

§ 94511. Innovative Products.

(a) The Executive Officer shall exempt a consumer product from the VOC limits specified in Section 94509(a) if a manufacturer demonstrates by clear and convincing evidence that, due to some characteristic of the product formulation, design, delivery systems or other factors, the use of the product will result in less VOC emissions as compared to:

- (1) the VOC emissions from a representative consumer product which complies with the VOC limits specified in Section 94509(a), or
- (2) the calculated VOC emissions from a noncomplying representative product, if the product had been reformulated to comply with the VOC limits specified in section 94509(a). VOC emissions shall be calculated using the following equation:

$$ER = ENC \times VOCSTD \div VOCNC$$

where:

ER = The VOC emissions from the noncomplying representative product, had it been reformulated.

ENC = The VOC emissions from the noncomplying representative product in its current formulation.

VOCSTD = the VOC limit specified in 94509(a).

VOCNC = the VOC content of the noncomplying product in its current formulation.

If a manufacturer demonstrates that this equation yields inaccurate results due to some characteristic of the product formulation or other factors, an alternative method which accurately calculates emissions may be used upon approval of the Executive Officer.

(b) For the purposes of subsections (a) and (f), "representative consumer product" means a consumer product which meets all of the following criteria:

- (1) the representative product shall be subject to the same VOC limit in Section 94509(a) as the innovative product.

- (2) the representative product shall be of the same product form as the innovative product, unless the innovative product uses a new form which does not exist in the product category at the time the application is made.
 - (3) the representative product shall have at least similar efficacy as other consumer products in the same product category based on tests generally accepted for that product category by the consumer products industry.
- (c) The Executive Officer shall exempt an aerosol "Hair Finishing Spray," "Dry Shampoo," or "Personal Fragrance Product" product from the VOC limits specified in Section 94509(a) if the product manufacturer demonstrates by clear and convincing evidence that the proposed innovative product meets all four of the following criteria:
- (4) At least 50 percent by volume of propellant ingredients are compressed gas, nitrogen, or carbon dioxide;
 - (5) the replacement of HFC-152a propellant with compressed air, nitrogen, or carbon dioxide propellant will result in the proposed innovative product having a lower global warming potential (GWP) compared to a representative HFC-152a product.
 - (A) The global warming potential of the proposed innovative product shall be determined by using the 100-Year GWP values from the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A.(eds.)]. IPCC, Geneva, Switzerland, 104 pp.);
 - (B) For a substance for which no GWP value exists in the IPCC's Fourth Assessment Report, but for which a GWP value does exist in IPCC's Fifth Assessment Report (IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp), the GWP of the substance shall be determined by using the 100-Year Global Warming Potential values from the IPCC Fifth Assessment Report.
 - (C) For a substance for which no GWP value exists in IPCC's Fourth Assessment Report or the IPCC Fifth Assessment Report, the GWP value of the substance shall be zero.

- (6) the non-propellant mass of the proposed innovative product does not exceed the non-propellant mass of the representative HFC-152a product; and
- (7) the ozone forming potential of the proposed innovative product does not exceed that of the representative HFC-152a product.
 - (A) Assignment of a substance's Maximum Incremental Reactivity (MIR) values for the purposes of determining a product's 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 in section 94700 must be used to calculate the 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:
 - (8) has the product formulation identified in Table 94511(d)(1) for the applicable product category; or
 - (9) whose propellant mass is at least 50 percent HFC-152a; whose fragrance content does not exceed that of the proposed innovative product; and which meets the criteria identified in subsection 94511(b)(1) through (3).
 - (10) where the percent of HFC-152a is reduced by 50% from the representative product.

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

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

* Includes VOCs and LVP-VOCs. Average MIR of 0.9

** MIR of 0.00

(e) The Executive Officer shall exempt an aerosol product from the VOC limit specified in section 94509(a) if the product manufacturers demonstrate by clear and convincing evidence that the proposed innovative product meets all four of the following criteria:

(11) The propellant/solvent blend total percentage is the same as the Representative Sample in Table 94511 (c)1 or of a Representative product as described in Table 94511 (e) 1.

(12) the replacement of HFC-152a propellant will result in the proposed innovative product having at least a 50% reduction in weight of global warming potential (GWP) compounds compared to a representative HFC-152a product as described in Table 92511 (e) 1.

(A) The global warming potential of the proposed innovative product shall be determined by using the 100-Year GWP values from the

Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A.(eds.)]. IPCC, Geneva, Switzerland, 104 pp.);

- (B) For a substance for which no GWP value exists in the IPCC's Fourth Assessment Report, but for which a GWP value does exist in IPCC's Fifth Assessment Report (IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp), the GWP of the substance shall be determined by using the 100-Year Global Warming Potential values from the IPCC Fifth Assessment Report.
 - (C) For a substance for which no GWP value exists in IPCC's Fourth Assessment Report or the IPCC Fifth Assessment Report, the GWP value of the substance shall be zero.
- (13) The non-propellant/solvent blend percentage cannot exceed the MIR Value of the representative product as described in Table 94511 (e) 1.
- A) Assignment of a substance's Maximum Incremental Reactivity (MIR) values for the purposes of determining a product's 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 in section 94700 must be used to calculate the product ozone forming potential.
- (14) The Executive Officer will designate a new VOC limit for the Innovative Product. This new VOC limit is enforceable by CARB.

Table 94511(e)(1): Representative HFC-152a Product Formulations

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

(ef) 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, mass, weight percent, density, reactivity, 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 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.
- (g) 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.
- (eh) 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.
- (ei) 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.
- (fj) 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.
- (ek) 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.

(l) 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, 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)(l);

(B) The total mass 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" and 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.

(2) If the modified product does not meet all of the conditions in subsections (A) through (C), the manufacturer must apply for a new exemption for the modified product pursuant to subsection (e)(2).

(m) 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).

- (i) 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.