

§ 94510. Exemptions

- (c) Except for Pressurized Gas Duster, the VOC limits specified in Section 94509(a) shall not apply to ~~frangrances up to a combined level of 2 percent by weight contained in any consumer product.~~the following:
- (1) For “General Purpose Cleaner” (nonaerosol) and “General Purpose Degreaser” (nonaerosol) products manufactured ~~between January 1, 2023, and December 31, 2030~~before January 1, 2031, frangrances up to a combined 2 percent by weight and monoterpenes up to a combined 0.25 percent by weight, not to exceed a combined total of 2 percent frangrances and monoterpenes by weight.
 - (2) For products, other than “General Purpose Cleaner” (nonaerosol) and “General Purpose Degreaser” (nonaerosol), manufactured before January 1, 2031, frangrances up to a combined level of 2 percent by weight.
 - (3) For “General Purpose Cleaner” (nonaerosol) and “General Purpose Degreaser” (nonaerosol) products manufactured on or after January 1, 2031, frangrances and/or monoterpenes up to a combined 0.25 percent by weight.
 - (4) For “Air Freshener,” “Disinfectant,” and “Sanitizer” products manufactured on or after January 1, 2031, frangrances up to a combined level of 0.25 percent by weight.

For the purposes of subsections (c)(1) and (c)(3), “Monoterpene” means one or more chemical compounds listed by the specific chemical name or associated Chemical Abstracts Service (CAS) number in Table 94510(c).

Table 94510(c)
Specified Monoterpenes

<u>Chemical Name</u>	<u>CAS #</u>
<u>limonene (d isomer)</u>	<u>5989-27-5</u>
<u>limonene (l isomer)</u>	<u>5989-54-8</u>
<u>dipentene (dl-limonene)</u>	<u>138-86-3</u>
<u>α-pinene</u>	<u>80-56-8</u>
<u>α-pinene (d isomer)</u>	<u>7785-70-8</u>

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<u>Chemical Name</u>	<u>CAS #</u>
<u>α-pinene (l isomer)</u>	<u>7785-26-4</u>
<u>β-pinene</u>	<u>127-91-3</u>
<u>β-pinene (l isomer)</u>	<u>18172-67-3</u>

§ 94511. Innovative Products.

(c) The Executive Officer shall exempt an “Innovative Compressed Gas Propellant Product” or “Innovative Liquefied Propellant Product” in the aerosol “Hair Finishing Spray,” “Dry Shampoo,” or “Personal Fragrance Product” product-categories from the VOC standards specified in section 94509(a) if the product manufacturer demonstrates by clear and convincing evidence at the time of the IPE application that all four of the following criteria are met: an “Innovative Compressed Gas Propellant Product” meets the criteria in sections (c)(1) and (c)(3) through (c)(6) and an “Innovative Liquefied Propellant Product” meets the criteria in sections (c)(2) through (c)(6).

(1) “Innovative Compressed Gas Propellant Product” means a product which meets all of the following criteria:

- (A) For a product manufactured before January 1, 2029, the HFC-152a propellant is replaced with a propellant comprised of compressed air, compressed nitrogen, and/or compressed carbon dioxide, and use of the replacement propellant will result in the Innovative Compressed Gas Propellant Product achieving a 50 percent or greater reduction in greenhouse gas (GHG) emissions compared to the Representative HFC-152a Product.
- (B) For a product manufactured on or after January 1, 2029, the Innovative Compressed Gas Propellant Product includes only ingredients with a GWP less than 10, or achieves a 90 percent or greater reduction in GHG emissions compared to the Representative HFC-152a Product;
- (C) The weight of the Innovative Compressed Gas Propellant Product propellant or propellants does not exceed 50 percent of the weight of the Representative HFC-152a Product propellant or propellants; and
- (D) The ozone-forming potential of the Innovative Compressed Gas Propellant Product does not exceed that of the Representative HFC-152a Product.

(2) “Innovative Liquefied Propellant Product” means a product which meets all of the following criteria:

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- (A) For a product manufactured before January 1, 2029, the Innovative Liquefied Propellant Product achieves a 50 percent or greater reduction in GHG emissions compared to the Representative HFC-152a Product;
- (B) For a product manufactured on or after January 1, 2029, the Innovative Liquefied Propellant Product includes only ingredients with a GWP less than 10, or achieves a 90 percent or greater reduction in GHG emissions compared to the Representative HFC-152a Product; and
- (C) The ozone-forming potential of the Innovative Liquefied Propellant Product does not exceed that of the Representative HFC-152a Product.
- (3) “Representative HFC-152a Product” means a product that meets either (A) or (B) below:
- (A) A consumer product that has the product formulation identified in Table 94511(c)(3) for the applicable product category; or
- (B) A compliant consumer product that meets (i) through (v) below:
- i) is in the same product category as the innovative product,
- ii) is available for purchase in California at the time of the IPE application,
- iii) has a MIR within five (5.0) percent of the applicable product formulation in Table 94511(c)(3),
- iv) has GHG emissions that are within five (5.0) percent of the applicable product formulation in Table 94511(c)(3), and
- v) has a fragrance content that is representative of products on the California market in the applicable category at the time of the IPE application.

Table 94511(c)(3): Representative HFC-152a Product Formulations

<u>Product Category and Applicable VOC Standard</u>	<u>Ingredient Weight Percent</u>				
	<u>Ethanol</u>	<u>HFC-152a</u>	<u>Fragrance</u>	<u>Other VOC or LVP-VOC*</u>	<u>Non-Volatiles and Exempt VOCs**</u>
<u>Hair Finishing Spray: 50% VOC</u>	<u>45</u>	<u>45</u>	<u>0.1</u>	<u>3.9</u>	<u>6</u>
<u>Dry Shampoo: 55% VOC</u>	<u>30</u>	<u>29</u>	<u>0.2</u>	<u>30.8</u>	<u>10</u>
<u>Dry Shampoo: 50% VOC</u>	<u>30</u>	<u>33</u>	<u>0.2</u>	<u>26.8</u>	<u>10</u>
<u>Personal Fragrance Product: 70% VOC</u>	<u>40</u>	<u>15</u>	<u>2</u>	<u>30</u>	<u>13</u>
<u>Personal Fragrance Product: 50% VOC</u>	<u>30</u>	<u>30</u>	<u>2</u>	<u>22</u>	<u>16</u>

* Ingredients in this column are assumed to have an average MIR of 0.9.

** Ingredients in this column are assumed to have an average MIR of 0.0.

(4) An “Innovative Compressed Gas Propellant Product” or an “Innovative Liquefied Propellant Product” shall have at least similar efficacy as other consumer products in the same category, based upon consumer or scientific testing generally accepted for that product category by the consumer products industry, demonstrated product spray rate, percent or efficacy of active ingredients, or information that the applicant may provide or that CARB may request. Application of a greater quantity of innovative product shall not be needed to achieve the same efficacy as the representative product.

~~(1) At least 50 percent by volume of the proposed innovative product’s propellant ingredients are compressed air, compressed nitrogen, and/or compressed carbon dioxide, and the weight of the proposed innovative product’s propellant or propellants does not exceed 50 percent of the weight of the representative product’s propellant or propellants;~~

~~(2) The replacement of HFC-152a propellant with compressed air, compressed nitrogen, and/or compressed gas propellant will result in the proposed innovative product having a lower global warming potential (GWP) compared to the representative HFC-152a product.~~

(5) GHG emissions shall be calculated as follows:

(A) The GHG emissions for an “Innovative Compressed Gas Propellant Product,” “Innovative Liquefied Propellant Product,” or Representative HFC-152a Product shall be calculated using the following equation for the purposes of determining compliance with section 94511(c):

$$\underline{GHG_{PRODUCT} = (GWP_{INGREDIENT} \times Wt)_1 + (GWP_{INGREDIENT} \times Wt)_2 + \dots + (GWP_{INGREDIENT} \times Wt)_n}$$

where:

GHG_{PRODUCT} = the GHG emissions from the Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product;

GWP_{INGREDIENT} = ingredient GWP, as specified in 94511(c)(5)(B-D);

Wt = ingredient weight;

1,2,3,...,n = each ingredient in the Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product, up to the total n ingredients in the Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product.

(AB) The global warming potential of the proposed ~~innovative product~~ Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product shall be determined by using the 100-Year GWP values from the Intergovernmental Panel on Climate Change’s (IPCC) Fourth Assessment Report (Forster, P., V. Ramaswamy, P. Artaxo, T. Berntsen, R. Betts, D.W. Fahey, J. Haywood, J. Lean, D.C. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz and R. Van Dorland, 2007: Changes in Atmospheric Constituents and in Radiative Forcing. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.), incorporated by reference herein.

(BC) For an ~~substance~~ ingredient for which no GWP value exists in the IPCC’s Fourth Assessment Report, but for which a GWP value does exist in the IPCC’s Fifth Assessment Report (Myhre, G., D. Shindell, F.-M. Bréon, W. Collins, J. Fuglestedt, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura and H. Zhang, 2013: Anthropogenic and Natural Radiative Forcing. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment

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Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.] incorporated by reference herein, the GWP of the ingredient shall be determined by using the 100-Year Global Warming Potential value from the IPCC’s Fifth Assessment Report.

(E) For a substance ingredient for which no GWP value exists in the IPCC’s Fourth Assessment Report or the IPCC’s Fifth Assessment Report, the GWP value of the ingredient shall be zero.

~~(3) The amount of product dispensed by the innovative product is equal to or greater than the amount of product dispensed by the representative product; and~~

~~(4) The ozone-forming potential shall be calculated as follows of the proposed innovative product does not exceed that of the representative HFC-152a product:~~

(A) Assignment of an substance’s ROC’s Maximum Incremental Reactivity (MIR) value for the purpose of determining an product’s Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product ozone-forming potential shall be conducted pursuant to subsections 94509(r)(5)(A)-(D) and (F)-(I).

(B) For fragrance, the MIR value for terpinolene listed in section 94700 shall be used to calculate the product’s Innovative Compressed Gas Propellant Product, Innovative Liquefied Propellant Product, or Representative HFC-152a Product ozone-forming potential.

~~(d) For the purposes of subsections (c) and (f) of this section, “representative HFC-152a product” means a consumer product that meets either of the following criteria:~~

~~(1) A consumer product that has the product formulation identified in Table 94511(d)(1) for the applicable product category; or~~

~~(2) A consumer product that is in the same product category as the innovative product, with a propellant that is at least 50 percent HFC-152a, by weight, and with a fragrance content that is representative of products on the California market in the applicable category at the time of the IPE application.~~

~~**Table 94511(d)(1)- Representative HFC-152a Product Formulations**~~

<u>Product Category and Applicable VOC Standard</u>	<u>Ingredient Weight Percent</u>				
	<u>Ethanol</u>	<u>HFC-152a</u>	<u>Fragrance</u>	<u>Other VOC or LVP VOC*</u>	<u>Non-Volatiles and Exempt VOCs**</u>

Hair Finishing Spray: 50% VOC	45	45	0.1	3.9	6
Dry Shampoo: 55% VOC	30	29	0.2	30.8	10
Dry Shampoo: 50% VOC	30	33	0.2	26.8	10
Personal Fragrance Product: 70% VOC	40	15	2	30	13
Personal Fragrance Product: 50% VOC	30	30	2	22	16

~~* Ingredients in this column are assumed to have an average MIR of 0.9.~~

~~** Ingredients in this column are assumed to have an average MIR of 0.0.~~

~~(ced)~~ A manufacturer shall apply in writing to the Executive Officer for any exemption claimed under this subsection (a). The application shall include the supporting documentation that demonstrates the reduction of emissions from the innovative product, including the actual physical test methods used to generate the data and, if necessary, the consumer testing undertaken to document product usage. In addition, the applicant must provide any information necessary to enable the Executive Officer to establish enforceable conditions for granting the exemption including the VOC content for the innovative product and test methods for determining the VOC content. All information submitted by a manufacturer pursuant to this section shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations, Sections 91000-91022.

- ~~(1)~~ For products that meet the criteria identified in subsections 94511(a) and (b), the application shall include the supporting documentation that demonstrates the reduction of emissions from the innovative product, including the actual physical test methods used to generate the data and, if necessary, the consumer testing undertaken to document product usage. In addition, the applicant must provide any information necessary to enable the Executive Officer to establish enforceable conditions for granting the exemption, including the VOC content for the innovative product and test methods for determining the VOC content.
- ~~(2)~~ For products that meet the criteria identified in subsections 94511(c) ~~and (d)~~, the application shall include the supporting documentation that demonstrates the criteria identified in subsections (c) ~~(1) through (4)~~ are met, including the name, weight percent, density, MIR, and GWP for all ingredients present in an amount greater than or equal to 0.1 percent by weight of the product formulation, and all supporting calculations or

analytical measurements. In addition, the applicant must provide any information necessary, upon request of the Executive Officer, to enable the Executive Officer to establish enforceable conditions for granting the exemption, including the VOC content and ozone forming potential of the innovative product.

- ~~(fe)~~ A consumer product which reduces VOC emissions relative to the representative consumer product due to VOC combustion (including, but not limited to, catalytic combustion) shall be ineligible for any exemption provided in this section.
- ~~(gdf)~~ Within 30 days of receipt of the exemption application the Executive Officer shall determine whether an application is complete as provided in section 60030(a), Title 17, California Code of Regulations.
- ~~(geg)~~ Within 90 days after an application has been deemed complete, the Executive Officer shall determine whether, under what conditions, and to what extent, an exemption from the requirements of Section 94509(a) will be permitted. The applicant and the Executive Officer may mutually agree to a longer time period for reaching a decision, and additional supporting documentation may be submitted by the applicant before a decision has been reached. The Executive Officer shall notify the applicant of the decision in writing and specify such terms and conditions that are necessary to ensure that emissions from the product will meet the emissions reductions specified in subsection (a), and that such emissions reductions can be enforced.
- ~~(ifh)~~ In granting an exemption for a product the Executive Officer shall establish conditions that are enforceable. These conditions shall include the VOC content of the innovative product, dispensing rates, application rates, and any other parameters determined by the Executive Officer to be necessary. The Executive Officer shall also specify the test methods for determining conformance to the conditions established. The test methods shall include criteria for reproducibility, accuracy, and sampling and laboratory procedures.
- ~~(jgi)~~ For any product for which an exemption has been granted pursuant to this section, the manufacturer shall notify the Executive Officer in writing within 30 days of any change in the product formulation or recommended product usage directions, and shall also notify the Executive Officer within 30 days if the manufacturer learns of any information which would alter the emissions estimates submitted to the Executive Officer in support of the exemption application.
- ~~(ki)~~ Modification of Product Ingredients for an Existing Exemption: Where one or more ingredients in a product for which an exemption has been granted based upon the eligibility criteria in subsection (c) has been modified after the exemption has been granted, the product shall be considered a modified product and:

- (1) the manufacturer must notify the Executive Officer of an ingredient modification within 30 days, but need not apply for a new exemption for the modified product if all of the following three conditions are met:
 - (A) The modified ingredient or ingredients meet the definition of fragrance as specified in section 94508(a)(54) and/or do not meet the definition of ‘Reactive Organic Compound’ as specified in section 94509(r)(1)(I);
 - (B) The total weight of the modified ingredient or ingredients that meet the criteria in subsection (A) represent no more than 0.5 percent of the total product weight for “Hair Finishing Spray” and “Dry Shampoo,” or represent no more than 2.5 percent of the total product weight for “Personal Fragrance Product”; and
 - (C) the modification does not increase the product’s ozone forming potential or GWP.
- (2) If the modified product does not meet all of the conditions in subsections 94511(j)(1)(A) through (C), the manufacturer must apply for a new exemption for the modified product pursuant to subsection 94511(ed)(2). The modified product must still meet the requirements in subsection (c).

~~(h)~~ If the VOC limits specified in Section 94509(a) are lowered for a product category through any subsequent rulemaking, all innovative product exemptions granted for products in the product category, except as provided in this subsection ~~(h)~~, shall have no force and effect as of the effective date of the modified VOC standard. This subsection ~~(h)~~ shall not apply to innovative product exemptions granted to the following:

- (1) those innovative products which have VOC emissions less than the applicable lowered VOC limit and for which a written notification of the product's emissions status versus the lowered VOC limit has been submitted to and approved by the Executive Officer at least 60 days before the effective date of such limits; and
- (2) an ‘Automatic Aerosol Air Freshener’ product subject to a 30% VOC standard pursuant to Section 94509(a).

~~(m)~~ If the Executive Officer believes that a consumer product for which an exemption has been granted no longer meets the criteria for an innovative product specified in subsection (a), the Executive Officer may modify or revoke the exemption as necessary to assure that the product will meet these criteria. The Executive Officer shall not modify or revoke an exemption without first affording the applicant an opportunity for a public hearing held in accordance with the procedures specified in Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 1, Article 4 (commencing with Section 60040), to determine if the exemption should be modified or revoked.
