the 24-month time period required to implement the required mitigation measures.

Cancelled product and leather use

To comply with this decision, one commercial product, Amical WP (Reg. No. 22910), which is only registered for leather tanning use is cancelled (as of the date of publication) pursuant to paragraph 20(1)(b) of the *Pest control Products Act.* Where risks of concern are not considered imminent and serious, existing stocks of the cancelled product are phased out in Canada following a general timeline of three (3) years from the publication date of the decision and following a sequential timeline provided for each level of the supply chain (in other words, at registrant, retail/distribution, and user levels). Health Canada has determined that the identified risks of concern from the use of diodofon in leather tanning under the current conditions of use are not expected to be serious or imminent over the three-year phase-out period, as risks of concern were from long-term exposure durations. Therefore, continued possession, handling, storage and use of existing stock in Canada of Amical WP (Reg. No. 22910) will be authorized under paragraph 21(5)(a) of the *Pest Control Products Act* as per the schedule below:

- Authorized for sale (of existing stocks in Canada) by registrant one (1) year from the date of decision, followed by;
- Authorized for sale by retailer/distributor (if applicable) one (1) year from the last date of sale by registrant, followed by;
- Authorized for use one (1) year from the last date of sale by retailer/distributor.

During the phase-out period, import or manufacture in Canada of PCP22910 is prohibited. In addition, the registrant is required to continue to comply with sales and incident reporting obligations during the phase-out period.

Diodofon-treated articles:

Information Note – Treated Articles[5] (September 2022) provides regulatory requirements for articles that have been treated with pesticides.

- Building materials treated with diodofon (except wallboard joint compounds):
  The import and sale of products treated with diodofon at the unamended label rates is permitted during the 24-month implementation period. However, after 24 months, the import and sale of products treated at the unamended label rate will be prohibited; all products sold after 24 months must be treated at the new label rate.

- Interior paints treated with diodofon:
  The import and sale of diodofon-treated interior paint without PPE requirements on the paint labels is permitted during the 24-month implementation period. However, after 24 months, the import or sale of interior paint without the requirement for PPE (for professional painters using airless sprayers) on the label will be prohibited.

- Wallboard joint compounds treated with diodofon:
  The import and sale of wallboard joint compound and exterior paints treated with diodofon is permitted during the 24-month implementation period. However, after 24 months, the import and sale of diodofon-treated wallboard joint compound and exterior paints will be prohibited.

- Leather products treated with diodofon:
  During the three-year phase-out period, the import of leather treated with diodofon into Canada is permitted. After 3 years from the publication date of the decision document, the import of diodofon-treated leather will be prohibited.

Refer to Appendix I and Appendix IV for details on specific products impacted by this decision.

Product stewardship/outreach plan

The product stewardship/outreach plan is intended to inform professional painters of the requirement for additional personal protective equipment (coveralls, chemical-resistant gloves, painter's hat and respirator) to mitigate risks when applying paint using airless sprayers. The plan will also have the general goal of increasing awareness of the presence of pesticide preservatives in paint and how to reduce health risks for painters. Health Canada is creating communication materials for this outreach program.

Registrants are required to notify paint manufacturers of the new paint labelling requirements related to PPE for professional painters using an airless sprayer. Paint manufacturers are required to directly label paint cans with the required label statements.

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[5] Canada. Health Canada. *Information Note – Treated Articles*. Ottawa, 2022. (Internet: https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/fact-sheets-other-resources/treated-articles.html; cited October 2022.)

Other information

Any person may file a notice of objection[6] regarding this decision on diodofon within 60 days from the date of publication of this Special Review Decision. For more information regarding the basis for objecting (which must be based on scientific grounds), please refer to the Pesticides and Pest Management portion of the Canada.ca website (Request a Reconsideration of Decision) or Health Canada's Pest Management Information Service.

The relevant confidential test data on which the decision is based (as referenced in PSRD2020-01) are available for public inspection, upon application, in PMRA's Reading Room. For more information, please contact Health Canada's Pest Management Information Service.

Legislative Framework

The Minister of Health's primary objective under the *Pest Control Products Act* (or the Act) subsection 4(1) is to prevent unacceptable risks to individuals and the environment from the use of pest control products.

As noted in the preamble of the Act, it is in the national interest that the attainment of the objectives of the federal regulatory system continue to be pursued through a scientifically-based national registration system that addresses risks to human health, the environment and value both before and after registration and applies to the regulation of pest control products throughout Canada; and that pest control products with acceptable risk and value be registered for use only if it is shown that their use would be efficacious and if conditions of registration can be established to prevent unacceptable risks to human health and the environment.

For the purposes of the Act, the health or environmental risks of a pest control product are acceptable if there is reasonable certainty that no harm to human health, future generations or the environment will result from exposure to or use of the product, taking into account its conditions of registration as per subsection 2(2) of the *Pest Control Products Act*.

Risk for the human health and environment, and value are defined under the Act subsection 2(1) as follows:

> **health risk**, in respect of a pest control product, means the possibility of harm to human health resulting from exposure to or use of the product, taking into account its conditions or proposed conditions of registration.
>
> **environmental risk**, in respect of a pest control product, means the possibility of harm to the environment, including its biological diversity, resulting from exposure to or use of the product, taking into account its conditions or proposed conditions of registration

[6] As per subsection 35(1) of the *Pest Control Products Act.*

> **value**, in respect of a pest control product, means the product's actual or potential contribution to pest management, taking into account its conditions or proposed conditions of registration, and includes the product's (a) efficacy; (b) effect on host organisms in connection with which it is intended to be used; and (c) health, safety and environmental benefits and social and economic impact.

When evaluating the health and environmental risks of a pesticide and determining whether those risks are acceptable, subsection 19(2) of the *Pest Control Products Act* requires Health Canada to apply a scientifically-based approach. The science-based approach to assessing pesticides considers both the toxicity and the level of exposure of a pesticide in order to fully characterize risk. Health Canada's approach to risk and value assessment is outlined in A Framework for Risk Assessment and Risk Management of Pest Control Products.[7]

For this special review on diodofon, the aspects of concern are related to human health.

[7] Canada. Health Canada. *PMRA Guidance Document, A Framework for Risk Assessment and Risk Management of Pest Control Products,* 2021 (Internet: https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/risk-management-pest-control-products.html, cited October 2022).

List of abbreviations

AEATF II	Antimicrobial Exposure Assessment Task Force II
CPCA	Canadian Paint and Coatings Association
OSHA	Occupational Safety and Health Administration
PMRA	Pest Management Regulatory Agency
PPE	personal protective equipment
PRVD	Proposed Re-evaluation Decision
PSRD	Proposed Special Review Decision
REV	Re-evaluation Note
RVD	Re-evaluation Decision
SRD	Special Review Decision
USEPA	United States Environmental Protection Agency

Appendix I Registered products containing diodofon in Canada as of 8 September 2022

Table 1 Products containing diodofon that are cancelled as a result of the special review

Registrant	Registration number	Product name	Marketing class	Formulation	Active ingredient
Nutrition & Biosciences Canada Company	22910	Amical WP (Antimicrobial Powder)	C	Wettable Powder	47.5%

C = commercial

Table 2 Registered diodofon products in Canada requiring label amendments

Registrant	Registration number	Product name	Marketing class	Formulation	Active ingredient
Nutrition & Biosciences Canada Company	15321	Amical Flowable (Antimicrobial Agent)	C	Suspension	39.2%
	27102	Amical 48 (Antimicrobial Powder)	C	Dust or powder	93.15%
Microban Canada Inc.	25848	Ultra-Fresh 40	C	Suspension	39.2%
	25887	Ultra-Fresh 95	C	Dust or powder	93.15%

C = commercial

Table 3 Product containing diodofon that does not require label amendments

Registrant	Registration number	Product name	Marketing class	Formulation	Active ingredient
Nutrition & Biosciences Canada Company	15320	Amical (TM) Technical	T	Dust or powder	93.15%

T = technical grade active ingredient;
Note: Discontinued products and products with submissions for discontinuation not included.

Appendix II List of commenters to PSRD2020-01

List of commenters' affiliations for comments submitted in response to PSRD2020-01

Category	Commenter
Industry association	Canadian Paint and Coatings Association (CPCA)

Appendix III Comments and responses

Health Canada received comments from the industry association Canadian Paint and Coatings Association (CPCA) in response to the consultation document Proposed Special Review Decision, PSRD2020-01 *Special Review of Diodofon and Its Associated End-use Products*. The consolidated comments related to the aspects of concern of this special review and Health Canada's responses to those comments are provided below.

1.0 Comments related to Health Canada processes and policies

1.1 Comments related to harmonization of Health Canada and United States Environmental Protection Agency (USEPA) timelines and decisions:

Comments were submitted by the CPCA expressing the importance of a more aligned North American review process for biocides to maintain fair trade and access to a sufficient number of biocides in both countries for all paint manufacturers.

Health Canada response

As outlined in the diodofon proposed special review decision document (PSRD2020-01), Health Canada relied on data provided by the registrant and the Antimicrobial Exposure Assessment Task Force II (AEATF II) to conduct the risk assessments for each of the active ingredients in the paint cluster. Health Canada has engaged with the AEATF II and the USEPA on science matters prior to and following the submission of this data.

Health Canada continues to communicate with its USEPA counterparts on science-related topics. Health Canada has also shared the outcome of its paint preservative assessments and proposed decisions with them and other regulatory authorities. Additionally, as this is a special review of diodofon, Health Canada is obligated to initiate and come to a final decision for the special review as expediently as possible, to address the identified aspects of concern related to human health.

1.2 Comments related to the process and paint-related antimicrobials

Comments were submitted by the CPCA regarding the re-evaluation process, with respect to antimicrobials for use as paint preservatives in general. These comments included topics such as socio-economic cost impact, transparency, research and development, and the method of assessment for antimicrobials.

Health Canada response

Health Canada considered a science-based risk assessment and risk management approach for this special review, and risk mitigation measures are implemented to address the aspects of concern related to human health. Comments regarding Health Canada's re-evaluation process and protocols in general are beyond the scope of the special review of diodofon and cannot be adequately addressed in this document.

2.0 Comments related to the health risk assessment

2.1 Comments related to occupational/residential exposure

2.1.1 Comment related to Health Canada's assessment of the exposure studies

A comment was received from the CPCA expressing concern about the major limitations identified by Health Canada following the review of the AEATF II study reports, even though the protocols/studies were approved beforehand by Health Canada and the USEPA. Moreover, the comment stated that these limitations led Health Canada to apply safety factors in the calculation of unit exposure values, noting that additional safety factors should only be applied following appropriate risk evaluations that are linked to actual related incidents and applied in a transparent manner.

Health Canada response

While limitations have been identified within the individual exposure studies (for example, brush and roller and airless sprayer studies), the unit exposure values derived from each study align closely between Health Canada and the USEPA and no additional safety factors were applied to the risk assessments to account for these limitations. In turn, Health Canada has considered this information in the risk assessments, along with the other information, based on a weight-of-evidence approach. This approach is in alignment with Health Canada's standard policy for evaluating risks.

2.1.2 Comment related to the selection of the use of 100% inhalation absorption

A comment was received from the CPCA regarding the use of a 100% systemic absorption by inhalation exposure for the diodofon applicator risk assessment. This assumption was described as being excessive considering the available literature (ACGIH, 1985; Kalman et al., 1984) which reports that the respirable fraction of aerosols, and other airborne particulate matter, depend heavily on other factors including particle size, which in turn determines regional deposition within the respiratory tract. A 100% bioavailability by inhalation during application is unlikely in any real-world exposure.

Health Canada response

In the AEATF II airless sprayer exposure study, inhalation exposure was monitored using two low-volume, SKC personal air-sampling pumps attached to the subject's belt, one with an OSHA Versatile Sampler (OVS) air-sampling tube containing a glass filter and XAD-2 sorbent, and the other with a disposable preloaded Parallel Particle Impactor (PPI) containing a 37 mm PVC filter and 37 mm support pad. The OVS tube is designed to capture total inhalable particles (≤ 100 microns) while the PPI is designed to trap respirable particles (≤ 4 microns). Both samplers were clipped near the individual's breathing zone.

Health Canada acknowledges that there are chemicals, which are known to be hazardous when inhaled and deposited in the gas-exchange region only. For such chemicals, the respirable fraction of aerosols should be considered in the risk assessment. However, for diodofon, the 90-day inhalation toxicity study in rats showed histological effects in the thyroid, nasal and respiratory tissues. This indicates that the chemical is hazardous when deposited anywhere in the

respiratory tract. In addition, inhalation of particle-bound chemical residues may result in a biologically effective dose even when inhaled particulates are too large to penetrate the lungs, due to absorption through the gastrointestinal tract (ACGIH, 1995). As such, the total inhalable fraction was considered in the risk assessment for diodofon.

2.1.3 Comment related to the lack of incident reports

A comment from CPCA was received stating that no incident reports were noted in any of the assessment monographs, which normally justify the decision to impose drastic reductions of use levels and/or cancellations of use.

Health Canada response

A low number or a lack of incidents cannot be used to imply an absence of risks of concern. Secondary (professional and residential) handlers applying/using paints, building materials and treated leather are likely unaware that these products have been treated with a material preservative. Therefore, the true burden of any observed adverse effect from exposure to the preservative, resulting from the application/use of wallboard joint compound and exterior paints and from leather tanning, is unknown. Underreporting of incidents and barriers to reporting has been documented in many areas including, pesticides (Prado et al., 2017[8]; Bell et al., 2005[9]). Health Canada therefore, considers all available data and scientific information to ensure that registered pesticides continue to meet current health and environmental safety standards and continue to have value.

3.0 Comment related to the value assessment

3.1 Comment related to limited or no alternatives to material preservative active ingredients

The CPCA emphasized that there are limited or no alternatives to active ingredients used as material preservatives and indicated challenges with the registered alternatives (for example, higher cost, lower effectiveness, undesirable effects such as yellowing of paints).

Health Canada response

Health Canada acknowledges that there are limitations to alternative active ingredients registered for certain material preservative uses. Health Canada considers the value of currently registered uses of diodofon to be acceptable, however, information related to the value of registered alternatives cannot be used to negate required risk mitigation measures.

[8] Prado J.B., Mulay P.R., Kasner E.J., Bojes H.K. and Calvert, G.M. (2017). *Acute pesticide-related illness among farmworkers: Barriers to reporting to Public Health Authorities. Journal of Agromedicine, 22(4): 395-405.*

[9] Bell, E.M., Sandler, D.P., and Alavanja, M.C. (2006). *High Pesticide exposure events among farmers and spouses enrolled in the Agricultural Health Study. Journal of Agricultural Safety and Health, 12(2):101-116.*

4.0 Comment related to the product stewardship/outreach program development for the paint cluster

4.1 Comment regarding the development and implementation of the product stewardship/outreach program:

Comments received were in favour of a stewardship/outreach program, however, the details of the plan and the implementation timeline were in question. Questions were raised on how the stewardship/outreach program will impact the safety margins for the risk assessment and who is responsible for developing the program. Recommendations for developing the stewardship/outreach program were also received. These recommendations included having PMRA act as lead developer of any PPE guidance material with input from paint associations, painter groups and industry. In addition, there were recommendations for recurring educational awareness campaigns and performance evaluations with workplace monitoring to ensure ongoing compliance. Considerations for developing labelling, general PPE guidance and educational awareness campaigns were also suggested.

Health Canada response

The Paint Cluster Stewardship/Outreach Program is intended to inform professional painters of the requirement for additional personal protective equipment (coveralls, chemical-resistant gloves, painter's hat and respirator) to mitigate risks when applying paint using airless sprayers. The program will also have the general goal of increasing awareness of the presence of pesticide preservatives in paint and how to reduce health risks for all painters.

The Stewardship/Outreach Program will consist of an educational campaign to increase awareness of the presence of pesticide preservatives in paint and the new labelling on paint containers. This outreach will be directed mainly towards professional painters but is also intended for all paint users. The educational material will be developed primarily by Health Canada with consideration of the comments received by stakeholders.

Appendix IV Label amendments for products containing diodofon

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Information on labels of currently registered products should not be removed unless it contradicts the following label statements.

The following uses are cancelled. All references to these uses must be removed from all end-use product labels:

- Exterior latex paint
- Wallboard joint compound
- Leather tanning

The following product is cancelled, as leather tanning is the only registered use on the label:

- Amical WP (Antimicrobial Powder) [PCP# 22910]

1.0 Label amendments for commercial class end-use products containing diodofon

Label statements must be amended (or added) to include the following directions to the appropriate labels, unless the current label mitigation is more restrictive:

2.0 PRECAUTIONS

2.1 Personal protective equipment

2.1.1 Suspensions – PCP#s 15321 and 25848

Use a closed transfer system when mixing and loading. A closed transfer system is defined as a procedure for removing a pesticide from its original container, rinsing the emptied container and transferring the pesticide and rinse solution through connecting hoses pipes, and coupling that are sufficiently tight to prevent exposure of any person to the pesticide or rinse solution. Furthermore, the closed transfer system must be equipped with a dry coupling system that is designed to drip less than 2 mL per coupling.

2.1.2 Dusts and Powders – PCP#s 27102 and 25887

Wear chemical-resistant coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear and a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides during mixing, loading, clean-up and repair.

Limit the amount of active ingredient handled to 1.045 kg per person per day. These restrictions are in place to minimize exposure to individual handlers. Application may need to be performed over multiple days or by using multiple handlers.

2.1.3 Manufactured paint products containing the preservative diodofon must be labelled with the following information:

Professional painters USING AN AIRLESS SPRAYER must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, a painter's hat, and a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides.

3.0 Directions for use for all end-use products

Reduce the maximum application rates for caulks and mastics to 0.5 g a.i./kg.

Reduce the maximum application rates for adhesives and vinyl wallboard pastes to 0.391 g a.i./kg.

The rate of diodofon is to be converted into the corresponding product rate by the registrant for each product label.