



Health
Canada Santé
Canada

*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

Code of Practice for 2-Butanone, oxime (Butanone oxime) Associated with the Interior Application of Consumer Alkyd Paint and Coating Products

June 2014

Canada 

Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit communities. We work with the provinces to ensure our health care system serves the needs of Canadians.

Également disponible en français sous le titre :

Code de pratique sur le 2-butanone, oxime (butanone-oxime) dans le cadre de l'application intérieure de peintures et de revêtements alkydes destinés aux consommateurs

To obtain additional copies, please contact:

Chemical Substances Web site
c/o Health Canada
Ottawa, ON K1A 0K9
Tel.: 613- 954-9807
Fax.: 613- 952-8857
TTY: 1-800-465-7735



This publication can be made available in alternative formats upon request.

© Her Majesty the Queen in Right of Canada, as represented by the Minister of Health Canada, 2014

Publication date: June 2014

This publication may be reproduced for personal or internal use only without permission provided the source is fully acknowledged. However, multiple copy reproduction of this publication in whole or in part for purposes of resale or redistribution requires the prior written permission from the Minister of Public Works and Government Services Canada, Ottawa, Ontario K1A 0S5 or copyright.droitdauteur@pwgsc.gc.ca.

Cat.: H129-37/2014E-PDF
ISBN: 978-1-100-23205-8
Pub.: 130572

Code of Practice for 2-Butanone, oxime (Butanone oxime) Associated with the Interior Application of Consumer Alkyd Paint and Coating Products

Table of Contents

1.0	Objective of the Code of Practice
2.0	Background
3.0	Elements of Exposure Mitigation for the Interior Application of Consumer Alkyd Paint and Coating Products
4.0	Persons to Which the Code Applies
5.0	Products to Which the Code Applies
6.0	Products Excluded from the Code
7.0	Recommended Practices
8.0	Label Statements
9.0	Consumer Education
10.0	Record Keeping and Reporting
11.0	Contact Information for Submitting Reports
12.0	Review of Progress and Need for Further Action
13.0	Glossary of Terms
14.0	References

1.0 Objective of the Code of Practice

1.1 The objective of this code of practice (herein referred to as the “Code”) is to help reduce inhalation exposure to 2-Butanone, oxime (butanone oxime) by the general public during and immediately following interior application of consumer alkyd paint and coating products. However, all applicable municipal, provincial, territorial and federal legal requirements pertaining to this substance must be met, and a commitment by any person to adopt the practices and procedures set out in this Code does not remove obligations to comply with all applicable statutory and regulatory requirements. This Code outlines the following recommended practices:

- a) to reduce the concentration of butanone oxime in products to which the Code applies to the lowest level technically and economically feasible;
- b) to incorporate a ventilation statement on all products to which the Code applies; and
- c) to implement a consumer education program that will inform consumers on behaviours that will help to achieve well ventilated conditions during and following use of products to which the Code applies.

2.0 Background

2.1 The substance butanone oxime, Chemical Abstracts Service Registry Number (CAS RN) 96-29-7, is part of the chemical grouping “discrete organics”, and the chemical sub-grouping “oximes”, or more specifically, “ketoximes”. Butanone oxime was included in [Batch 7 of the Challenge](#) under the Government of Canada’s [Chemicals Management Plan](#).

2.2 The most prevalent use of butanone oxime is as an anti-skinning agent in the formulation of alkyd paints, primers, varnishes and stains. Anti-skinning agents are added to prevent air-dried coatings from forming hard, congealed films on the surface of the coating (oxidation) during storage by preventing the drier effect until application of the coating. In closed containers, the oxidation and skin formation takes place due to the presence of air between the coating surface and the closed lid. Butanone oxime is the most used anti-skinning agent in paints and is a volatile type of anti-skinning agent (in other words, will be volatilized from a formulation upon application to allow drying) (Danish Environmental Protection Agency, 2003). The use of anti-skinning agents is a compromise between preventing skinning and retaining an adequate drying potential of the coating after application. The cross-linking should be as slow as possible during storage and then regain its full drying potential as soon as possible after application. Therefore, for drying performance, it is preferable that a minimum amount of anti-skinning agent be used (Danish Environmental Protection Agency, 2003).

3.0 Elements of Exposure Mitigation for the Interior Application of Consumer Alkyd Paint and Coating Products

3.1 A study by Chang *et al.* (1998) examined emissions of butanone oxime immediately following application of interior alkyd paint products. This study and a publication on healthy indoor painting practices (United States Environmental Protection Agency, 2000) have been considered in the development of label statements and consumer education that will serve to guide the general public on actions intended to reduce indoor air concentrations.

3.2 Mechanisms to help reduce exposure to butanone oxime during and following interior application of consumer alkyd paint and coating products are the following:

- a) to reduce the concentration of butanone oxime in interior and dual use consumer alkyd paint and coating products to the lowest level technically and economically feasible. A means to achieve this may also include replacement of butanone oxime with an appropriate alternative;
- b) to increase ventilation in the work area during painting. Maximizing the ventilation and releasing air to outdoors may result in a reduction in air concentrations of butanone oxime during the work period; and
- c) to continue ventilation after painting which may result in a more rapid decrease in air concentrations of butanone oxime.

4.0 Persons to Which the Code Applies

4.1 This Code may be adopted by any person who:

- a) manufactures, imports or sells interior or dual use consumer alkyd paint and coating products containing butanone oxime in Canada; and
- b) has the responsibility to ensure that consumer products comply with Canadian labelling requirements.


5.0 Products to Which the Code Applies

5.1 This Code is recommended for:

- a) interior consumer alkyd paint and coating products; or
- b) dual use consumer alkyd paint and coating products.

6.0 Products Excluded from the Code

6.1 This Code is not intended for consumer alkyd paint and coating products that are:

- a) to be used exclusively for exterior applications; or
- b) in compliance with  [subsection 25\(2\) of the Consumer Chemicals and Containers Regulations, 2001 \(CCCR, 2001\)](#).

7.0 Recommended Practices

7.1 Reduce the concentration of butanone oxime in products to which the Code applies to the lowest level technically and economically feasible.

7.2 When feasible, use alternatives to butanone oxime:

- a) alternatives should be considered to reduce human health risks and minimize environmental risks; and
- b) alternatives should not have the potential to produce butanone oxime.

8.0 Label Statement

8.1 To help achieve reduced indoor air concentrations of butanone oxime, it is recommended that the labels of the products listed in section 5 include the following statement:

“USE ONLY IN A WELL-VENTILATED AREA”

9.0 Consumer Education

9.1 In order to help reduce public/consumer inhalation exposure to butanone oxime, a person who adopts this Code should:

- a) provide information on how to help achieve a well-ventilated area; and
- b) provide information on ventilation following application.

9.2 The following are examples of statements that may be used as part of the consumer education information if they do not represent a different hazard to the consumer/user of the product (for example, a product that has flammable vapours that may prevent use of a fan):

- a) “Open Windows and/or Blow Air Outdoors with Fan”
- b) “Continue Ventilation Following Application”

9.3 For the purpose of sections 9.1 and 9.2, it is recommended that any person who adopts this Code make information available to the public/consumers using one or more of the following means:

- a) information pamphlet, poster or similar media at the site of product purchase;
- b) information posted on a website; or
- c) information on a label affixed to the product that does not contravene existing product labelling requirements.

10.0 Record Keeping and Reporting

10.1 Record Keeping: any person who adopts this Code is asked to keep at the principal place of business in Canada electronic or paper records of the information below for a period of at least five years after the day on which they are made.

- a) The name and civic address of the person responsible for labelling the products on behalf of the participating companies;
- b) a list of the interior and dual use consumer alkyd paint and coating products to which this Code applies;
- c) indicate if butanone oxime was removed from any of its products and replaced with another substance, demonstrating that section 7 of the Code has been adopted;
- d) concentration of butanone oxime in each product (% by weight);
- e) label information demonstrating that section 8 of the Code has been adopted; and
- f) consumer education information including specific statements and means of communication demonstrating that section 9 of the Code has been adopted.

10.2 Reporting: any person who adopts this Code is asked to provide electronic notice to the Government of Canada upon adoption of sections 7, 8 and 9 of the Code. This Notice will detail the specific interior and dual use consumer alkyd paint and coating products to which this Code is applied as outlined in section 10.1. A template for reporting information has been provided in Appendix 1.

10.3 Confidentiality: In this section, "confidential business information" in respect of a person to whose business or affairs the information relates, means business information:


- a) that is not publicly available;
- b) in respect of which the person has taken measures that are reasonable in the circumstances to ensure that it remains not publicly available; and
- c) that has actual or potential economic value to the person or their competitors because it is not publicly available and its disclosure would result in a material financial loss to the person or a material financial gain to their competitors.

10.4 Request for confidentiality

10.4.1 A person who provides information to the Minister of Health under this Code may submit a written request that the information or part of it be treated as confidential business information.

10.4.2 If the Minister of Health considers that the information does not meet the definition of confidential business information, a written notice will be given to this effect to the person who had provided the information to the Minister.

10.5 Use and Disclosure of Confidential Business Information: The Minister of Health will use and disclose confidential business information in respect of which a request for confidentiality has been made under section 10.4 as permitted by law.

10.6 Disclosure of personal information: For greater certainty, personal information as defined in section 3 of the  [Privacy Act](#) will be used and disclosed in accordance with that Act.

11.0 Contact Information for Submitting Reports

11.1 Reporting documentation is to be submitted to the Minister of Health either by email, mail or fax to the following addresses. Please type: **“Report on Butanone Oxime Code of Practice”** in the subject line of your message.



Mail: Chemical Substances Web site
c/o Health Canada
269 Laurier Avenue West, Address Locator 4905B
Ottawa (ON) K1A 0K9

Fax: 613-952-8857

12.0 Review of Progress and Need for Further Action

12.1 Five years after publication of this Code in the *Canada Gazette*, Part I, the Minister of Health will initiate an evaluation of progress achieved towards reducing inhalation exposure to butanone oxime by the general public during interior application of consumer alkyd paint and coating products.

12.2 The review will help determine if other steps or programs are needed to further reduce inhalation exposure to butanone oxime by the general public during interior application of consumer alkyd paint and coating products.

12.3 Periodic reviews of the reduction of inhalation exposure to butanone oxime will occur as needed after the five year review is completed.

13.0 Glossary of Terms

CEPA 1999

 [Canadian Environmental Protection Act, 1999](#)

Consumer Product

For the purpose of this Code, a consumer product is a product that may reasonably be expected to be obtained by an individual to be used for non-commercial purposes.

Interior consumer alkyd paint and coating products

Alkyd paint and coating products that are consumer products and that are intended to be used for interior applications.


Dual use consumer alkyd paint and coating products

Alkyd paint and coating products that are consumer products and that are intended to be used for both interior and exterior applications.

14.0 References

Chang, John, C.S., Zhishi Guo, Leslie E. Sparks, (1998). Exposure and Emission Evaluations of Methyl Ethyl Ketoxime (MEKO) in Alkyd Paints, Indoor air: 8: 295-300.

 [Danish Environmental Protection Agency, Environmental Project No. 884, 2003, Substitution of Cobalt Dryers and Methyl Ethyl Ketoxime.](#)

 [US Environmental Protection Agency, Office of Pollution Prevention and Toxics \(2000\) EPA-744-F-00-011, Healthy Indoor Painting Practices.](#)

Appendix 1: Reporting Form for the Code of Practice for 2-Butanone, oxime (Butanone oxime) Associated with the Interior Application of Consumer Alkyd Paint and Coating Products.

This form may be used as a template to provide information to Health Canada in respect to section 10 of the Code of Practice.

Section A – Contact Information

a) Name and civic address of the person providing information or duly authorized representative

Name: _____

Participating Company Name: _____

Civic Address: _____

Date of Submission: _____

b) General/Technical contact for the company/facility (if different from authorized representative). This contact information will be used by Health Canada to correspond with your company/facility on items related to your submission.

Name: _____

Email: _____

Position/Job Title: _____

Telephone Number (with area code): _____

Section B - Information to be submitted

1. Provide the name of each product subject to the Code	2. Indicate if butanone oxime has been removed and replaced by another substance (provide product name or CAS Registry Number of replacement, if possible)	3. Concentration of butanone oxime (%) by weight (w/w%)	4. Label information demonstrating that section 8.0 has been implemented (may include any additional ventilation statements on the label).	5. Consumer education information including specific statements and means of communication (for example, label, website, pamphlet) that demonstrate section 9 of the Code has been adopted.

Section C – Signature

I declare this report to be accurate and complete.

Submitter Name (print)

Submitter Title

Telephone

Email

Submitter Signature

Date of Signature

Section D – Request for Confidentiality

Please identify specific sections that are requested to be treated as confidential.