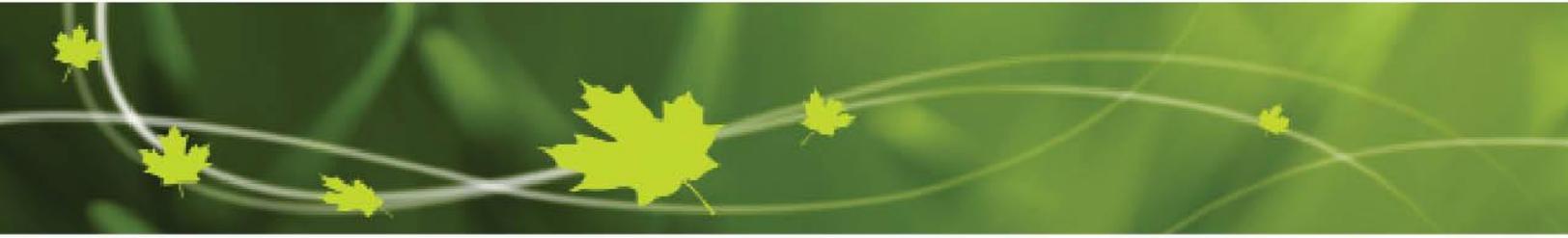




Environment
Canada

Environnement
Canada



Environment Canada's Proposal
to Add Compounds to the Exclusion List
of the Volatile Organic Compound (VOC)
Definition under Schedule 1 of the
Canadian Environmental Protection Act, 1999

Consultation Document

Products Division
Chemicals Sector Directorate
Environment Canada

September 2013



Canada 

Information contained in this publication may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes, without charge or further permission, unless otherwise specified.

You are asked to:

- Exercise due diligence in ensuring the accuracy of the materials reproduced;
- Indicate both the complete title of the materials reproduced, as well as the author organization; and
- Indicate that the reproduction is a copy of an official work that is published by the Government of Canada and that the reproduction has not been produced in affiliation with or with the endorsement of the Government of Canada.

Commercial reproduction and distribution is prohibited except with written permission from the Government of Canada's copyright administrator, Public Works and Government Services of Canada (PWGSC). For more information, please contact PWGSC at 613-996-6886 or at droitdauteur.copyright@tpsgc-pwgsc.gc.ca.

Photos: © Environment Canada

© Her Majesty the Queen in Right of Canada represented by
the Minister of the Environment, 2013

Aussi disponible en français

Table of Contents

1.0 Introduction.....	1
1.1 Objective of this Consultation.....	1
1.2 Consultation Process.....	1
2.0 Background.....	2
3.0 Objectives.....	3
4.0 Science.....	4
4.1 VOC Classification.....	4
4.2 Impacts on Human Health or the Environment	4
5.0 Environment Canada’s Proposal.....	4
6.0 Compound Descriptions.....	5
6.1 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C ₃ F ₇ OCH ₃ or HFE-7000), 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500) and 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)	5
6.2 Methyl Formate (HCOOCH ₃)	5
6.3 Tertiary Butyl Acetate (TBAc).....	6
6.4 (1)1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300)	6
6.5 3-dioxolan-2-one, 4-methyl- (Propylene Carbonate) and Dimethyl Carbonate.....	6
6.6 2,3,3,3-tetrafluoropropene (HFO-1234yf)	7
6.7 <i>Trans</i> -1,3,3,3-tetrafluoropropene (HFO-1234ze).....	7
6.8 HCF ₂ OCF ₂ H (HFE-134), HCF ₂ OCF ₂ OCF ₂ H (HFE-236cal2), HCF ₂ OCF ₂ CF ₂ OCF ₂ H (HFE- 338pcc13) and HCF ₂ OCF ₂ OCF ₂ CF ₂ OCF ₂ H (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180)).....	7
6.9 <i>Trans</i> 1-chloro-3,3,3-trifluoroprop-1-ene (Solstice™ 1233zd(E))	7
7.0 Benefits and Costs	8
8.0 Path Forward	8
9.0 Contact Information.....	8
Appendix I: Reactivity Levels for VOCs.....	9

1.0 Introduction

1.1 Objective of this Consultation

Environment Canada has prepared this consultation document to inform stakeholders and solicit feedback on the proposed addition of compounds to the exclusion list of the volatile organic compound (VOC) definition under Schedule 1 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999).

This consultation paper aims to:

- identify and inform stakeholders on the proposed addition of compounds to the exclusion list of the VOC definition; and
- provide an opportunity for stakeholders to comment on the approach.

The Government of Canada is committed to providing interested or affected parties with the opportunity to take part in consultations at all stages of the development process for the publication of a proposed Order to add compounds to the exclusion list of the VOC definition under Schedule 1 of CEPA 1999 (hereafter the proposed Order). All parties may comment in writing by mail, fax or email to the addresses provided in Section 9 of this document.

1.2 Consultation Process

This document is intended to provide focus and guidance to the consultation. In order to solicit input from stakeholders, Environment Canada has posted a copy of the document on the CEPA Environmental Registry website and distributed it by email and regular mail to all designated Canadian stakeholders, including representatives from other federal departments, provincial, territorial and municipal governments, industry, environmental groups, and public advocacy groups.

Environment Canada will review all written responses received during the consultation period prior to drafting and publishing the proposed Order in the *Canada Gazette*, Part I. A summary of comments received will be published concurrently with the proposed Order. Environment Canada welcomes the addition of contacts who were not previously involved in the stakeholder consultation, and the distribution of this document to other potential stakeholders.

It is expected that stakeholders may include non-governmental organizations, provincial, territorial and federal government departments, associations, as well as industries and companies belonging to the following sectors: chemical manufacturing and distribution; paints and coatings; and consumer and commercial manufacturing.

2.0 Background

VOC emissions contribute to the formation of air pollution. In the atmosphere, photochemical reactions between VOCs and other common airborne pollutants such as nitrogen oxides result in the formation of ground-level ozone, a respiratory irritant and a component of smog. Smog is a noxious mixture of air pollutants, consisting primarily of ground-level ozone and particulate matter that can often be seen as a haze in the air, especially over urban centres.

Air pollution has been shown to have a significant adverse impact on human health, with evidence showing an increased incidence of premature death, hospital admissions and emergency room visits. Studies indicate that air pollution is associated with increased risks of lung cancer and heart disease. Scientific evidence further indicates that ground-level ozone can have a detrimental impact on the environment. This impact can lead to reductions in agricultural crop and commercial forest yields, reduced growth and survivability of tree seedlings, and increased plant susceptibility to disease, pests and other environmental stresses (e.g., harsh weather).

On July 2, 2003, VOCs were added to the List of Toxic Substances in Schedule 1 of CEPA 1999.¹ Some VOCs are excluded from the requirements of the List of Toxic Substance in Canada by way of an exclusion list. This exclusion list was similar to the United States Environmental Protection Agency's (U.S. EPA's) exclusion list at that time.

Since November 2004, the U.S. EPA has added the following thirteen compounds to the exclusions from their VOC definition in consideration of industry petitions. These compounds were determined to negligibly contribute to the formation of ground-level ozone:

- 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (HFE-7000)²
- 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500)³
- 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)⁴
- methyl formate (HCOOCH₃)⁵
- tertiary butyl acetate (TBAC)⁶
- (1) 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300)⁷
- 1,3-dioxolan-2-one, 4-methyl- (propylene carbonate)⁸
- dimethyl carbonate⁹

¹ The VOC definition is under Item 65 of the List of Toxic Substances in Schedule 1: <http://ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=ODA2924D-1&wsdoc=4ABEFC8-5BEC-B57A-F4BF-11069545E434>

² <http://www.epa.gov/EPA-AIR/2004/November/Day-29/a26070.htm>

³ Idem

⁴ Idem

⁵ Idem

⁶ <http://www.epa.gov/EPA-AIR/2004/November/Day-29/a26069.htm>

⁷ <http://www.epa.gov/fedrgstr/EPA-AIR/2007/January/Day-18/a638.htm>

⁸ <http://www.epa.gov/EPA-AIR/2009/January/Day-21/a1150.htm>

⁹ Idem

- *trans*-1,3,3,3-tetrafluoropropene (HFO-1234ze)¹⁰
- HCF₂OCF₂H (HFE-134)¹¹
- HCF₂OCF₂OCF₂H (HFE-236cal2)¹²
- HCF₂OCF₂CF₂OCF₂H (HFE-338pcc13)¹³
- HCF₂OCF₂OCF₂CF₂OCF₂H (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180))¹⁴

On October 17, 2011 and February 15, 2013, the U.S. EPA also proposed to add the following two compounds to the list of exclusions from their VOC definition:

- 2,3,3,3-tetrafluoropropene (HFO-1234yf)¹⁵
- *trans* 1-chloro-3,3,3-trifluoroprop-1-ene (Solstice™ 1233zd(E))¹⁶

The U.S. EPA decision is still pending for these two compounds.

3.0 Objectives

VOCs in several products are currently regulated in Canada. However, the addition of certain VOCs in the exclusion list of the VOC definition under Schedule I of CEPA 1999 allows further alignment with U.S. regulations, and provides greater flexibility to industry to utilize these compounds in their formulations. These additional compounds, as with the existing compounds on the exclusion list, have been determined to negligibly contribute to the formation of ground-level ozone.

In past years, industry associations, chemical producers and a number of coating suppliers have recommended that Environment Canada incorporate exclusions that are part of the U.S. EPA's VOC definition for several of these compounds.

The exclusion of these compounds from the CEPA 1999 VOC definition would:

- align with the United States, providing a level playing field for manufacturers and importers of products with these compounds and avoiding varying requirements across jurisdictions;
- make it easier and less expensive for industry to use these compounds as solvents in a variety of products; these compounds may possibly be used as a substitute for other solvents that are more harmful to the environment and more strictly regulated; and
- provide these manufacturers with a cost-effective compliance tool to meet the *Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products*

¹⁰<http://www.regulations.gov/contentStreamer?objectId=090000648105eff5&disposition=attachment&contentType=html>

¹¹ <http://www.gpo.gov/fdsys/pkg/FR-2013-02-12/pdf/2013-03057.pdf>

¹² Idem

¹³ Idem

¹⁴ Idem

¹⁵<http://www.regulations.gov/contentStreamer?objectId=0900006480f53f34&disposition=attachment&contentType=html>

¹⁶ <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2012-0393-0016>

*Regulations*¹⁷, the *Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations*¹⁸ and other instruments.

4.0 Science

4.1 VOC Classification

VOCs are those compounds of carbon¹⁹ that are volatile. Operationally, this is defined as those organic compounds that have a vapour pressure greater than 10-1 Torr at 25°C and 760 mm Hg. Many VOCs contribute to air pollution by forming ground-level ozone through atmospheric photochemical reactions. However, different VOCs have different levels of reactivity; therefore they do not react at the same speed or contribute to ozone formation to the same extent.

It has been the U.S. EPA's policy that organic compounds with a negligible level of reactivity need not be regulated to reduce ozone. In determining negligible reactivity, the U.S. EPA compares the reactivity of a compound to the reactivity levels of ethane-using methods, which are based on the reaction rate constant of hydroxyl radical (known as K_{OH}) in the air, and on the maximum incremental reactivity (MIR), expressed either on a reactivity per gram basis or reactivity per mole basis (for technical information, see Appendix I). Compounds with reactivity levels less than or equal to the reactivity levels of ethane may be deemed negligibly reactive, and are excluded from the regulatory definition of VOC.

Environment Canada is in agreement with this evaluation for determining reactivity levels for VOCs.

4.2 Impacts on Human Health or the Environment

It is important to note that these compounds were only evaluated for their contributions to the formation of ground-level ozone. Excluding these compounds from the VOC listing on Schedule 1 of CEPA 1999 does not preclude their future management for other reasons, such as climate change or their inherent toxicity to human health or the environment.

5.0 Environment Canada's Proposal

Environment Canada is proposing to exclude thirteen compounds described below from the definition of VOC,²⁰ because:

- the compounds would negligibly contribute to the formation of ground-level ozone;

¹⁷ <http://ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=118>

¹⁸ <http://ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=117>

¹⁹ Excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

²⁰ For the purpose of the proposed addition of this compound to the exclusion list of the VOC definition, this compound was only evaluated for its contribution to the formation of ground-level ozone.

- this modification of the VOC definition would better align our regulatory approaches with the United States; and
- this modification would create less administrative burden for businesses.

Environment Canada will follow the outcome of the U.S. EPA's decision regarding addition of the two proposed compounds (HFO-1234yf and Solstice™ 1233zd(E)) to their VOC definition exclusion list. In the development of the proposed Order, Environment Canada may propose to exclude these compounds from the definition of VOC for the same reasons as noted above.

6.0 Compound Descriptions

6.1 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C₃F₇OCH₃ or HFE-7000), 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500) and 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)

HFE-7000 (Chemical Abstracts Service [CAS] Registry # 375-03-1) may be used as a refrigerant or aerosol propellant, and HFE-7500 (CAS # 297730-93-9) may be used as a refrigerant. HFC-227ea (CAS # 431-89-0) may be used as a fire suppressant or aerosol propellant; it is classified as a hydrofluorocarbon (HFC).

In Canada, HFE-7000, HFE-7500 and HFC-227ea are not specified on the Domestic Substances List (DSL) or the Non-domestic Substances List (NDSL). Therefore, these substances would be subject to the *New Substances Notification Regulations (Chemicals and Polymers)*.²¹ Any person who intends to import or manufacture these substances above prescribed quantities is required to provide the Minister of the Environment with a New Substances Notification (NSN) package containing all information prescribed in these Regulations, prior to import or manufacture.

6.2 Methyl Formate (HCOOCH₃)

Methyl Formate (CAS # 107-31-3) is used to manufacture formamides and formic acid. Because of its high vapour pressure, it may be used as a component for quick-drying finishes. It is also used as a blowing agent in foam manufacturing processes, where it may be a replacement for butane, pentane and some hydrochlorofluorocarbons (HCFCs).

In Canada, methyl formate is included on the DSL and has a possible use as a blowing agent for foam insulation. However, it has not met the Government of Canada's categorization criteria; as such it was not identified as requiring further attention in the form of assessment, research and/or measure to control its use or release.

²¹ For further information, visit <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2005-247/index.html>.

6.3 Tertiary Butyl Acetate (TBAC)

On November 29, 2004, the U.S. EPA excluded TBAC (CAS # 540-88-5) from its definition of VOCs, based on the MIR method. However, all record-keeping, emissions reporting and inventory requirements that apply to VOCs remain in place for this compound. In making the announcement, the U.S. EPA indicated that it is desirable to track emissions of TBAC because the compound's reactivity is near that of ethane, their current benchmark for exemptions, and there is a potential for widespread use of TBAC. Also, they noted that the tracking of the emissions of TBAC is part of their continued effort to assess long-term health effects.²²

In the United States, TBAC may be used in inks, coatings, adhesives, cleaners and general solvents.

In Canada, TBAC is included on the DSL but has not met the Government of Canada's categorization criteria; as such it was not identified as requiring further attention in the form of assessment, research and/or measure to control its use or release. Based on information from a chemical producer, it is believed that TBAC is likely to be used in coatings, adhesives, cleaners, degreasers, thinning solvents and other consumer products.

6.4 (1)1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300)

HFE-7300 (CAS # 132182-92-4) may be used in a variety of applications, including heat transfer, lubricant deposition, electronic testing and cleaning applications.

In Canada, HFE-7300 is included on the NDSL. The NDSL is an inventory of substances that are not on the DSL but are accepted as being in use internationally. This compound is also subject to the *New Substances Notification Regulations (Chemicals and Polymers)*.²³

6.5 3-dioxolan-2-one, 4-methyl- (Propylene Carbonate) and Dimethyl Carbonate

Propylene carbonate (CAS number # 108-32-07) has been used in cosmetics, as an adhesive component in food packaging, as a solvent for plasticizers and synthetic fibers and polymers, and as a solvent for aerial pesticide application. Dimethyl carbonate (CAS number # 616-38-6) is used as a co-solvent in paints, sealants and adhesives, and as a multi-purpose and thinning solvent. Dimethyl carbonate may also be used as a niche or specialty solvent in industrial coating/sealant applications. For some cleaning applications, dimethyl carbonate may be used as a substitute for isopropyl alcohol.

In Canada, propylene carbonate and dimethyl carbonate are included on the DSL but have not met the Government of Canada categorization criteria; therefore they were not identified as requiring further attention in the form of assessment, research and/or measure to control their

²² http://www.epa.gov/ttn/oarpg/t1/fact_sheets/tbacfinfs.pdf

²³ For further information, visit <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2005-247/index.html>.

use or release. Propylene carbonate has possible uses in adhesives, binders, sealants and fillers. Dimethyl carbonate has possible uses in paints, coatings and adhesives.

6.6 2,3,3,3-tetrafluoropropene (HFO-1234yf)

HFO-1234yf (CAS # 754-12-1) may be used as a refrigerant in refrigeration and air-conditioning.

In Canada, HFO-1234yf is included on the DSL but has not met the Government of Canada categorization criteria; therefore they were not identified as requiring further attention in the form of assessment, research and/or measure to control their use or release.

6.7 Trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)

HFO-1234ze (CAS # 29118-24-9) may be used in refrigerants, aerosol propellants, and blowing agents for insulating foams.

In Canada, HFO-1234ze is included on the DSL but has not met the Government of Canada's categorization criteria; therefore they were not identified as requiring further attention in the form of assessment, research and/or measure to control their use or release.

6.8 HCF₂OCF₂H (HFE-134), HCF₂OCF₂OCF₂H (HFE-236cal2), HCF₂OCF₂CF₂OCF₂H (HFE-338pcc13) and HCF₂OCF₂OCF₂CF₂OCF₂H (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180))

HFE-134 (CAS # 1691-17-4), HFE-236cal2 (CAS # 78522-47-1), HFE-338pcc13 (CAS # 188690-78-0) and H-Galden 1040X (CAS # 188690-77-9) may be used as a fire suppressant or a refrigerant.

In Canada, HFE-134, HFE-236cal2, HFE-338pcc13 and H-Galden 1040X are not included on the DSL or NDSL. Therefore, these substances are subject to the *New Substances Notification Regulations (Chemicals and Polymers)*.²⁴ Any person intending to import or manufacture these substances is required to provide the Minister of the Environment with an NSN package containing all information prescribed in the Regulations, prior to import or manufacture.

6.9 Trans 1-chloro-3,3,3-trifluoroprop-1-ene (Solstice™ 1233zd(E))

Solstice™ 1233zd(E) (CAS # 102687-65-0) may be used in refrigerant, aerosol solvent and foam-blowing agent applications.

In Canada, Solstice™ 1233zd(E) is not included on the DSL or NDSL. Therefore, this substance is subject to the *New Substances Notification Regulations (Chemicals and Polymers)*.²⁵ Any person intending to import or manufacture this substance is required to provide the Minister of the Environment with an NSN package containing all information prescribed in the Regulations, prior to import or manufacture.

²⁴ For further information, visit <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2005-247/index.html>.

²⁵ Idem

7.0 Benefits and Costs

The proposal to add these compounds to the exclusion list of the VOC definition in Item 65 of the List of Toxic Substances in Schedule 1 is based primarily on a scientific assessment. The proposed amendments would provide alternative compounds for the industry to meet VOC regulatory requirements and would avoid varying requirements across the United States and Canada.

8.0 Path Forward

Industry, associations and other interested stakeholders are invited to submit comments on this proposed exclusion from the VOC definition during the 30-day public consultation period, ending *October 15, 2013*.

9.0 Contact Information

Comments and information submissions on this consultation document should be submitted by email to products.produits@ec.gc.ca, or by regular mail to the following address:

VOC Controls Unit
Products Division
Chemicals Sector Directorate
Environment Canada
Place Vincent Massey
351 St-Joseph Boulevard, 9th floor
Gatineau QC K1A 0H3

Telephone: 1-888-391-3426
Fax: 819-953-3132

For further information, visit <http://www.ec.gc.ca/toxiques-toxics/Default.asp?lang=En&n=98E80CC6-1&xml=075320D0-CF6E-4261-890E-90725A29E3C4>.

Appendix I: Reactivity Levels for VOCs

The U.S. EPA uses three methods to determine if a compound is negligibly reactive:

- “The first method is based on the reaction rate constant of K_{OH} in the air. This reaction is the first step in a series of chemical reactions in the formation of ozone. If this reaction is slow (smaller K_{OH} value), the compound will not likely form ozone at a fast rate.
- The other two methods are based on the MIR, expressed either on a reactivity per gram basis (grams of ozone formed per gram of VOC) or reactivity per mole basis (grams of ozone formed per mole of VOC). The MIR methods consider the activities from all steps in the ozone formation process from a specific organic compound, as opposed to just the first step of the chemical reaction.”²⁶

Comparing MIR values on a molar versus mass basis can lead to different conclusions about whether a compound is less or more reactive than ethane.

The U.S. EPA considers that the molar comparison is more consistent with the original smog chamber experiments, which compares equal molar concentrations of individual VOCs that underlie the selection of ethane as the threshold. The mass-based comparison is consistent with how MIR values and other reactivity metrics are applied in reactivity-based emission limits. The mass-based comparison is slightly less restrictive than the molar-based comparison in that a few more compounds qualify as negligibly reactive.

Environment Canada considered that these three methods are relevant to compare compounds to ethane.

Table 1 lists the fifteen compounds and compares the reactivity levels of each compound to that of ethane. TBAC, propylene carbonate, dimethyl carbonate HFO-1234ze, HFO-1234yf and SolsticeTM 1233zd(E) were excluded using the MIR methods, because the respective K_{OH} value of each compound was greater than the K_{OH} value of ethane.

²⁶ Sacramento Metropolitan Air Quality Management District, *Staff Report – Rule 101 – General Provisions and Definitions*, August 17, 2010. <http://www.airquality.org/notices/Rules2010/20100817Rules101-451-459WorkshopRule101StaffRpt.pdf>

Table 1: Reactivities of Ethane and Compounds Considered for Exclusion in Canada's Proposal²⁷

Compound	K_{OH} (cm³/molecule-sec)	MIR (g O₃/mole VOC)	MIR (g O₃/gram VOC)
Ethane	2.4 x 10⁻¹³	8.4	0.28
HFE-7000*	1.2 x 10⁻¹⁴	Not determined	Not determined
HFE-7500*	2.2 x 10⁻¹⁴	Not determined	Not determined
HFC-227ea*	1.09 x 10⁻¹⁵	Not determined	Not determined
Methyl formate*	2.27 x 10⁻¹³	Not determined	0.053
TBAc*	4.25 x 10 ⁻¹²	27.88	0.24
HFE-7300*	1.50 x 10⁻¹⁴	Not determined	Not determined
Propylene carbonate*	6.9 x 10 ⁻¹³	27.56	0.27
Dimethyl carbonate*	3.49 x 10 ⁻¹³	5.04	0.056
HFO-1234yf**	10.5 x 10 ⁻¹³	31.92	0.28
HFO-1234ze*	9.25 x 10 ⁻¹³	11.2	0.098
HFE-134*	2.3 x 10⁻¹⁵	Not determined	Not determined
HFE-236ca2*	2.4 x 10⁻¹⁵	Not determined	Not determined
HFE-338pcc13*	4.7 x 10⁻¹⁵	Not determined	Not determined
H-Galden 1040X*	4.9 x 10⁻¹⁵	Not determined	Not determined
Solstice™ 1233zd(E)**	4.40 x 10 ⁻¹³	5.22	0.040

* Currently listed on U.S. EPA's VOC exclusion list

** Proposed to be added on U.S. EPA's VOC exclusion list

²⁷ Data originate from the U.S. EPA's revision to the definition of VOC rules.

www.ec.gc.ca

Additional information can be obtained at:

Environment Canada

Inquiry Centre

10 Wellington Street, 23rd Floor

Gatineau QC K1A 0H3

Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800

Fax: 819-994-1412

TTY: 819-994-0736

Email: enviroinfo@ec.gc.ca