PROPOSED RULEMAKING
Annex A
TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
Subpart C. PROTECTION OF NATURAL RESOURCES
ARTICLE III. AIR RESOURCES
CHAPTER 129. STANDARDS FOR SOURCES

SOURCES OF VOCs

§ 129.51. General.

(a) *Equivalency.* Compliance with §§ 129.52, 129.52a, 129.52b, 129.52c, **[and 129.54—129.73]** **129.52e, 129.54—129.69, 129.71—129.73** and 129.77 may be achieved by alternative methods if the following exist:

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(3) Compliance by a method other than the use of a low VOC coating, adhesive, sealant, adhesive primer, sealant primer, surface preparation solvent **[or],** cleanup solvent or ink which meets the applicable emission limitation in §§ 129.52, 129.52a, 129.52b, 129.52c, **129.52e,** 129.67, 129.73 and 129.77 shall be determined on the basis of equal volumes of solids.

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(6) The alternative compliance method is incorporated into a plan approval or operating permit, or both, reviewed by the EPA, including the use of an air cleaning device to comply with § 129.52, § 129.52a, § 129.52b, § 129.52c, **§ 129.52e,** § 129.67, § 129.68(b)(2) and (c)(2), § 129.73 or § 129.77.

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(*Editor's note*: Section 129.52e is new and printed in regular type to enhance readability.)

§ 129.52e. Control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations.

(a) *Applicability*.

(1) This section applies to the owner and operator of an automobile and light-duty truck assembly coating operation that applies an automobile assembly coating or a light-duty truck assembly coating, or both, to one or more of the following:

(i) A new automobile body or a new light-duty truck body.

(ii) A body part for a new automobile or for a new light-duty truck.

(iii) Another part that is coated along with the new automobile body or body part or new light-duty truck body or body part.

(2) This section applies to the owner and operator of an automobile and light-duty truck assembly coating operation that operates a separate coating line at the facility on which a coating is applied to another part intended for use in a new automobile or new light-duty truck or an aftermarket repair or replacement part for an automobile or light-duty truck if the owner or operator elects to comply with this section instead of § 129.52d. The election occurs when the owner or operator notifies the Department by submitting a written statement to the appropriate Department regional office Air Quality Program Manager that specifies the intent to comply with § 129.52e instead of § 129.52d. (*Editor's Note*: Section 129.52d will be adopted on or before the date of final adoption of this proposed rulemaking.)

(3) This section applies to the owner and operator of a facility that coats a body or body part for a new heavier vehicle if the owner or operator elects to comply with this section instead of § 129.52d. The election occurs when the owner or operator notifies the Department by submitting a written statement to the appropriate Department regional office Air Quality Program Manager that specifies the intent to comply with § 129.52e instead of § 129.52d. (*Editor's Note*: Section 129.52d will be adopted on or before the date of final adoption of this proposed rulemaking.)

(4) This section applies to the owner and operator of a facility that performs a coating operation subject to this section on a contractual basis.

(5) This section does not apply to the use or application of an automobile and light-duty truck assembly coating by an owner or operator at a plastic or composites molding facility.

(b) *Definitions.* The following words and terms, when used in this section, have the following meanings, unless the context clearly indicates otherwise:

Adhesive–A chemical substance that is applied for the purpose of bonding two surfaces together by other than mechanical means.

Assembly coating–The term includes the primary and additional surface coatings applied during the vehicle assembly process.

(i) The primary coatings include the following:

(A) Electrodeposition primer.

(B) Primer-surfacer (including anti-chip coatings).

(C) Topcoat (including basecoat and clearcoat).

(D) Final repair.

(ii) The additional coatings include the following:

(A) Glass bonding primer.

(B) Adhesives.

(C) Cavity wax.

(D) Sealer.

(E) Deadener.

(F) Gasket/gasket sealing material.

(G) Underbody coating.

(H) Trunk interior coating.

(I) Bedliner.

(J) Weatherstrip adhesive.

(K) Lubricating waxes and compounds.

(iii) The term does not include aerosol coatings.

Automobile–A motor vehicle designed to carry up to eight passengers. The term excludes vans, sport utility vehicles and motor vehicles designed primarily to transport light loads of property.

Automobile and light-duty truck adhesive–An adhesive, including glass bonding adhesive, used at an automobile and light-duty truck assembly coating operation, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

Automobile and light-duty truck assembly coating operation–An operation that applies an assembly coating to a new automobile body or a new light-duty truck body, or both, or a body part for a new automobile or for a new light-duty truck, or both, or another part that is coated along with the new automobile body or body part or new light-duty truck body or body part. The operation consists of one or more of the following processes:

(i) Surface preparing.

(ii) Priming, including application of either of the following:

(A) Electrodeposition primer.

(B) Primer-surfacer.

(iii) Topcoating.

(iv) Final repairing.

(vi) Cleaning activities related to the vehicle coating operations.

Automobile and light-duty truck bedliner–A multi-component coating, used at an automobile and light-duty truck assembly coating operation, applied to a cargo bed after the application of topcoat and outside of the topcoat operation to provide additional durability and chip resistance.

Automobile and light-duty truck cavity wax–A coating, used at an automobile and light-duty truck assembly coating operation, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

Automobile and light-duty truck deadener–A coating, used at an automobile and light-duty truck assembly coating operation, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

Automobile and light-duty truck gasket/gasket sealing material–A fluid, used at an automobile and light-duty truck assembly coating operation, applied to coat a gasket or replace and perform the same function as a gasket. The term includes room temperature vulcanization (RTV) seal material.

Automobile and light-duty truck glass bonding primer–

(i) A primer, used at an automobile and light-duty truck assembly coating operation, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass bonding adhesives or the installation of adhesive bonded glass.

(ii) The term includes glass bonding and cleaning primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive bonded glass.

Automobile and light-duty truck lubricating wax/compound–A protective lubricating material, used at an automobile and light-duty truck assembly coating operation, applied to vehicle hubs and hinges.

Automobile and light-duty truck sealer–

(i) A high viscosity material, used at an automobile and light-duty truck assembly coating operation, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (for example, primer-surfacer). The primary purpose of the material is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment.

(ii) The term is also known as sealant, sealant primer or caulk.

Automobile and light-duty truck trunk interior coating–A coating, used at an automobile and light-duty truck assembly coating operation outside of the primer-surfacer and topcoat operations, applied to the trunk interior to provide chip protection.

Automobile and light-duty truck underbody coating–A coating, used at an automobile and light-duty truck assembly coating operation, applied to the undercarriage or firewall to prevent corrosion or provide chip protection, or both.

Automobile and light-duty truck weatherstrip adhesive–An adhesive, used at an automobile and light-duty truck assembly coating operation, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

Automobile Topcoat Protocol–A guidance document set forth by the United States Environmental Protection Agency for determining the daily volatile organic compound emission rate of automobile and light-duty truck primer-surfacer and topcoat operations. (EPA-453/R-08-002, September 2008, or revisions.)

Body part–An exterior part of a motor vehicle including the hood, fender, door, roof, quarter panel, deck lid, tail gate and cargo bed. The term does not include a bumper, fascia or cladding.

EDP or electrodeposition primer–

(i) A process of applying a protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. It is a dip coating method that uses an electrical field to apply or deposit the conductive coating onto the part. The object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank.

(ii) The term is also known as E-Coat, Uni-Prime and ELPO Primer.

Final repair–The operations performed and coating or coatings applied to completely assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating. The curing of the coatings applied in these operations is accomplished at a lower temperature than that used for curing primer-surfacer and topcoat. This lower temperature cure avoids the need to send parts that are not yet on a completely assembled vehicle through the same type of curing process used for primer-surfacer and topcoat and is necessary to protect heat sensitive components on completely assembled vehicles.

Heavier vehicle–A self-propelled vehicle designed for transporting persons or property on a street or highway that has a gross vehicle weight rating over 8,500 pounds.

In-line repair–

(i) The operation performed and coating or coatings applied to correct damage or imperfections in the topcoat on parts that are not yet on a completely assembled vehicle. The curing of the coatings applied in these operations is accomplished at essentially the same temperature as that used for curing the previously applied topcoat. This operation is considered part of the topcoat operation.

(ii) The term is also known as high bake repair or high bake reprocess.

Light-duty truck–A van, sport utility vehicle or motor vehicle designed primarily to transport light loads of property with a gross vehicle weight rating of 8,500 pounds or less.

Primer-surfacer–

(i) An intermediate protective coating applied over the electrodeposition primer and under the topcoat. The coating provides adhesion, protection and appearance properties to the total finish.

(ii) The coating operation may include one or more other coatings, including anti-chip, lower-body anti-chip, chip-resistant edge primer, spot primer, blackout, deadener, interior color, basecoat replacement coating or other coating, that is applied in the same spray booth.

(iii) The term is also known as guide coat or surfacer.

Solids turnover ratio (R_T)–The ratio of total volume of coating solids that is added to the EDP system in a calendar month divided by the total volume design capacity of the EDP system.

Topcoat–

(i) The final coating system applied to provide the final color, a protective finish, or both. The coating may be a monocoat color or basecoat/clearcoat system.

(ii) The coating operation may include one or more other coatings including blackout, interior color or other coating that is applied in the same spray booth.

(iii) The term includes in-line repair and two-tone.

(c) *Existing RACT permit.* The requirements of this section supersede the requirements of a RACT permit issued under §§ 129.91—129.95 (relating to stationary sources of NOx and VOCs) to the owner or operator of a source subject to this section prior to January 1, 2016, except to the extent the RACT permit contains more stringent requirements.

(d) *VOC content limits*.

(1) Beginning January 1, 2016, the VOC content limits specified in Table I and Table II (relating to VOC content limits for primary assembly coatings; and VOC content limits for additional assembly coatings (grams of VOC per liter of coating excluding water and exempt

compounds) as applied) apply to an owner and operator of a facility that has total actual VOC emissions equal to or greater than 15 pounds (6.8 kilograms) per day, before consideration of controls, from all operations at the facility that apply an assembly coating subject to this section, including related cleaning activities.

(2) Beginning January 1, 2016, the VOC content limits specified in Table I and Table II do not apply to the following:

(i) An owner and operator of a facility that has total actual VOC emissions below 15 pounds (6.8 kilograms) per day, before consideration of controls, from all operations at the facility that apply an assembly coating subject to this section, including related cleaning activities.

(ii) An assembly coating supplied in a container with a net volume of 16 ounces or less or a net weight of 1 pound or less.

(e) *Work practice requirements.* Beginning January 1, 2016, an owner and operator subject to subsection (d)(1) shall comply with the following work practices for:

(1) Coating-related activities:

(i) Store all VOC-containing coatings, thinners and coating-related waste materials in closed containers.

(ii) Ensure that mixing and storage containers used for VOC-containing coatings, thinners and coating-related waste materials are kept closed at all times except when depositing or removing these materials.

(iii) Minimize spills of VOC-containing coatings, thinners and coating-related waste materials and clean up spills immediately.

(iv) Convey VOC-containing coatings, thinners and coating-related waste materials from one location to another in closed containers or pipes.

(v) Minimize VOC emissions from cleaning of storage, mixing and conveying equipment.

(2) Cleaning materials. Develop and implement a written work practice plan to minimize VOC emissions from cleaning and purging of equipment associated with all coating operations for which emission limits are required. The written plan shall specify practices and procedures to ensure that VOC emissions from the following operations are minimized:

(i) Vehicle body wiping.

(ii) Coating line purging.

(iii) Flushing of coating systems.

(iv) Cleaning of spray booth grates.

(v) Cleaning of spray booth walls.

(vi) Cleaning of spray booth equipment.

(vii) Cleaning external spray booth areas.

(viii) Other housekeeping measures, including:

(A) Storing all VOC-containing cleaning materials and used shop towels in closed containers.

(B) Ensuring that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials.

(C) Minimizing spills of VOC-containing cleaning materials and cleaning up spills immediately.

(D) Conveying VOC-containing cleaning materials from one location to another in closed containers or pipes.

(E) Minimizing VOC emissions from cleaning of storage, mixing and conveying equipment.

(f) *Compliance monitoring and recordkeeping*. An owner or operator subject to this section shall maintain records sufficient to demonstrate compliance with this section.

(1) The owner or operator shall maintain daily records of the following parameters for each coating, thinner, component or cleaning material as supplied:

(i) The name and identification number.

(ii) The volume used.

(iii) The mix ratio.

(iv) The density or specific gravity.

(v) The weight percent of total volatiles, water, solids and exempt solvents.

(vi) The volume percent of solids for each EDP coating.

(vii) The VOC content.

(2) The owner or operator shall maintain a daily record of the VOC content of each as applied coating or cleaning material.

(3) The owner or operator shall:

(i) Maintain the records onsite for 2 years, unless a longer period is required under Chapter 127 (relating to construction, modification, reactivation and operation of sources) or a plan approval, operating permit or order issued by the Department.

(ii) Submit the records to the Department in an acceptable format upon receipt of a written request from the Department.

(4) The owner or operator subject to subsection (e) shall maintain the written work practice plan specified in subsection (e)(2) onsite and make it available to the Department upon request.

(g) *Measurement, calculation, sampling and testing methodologies.* The following measurement, calculation, sampling and testing methodologies shall be used to determine the amount of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations, as appropriate:

(1) Measurements of the volatile fraction of coatings shall be performed according to the following, as applicable:

(i) EPA Reference Method 24.

(ii) Appendix A of the NESHAP for surface coating of plastic parts (40 CFR Part 63, Subpart PPPP) for reactive adhesives.

(iii) Manufacturer's formulation data.

(2) Calculations of the VOC emissions and rates shall be performed according to the following, as applicable:

(i) Automobile Topcoat Protocol–*Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations*, EPA-453/R-08-002, including updates and revisions.[1]

(ii) *A Guideline for Surface Coating Calculations,* EPA-340/1-86-016, including updates and revisions.

(iii) *Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings*, EPA-450 3-84-019, including updates and revisions.

[1] This protocol shall apply to the owner and operator of a facility that coats a body or body part for a new heavier vehicle that elects under subsection (a)(3) to comply with this section instead of § 129.52d.

(3) Sampling and testing shall be performed according to the procedures and test methods specified in Chapter 139 (relating to sampling and testing.)

(4) Another method or procedure that has been approved in writing by the Department and the EPA.

Table I. VOC Content Limits for Primary Assembly Coatings

Assembly Coating	Recommended VOC Emission Limit		
Electrodeposition primer (EDP) operations (including application area, spray and rinse stations and curing oven)	When [2] $R_T < 0.040$	When $0.040 <= R_T < 0.160$	When $R_T => 0.160$
	No VOC emission limit.	$0.084 \times 350^{0.160-R_T}$ kg VOC/liter coating solids applied or $0.084 \times 350^{0.160-R_T}$ x 8.34 lb VOC/gal coating solids applied	0.084 kg VOC/liter coating solids applied or 0.7 lb VOC/gal coating solids applied
Primer-surfacer operations (including application area, flash-off area, and oven)	1.44 kg VOC/liter of deposited solids or 12.0 lbs VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the revised Automobile Topcoat Protocol.		
Topcoat operations (including application area, flash-off area, and oven)	1.44 kg VOC/liter of deposited solids or 12.0 lbs VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the revised Automobile Topcoat Protocol.		
Final repair operations	0.58 kg VOC/liter less water and less exempt solvents or 4.8 lbs VOC/gallon of coating less water and less exempt solvents on a daily weighted average basis or as an occurrence weighted average.		
Combined primer-surfacer and topcoat operations	1.44 kg VOC/liter of deposited solids or 12.0 lbs VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the revised Automobile Topcoat Protocol.		

[2] R_T is the solids turnover ratio. Solids turnover ratio is a defined term in subsection (b).

Table II. VOC Content Limits for Additional Assembly Coatings (grams of VOC per liter of coating excluding water and exempt compounds) as applied.

Material[3]	g VOC/liter coating less water and exempt compounds	lb VOC/gal coating less water and exempt compounds
Automobile and Light-duty Truck Glass Bonding Primer	900	7.51
Automobile and Light-duty Truck Adhesive	250	2.09
Automobile and Light-duty Truck Cavity Wax	650	5.4
Automobile and Light-duty Truck Sealer	650	5.4
Automobile and Light-duty Truck Deadener	650	5.4
Automobile and Light-duty Truck Gasket/Gasket Sealing Material	200	1.7
Automobile and Light-duty Truck Underbody Coating	650	5.4
Automobile and Light-duty Truck Trunk Interior Coating	650	5.4
Automobile and Light-duty Truck Bedliner	200	1.7
Automobile and Light-duty Truck Lubricating Wax/Compound	700	5.8
Automobile and Light-duty Truck Weatherstrip Adhesive	750	6.26

[3] The owner and operator of a facility that coats a body or body part, or both, for a new heavier vehicle that elects under subsection (a)(3) to comply with this section instead of § 129.52d shall comply with these limits for their equivalent coating materials.