11.0 Mobile Equipment Repair and Refinishing

(2010 revision, draft 2)

~~11/11/2001~~ mm/dd/2010

11.1 Applicability

11.1.1 Except as provided for in 11.1.2 of this regulation, t~~T~~he provisions of 11.0 of this regulation apply to any person who supplies, sells, offers for sale, blends, repackages for sale, manufacturers, distributes, uses, applies or specifies the use or application of any coating~~s~~ or cleaning solvent for the purpose of protection or beautification of mobile equipment or mobile equipment components. ~~in the State of Delaware, except:~~. Except as provided in 11.1.5 of this regulation, any person subject to 11.0 of this regulation shall comply with the provisions of this regulation on and after xx/xx/2010.

~~11.1.1.1 The surface coating process at any automobile assembly plant.~~

~~11.1.1.2 Persons who do not receive compensation for the application of the coatings.~~

~~11.1.1.3 The application of coatings sold in non-refillable aerosol cans.~~

11.1.2 ~~Any person subject to the requirements of 11.0 of this regulation shall be in compliance on or after October 31, 2003.~~The provisions of 11.0 of this regulation shall not apply to any person who supplies, sells, offers for sale, blends, repackages for sale, manufacturers, distributes, uses, applies or specifies the use or application of any coating or cleaning solvent:

11.1.2.1 where the use or application of that coating or cleaning solvent is at a facility subject to the requirements of Section 13.0 of this regulation, Automobile and Light-Duty Truck Coating Operations,

11.1.2.2 where the use or application of that coating or cleaning solvent is by a person who does not receive compensation for such use or application,

11.1.2.3 that is an aerosol coating product,

11.1.2.4 where the use or application of that coating or cleaning solvent is not within the State of Delaware,

11.1.2.5 where the coating or cleaning solvent is shipped to other manufacturers for reformulation or repackaging, or

11.1.2.6 that is packaged in 0.5 fluid ounce or smaller containers that are intended to be used to repair tiny surface imperfections.

11.1.3 Any person who is currently subject to a state or federal rule promulgated pursuant to the Clean Air Act Amendments of 1977 by exceeding an applicability threshold is and shall remain subject to those provisions.

11.1.4 Compliance with the requirements of 11.0 of this regulation are in addition to all other state and federal requirements, to include the requirements of 40 CFR 59, Subpart B, National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings

11.1.5 Transition period for existing permitted sources. Any person subject to 11.0 of this regulation that has been issued a permit pursuant to **7 DE Admin Code** 1102 or 1130 containing all applicable conditions of 11.0 of that regulation, as that regulation existed on November 11, 2001, shall comply with those permit conditions until December 31, 2011. On and after January 1, 2012, every such person shall comply with the provisions of 11.0 of this regulation.

11.2 Definitions. As used in 11.0 of this regulation, all terms not defined herein shall have the meaning given them in this regulation or in the Clean Air Act Amendments (CAAA) of November 15, 1990, or in 2.0 of this regulation.

"Airless spray" means a spray coating method in which the coating is atomized by forcing it through a small nozzle at high pressure. The coating is not mixed with air before exiting from the nozzle opening

"As supplied" means the VOC and solids content of a coating or coating component as sold and delivered to the end user.

"Automotive coating" means a coating or coating component used or recommended for use in motor vehicle or mobile equipment refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. A reference to automotive refinishing or automobile coating included on the container, on a label affixed to the container or in sales, advertising, technical or product literature constitutes a recommendation for use in motor vehicle or mobile equipment refinishing and recoating.

"Automotive coating component" means a portion of a coating, including a reducer or thinner, toner, hardener, or additive, which is recommended by a person to distributors or end-users for use in an automotive coating, or which is supplied for or used in an automotive coating. Raw materials used to produce the components are not considered automotive coating components.

“Automotive pretreatment coating” means a coating that contains a minimum of 0.5% acid by weight and not more than 16% solids by weight necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.

“Automotive primer” means a coating, which may be pigmented, labeled and formulated for application to a substrate to provide one or more of; a bond between the substrate and subsequent coats; corrosion resistance; a smooth substrate surface; and, resistance to penetration of subsequent coats and on which a subsequent coating is applied.

“Automotive refinishing facility” means a shop, business, location, or parcel of land where motor vehicles or mobile equipment or their associated parts and components are coated, including autobody collision repair shops, but not including the original equipment manufacturing plant where new motor vehicles or new mobile equipment is assembled.

“Cavity wax” means a coating applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

“Cleaning operation” means the removal of loosely held uncured adhesives, inks, coatings, or contaminants, including, but not limited to, dirt, soil, or grease from motor vehicles, mobile equipment, associated parts and components, substrates, products, tools, machinery, equipment, or general work areas.

“Cleaning solvent” means a fluid containing VOC used to perform surface preparation, or cleaning of surface coating equipment. Cleaning solvent does not include thinners, reducers or other solvents that may be used to adjust the solvent content of coatings.

“Clear coating” means a coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating. A clear coating may contain talc or silica which are not considered pigments for the purposes of this regulation.

“Coating” means, for the purposes of this regulation, a material applied to a substrate for decorative, protective, or functional purposes.

“Color coating” means a pigmented coating, excluding adhesion promoters, primers, and multicolor coatings, that requires a subsequent clear coating and which is applied over a primer, adhesion promoter, or color coating. Color coating includes metallic/iridescent coatings.

“Coating solids” means the nonvolatile portion of the coating that makes up the dry film.

“Deadener” means a coating applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

“Gasket/sealing material” means a fluid applied to coat a gasket or replace and perform the same function as a gasket including room temperature vulcanization (RTV) seal material.

“Graphic arts operation” means the application of logos, letters, numbers, or graphics to a painted surface by brush, roller, or airbrush.

“Low-solids coating” means a coating containing 0.12 kilogram or less of solids per liter (one pound or less solids per gallon) of coating material.

“Lubricating wax/compound” means a protective lubricating material applied to vehicle hubs and hinges.

“Metallic/iridescent color coating” means a coating that contains more than five grams per liter (0.042 pounds per gallon) of metal or iridescent particles as applied, where the particles are visible in the dried film.

“Electrostatic spray” means the application of charged atomized paint droplets that are deposited by electrostatic attraction.

“High Volume Low Pressure” or “(HVLP)” means a method of spraying a coating, that improves the transfer efficiency while maintaining the air pressure between 0.1 and 10 pounds per square inch gauge (psig).

“Mobile equipment” means any equipment that is physically capable of being driven or drawn upon a highway including, but not limited to, the following types of equipment: automobiles; trucks, truck cabs, truck bodies; buses; motorcycles; ground support vehicles, used in support of aircraft activities at airports; construction vehicles (such as mobile cranes, bulldozers, concrete mixers); farming equipment (such as wheel tractors, plows, and pesticide sprayers); hauling equipment (such as truck trailers, utility bodies, and camper shells); and miscellaneous equipment (such as street cleaners and golf carts).

“Multicolor coating” means a coating that exhibits more than one color in the dried film after a single application, is packaged in a single container, hides surface defects on areas of heavy use, and is applied over a primer or adhesion promoter.

“Other automotive coating type” means, for the purposes of this regulation, an automotive coating that does not meet the definitions for the specified automotive coating categories in Table 11-1.

"Sealer" means a high viscosity material with a primary purpose to fill body joints completely so there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Sealer is also referred to as sealant or caulk.

"Single-stage coating" means a pigmented coating, excluding automotive primers and multicolor coatings, labeled and formulated for application without a subsequent clear coat and includes single-stage metallic/iridescent coatings.

"Solvent" means a fluid containing VOC added to a coating, including, but not limited to, reducers and thinners.

"Spot repair" means repair of an area of less than one panel in size on a motor vehicle, piece of mobile equipment, or associated parts or components. There are several coating operations unique to spot repair that utilize a uniform finish solvent and in some cases a blend of such solvent with appropriate film forming solids. As the blend required and the appropriate VOC content may vary depending upon the nature and extent of the spot repair, no VOC limits are specified for this operation which is limited to spot repair.

"Temporary protective coating" means a coating labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.

"Truck bed liner coating" means a coating, excluding clear, color, multi color and single-stage coatings, labeled and formulated for application to a cargo bed, after the application of topcoat, to protect it from surface abrasion and provide additional durability and chip resistance.

"Trunk interior coating" means a coating applied to the trunk interior to provide chip protection.

"Underbody coating" means a coating labeled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the motor vehicle.

11.3 Standards

11.3.1 Except as exempted in 11.3.3 of this regulation, no person subject to the requirements of 11.0 of this regulation shall supply, sell, offer for sale, blend, repackage for sale, manufacture, distribute, use, apply or specify the use or application of an automotive coating unless that person meets the requirements of either 11.3.1.1 or 11.3.1.2.

11.3.1.1 The VOC content of the coating, calculated in accordance with equation 11-1, is less than or equal to the limits listed in Table 11-1 of this regulation. If, on the container of an automotive coating, or a label or sticker affixed to the container or in sales, advertising, technical or product literature any representation is made that

indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 11-1, then the lowest applicable VOC content limit shall apply.

$$\text{VOC coating regulatory content} = \frac{(Wv - Ww - Wec)}{(Vm - Vw - Vec)} \quad \textbf{(Equation 11-1)}$$

Where:
VOC coating regulatory content = VOC content in grams per liter (g/l)
W_V = Weight of total volatiles in grams (g)
W_W = Weight of water in grams (g)
Wec= Weight of exempt compounds in grams (g)
Vm = Volume of material (coating, including water and exempt compounds) in liters (l)
V_W = Volume of water in liters (l)
Vec = Volume of exempt compounds in liters (l)

Table 11-1: *Allowable VOC Content*

	VOC REGULATORY – AS APPLIED	
Coating Category	**lb/gal**	**gm/l**
Adhesion promoter	4.5	540
Automotive pretreatment coating	5.5	660
Automotive primer	2.1	250
Cavity wax	5.4	650
Clear coating	2.1	250
Color coating	3.5	420
Deadener	5.4	650
Gasket/gasket sealing material	1.7	200
Lubricating wax/compound	5.8	700
Multicolor coating	5.7	680
Sealer	5.4	650
Single-stage coating	2.8	340
Temporary protective coating	0.5	60
Truck bed liner coating	1.7	200
Trunk interior coating	5.4	650
Underbody coating	3.6	430
Uniform finish coating	4.5	540
All other coating types	2.1	250

11.3.1.2 Emissions capture and control equipment is installed and operated that achieves an emission reduction efficiency in accordance with 11.4 of this regulation.

11.3.2 Except as exempted in 11.3.3 or provided for in 11.3.2.1 and 11.3.2.2 of this regulation, no person subject to the requirements of 11.0 of this regulation shall supply, sell, offer for sale, blend, repackage for sale, manufacture, distribute, use, apply or specify the use or application of a cleaning solvent with a VOC content, calculated in accordance with equation 11-2 of this regulation, that is greater than 25 grams per liter.

11.3.2.1 Special cleaning solvent for use in specific and difficult cleaning tasks associated with surface preparation with a VOC content no greater than 350 g/l may be used at a volume equal to 2.5% of the preceding years annual coating usage up to a maximum of 40 gallons per year.

11.3.2.2

$$\text{VOC content (or actual)} = \frac{(Wv - Ww - Wec)}{Vm} \qquad \textbf{(Equation 11-2)}$$

Where:
VOC content = VOC content (or actual) in grams per liter (g/l)
W_V = Weight of total volatiles in grams (g)
W_W = Weight of water in grams (g)
Wec= Weight of exempt compounds in grams (g)
Vm = Volume of material (coating or cleaning solvent, as applicable, including water and exempt compounds) in liters (l)

11.3.3 Any product manufactured prior to January 1, 2012 is exempt from the requirements of 11.3.1 and 11.3.2 of this regulation, provided that product complies with requirements of 11.6.2 of this regulation.

11.3.~~1~~ 4 Except as exempted in 11.3.5 of this regulation, ~~A~~ any person who uses or applies automotive coatings subject to 11.~~0~~3 of this regulation shall use only the following application techniques:

11.3.~~1~~.4.1 Any non-atomized application technique (e.g., Flow/curtain coating, Dip coating, Roller coating, Brush coating, Cotton-tipped swab application coating, ~~Electro-deposition coating,~~etc.);

11.3.~~1~~ 4.2 High Volume Low Pressure (HVLP) spraying;

11.3.~~1~~ 4.3 Electrostatic spray;

11.3.~~1~~ 4.4 Airless spray;

11.3.~~1~~ 4.5 Any other coating application technique that the person has demonstrated and the Department has determined achieves ~~emission deductions~~ a transfer efficiency equivalent to ~~or better than~~ HVLP or electrostatic spray.

11.3.~~2~~ 5 The following are exempt from the requirements of 11.3.4 of this regulation:

11.3.~~2~~ 5.1 The use of airbrush application methods for graphics, stenciling, lettering, and other identification markings;

11.3.~~2~~ 5.2 The applications of coatings to cover finish imperfections equal to or less than one inch in diameter.

11.3.~~2~~ 5.3 A coating use of less than one fluid ounce.

11.3.~~2~~ 5.4 Underbody and truck bed liner coatings.

11.3. 6 Any person who uses or applies automotive coatings or cleaning solvents subject to 11.3 of this regulation shall implement the following work practice standards.

11.3.~~3~~ 6.1 Spray guns ~~used to apply coatings to mobile equipment or mobile equipment components~~ shall be cleaned by one or a combination of the following methods, using cleaning solvent or non-VOC containing solutions:

11.3.~~3~~ 6.1.1 Use of an enclosed spray gun cleaning system that is kept closed when not in use. The active and passive solvent losses from the use of the system shall be determined in accordance with the requirements of 11.7.4 of this regulation.

11.3.~~3~~ 6.1.2 The unatomized discharge of cleaning solvent into a paint waste container that is kept closed when not in use.

11.3.~~3~~ 6.1.3 The disassembly of the spray gun and cleaning in a vat that is kept closed when not in use.

11.3.~~3~~ 6.1.4 The atomized spray into a paint waste container that is fitted with a device designed to capture atomized cleaning solvent emissions.

11.3.~~4~~ 6.~~1~~ .2 Fresh and used automotive coatings, solvent, and cleaning solvents shall be stored in vaportight, non-absorbent, non-leaking containers. The containers shall be kept closed at all times except when filling or emptying.

11.3.~~4~~ 6.~~2~~ .3 Cloth and paper, or other absorbent applicators, moistened with automotive coatings, solvents, or cleaning solvents shall be stored in closed, vapor tight, non-absorbent, non-leaking containers.

11.3.~~4~~ 6.~~3~~ .4 Handling and transfer procedures shall minimize spills during the transfer of automotive coatings, solvents and cleaning solvents

11.3.~~5~~ 6.5 Any person who uses or applies automotive coatings, solvents or cleaning solvents subject to ~~the requirements of~~ 11.~~3~~0 of this regulation shall be trained in the proper use and handling of automotive coatings, solvents, cleaning solvents, and waste products in order to minimize the emission of air contaminants.

11.3.~~5~~.6.5.1 Proof of training shall be maintained on the facility premises.

11.3.~~7~~6.5.2 Acceptable forms of training include equipment or paint manufacturer's seminars, classes, workshops, or any other training approved by the Department.

11.4 Control Devices

11.4.1 Any person subject to 11.3.1.2 of this regulation shall determine the emission reduction efficiency needed to comply and demonstrate compliance as follows:

11.4.1.1 Determine for each day the overall emission reduction efficiency needed to demonstrate compliance. The overall emission reduction needed for a day is the lesser of the value calculated according to the procedure in 3.3 of **Appendix C** of this regulation for that day, or at least 85%.

11.4.1.2 Demonstrate each day that the overall emission reduction efficiency achieved for that day, as determined in **Appendix D** of this regulation, is greater than or equal to the overall emission reduction efficiency required for that day.

11.4.2 Any person subject to 11.3.1.2 of this regulation shall ensure that:

11.4.2.1 A capture system and control device are operated at all times that the coating facility is in operation, and the owner or operator demonstrates compliance with 11.0 of this regulation through the applicable coating analysis and capture system and control device efficiency test methods specified in **Appendix B**, **Appendix D** and **Appendix E** of this regulation and in accordance with the capture efficiency test methods in **Appendix D** of this regulation.

11.4.2.2 The control device is equipped with the applicable monitoring equipment specified in 2.2 of **Appendix D** of this regulation, and the monitoring equipment is installed, calibrated, operated, and maintained according to the vendor's specifications at all times the control device is in use.

11.5 Compliance Procedures, Recordkeeping, and Reporting Requirements Applicable to Any Person Who Uses or Applies Automotive Coatings or Cleaning Solvents. Any person who uses or applies automotive coatings or cleaning solvents subject to 11.3 of this regulation shall maintain and have available at all times, on site, the information specified in 11.5.1, 11.5.2, and 11.5.3 of this regulation:

11.5.1 For each automotive coating and cleaning solvent used or applied, a list that includes the following information:

11.5.1.1 The product name and manufacturer.

11.5.1.2 Whether the product is an automotive coating or cleaning solvent.

11.5.1.3 The method or methods employed to use or apply the product (e.g., HVLP spray, shop rag, etc.).

11.5.1.4 For any automotive coating, the applicable coating category or categories listed in Table 11-1 of this regulation.

11.5.1.5 The mix ratio specific to the automotive coating.

11.5.1.6 The VOC regulatory content, as applied, for each ready to spray or ready to apply automotive coating and copies of data sheets documenting how the as applied values were determined.

11.5.1.7 The VOC regulatory content as supplied and copies of current manufacturer specification sheets, product data sheets, material safety data sheets, technical data sheets, or air quality data sheets documenting the as supplied value.

11.5.2 For each automotive coating or cleaning solvent purchased, purchase records identifying the following;

11.5.2.1 The date the product was purchased.

11.5.2.2 The product name and the manufacturer.

11.5.2.2 For any coating, the applicable coating category listed in Table 11-1 of this regulation.

11.5.2.3 The volume purchased.

11.5.3 For any person subject to the requirements of 11.3.4 of this regulation:

11.5.3.1 A written description of each application method used at the facility.

11.5.3.2 For any spray equipment used, the manufacturer's published technical material on the design of the equipment, or other documentation that demonstrates it is HVLP, electrostatic, or airless spray, as defined in 11.0 of this regulation.

11.5.3.3 For any coating application technique complying with 11.3.4.5 of this regulation:

11.5.3.3.1 Written determination of the transfer efficiency in accordance with the test methods in 11.7.3 of this regulation.

11.5.3.3.2 Written documentation that the alternative spray coating application method has been approved by the Department.

11.6 Compliance Procedures, Recordkeeping, and Reporting Requirements Applicable to Any Person Who Blends, Repackages for Sale, Manufactures, Supplies, Sells, or Offers for sale Automotive Coatings or Cleaning Solvents. Any person who supplies, sells, offers for sale, blends, repackages for sale, manufactures, or distributes automotive coating or cleaning solvent subject to this regulation shall:

11.6.1 For each automotive coating product, include the following information on product data sheets or an equivalent medium:

11.6.1.1 The VOC regulatory content, as supplied, expressed in grams per liter, calculated in accordance with the requirements of 11.3.1.1 of this regulation.

11.6.1.2 The weight percent of volatiles, water, and exempt compounds.

11.6.1.3 The volume percent of water and exempt compounds.

11.6.1.4 The density of the material (in grams per liter).

11.6.2 For each automotive coating product, include the following information on all containers or on a label affixed to the container, or on the package:

11.6.2.1 The applicable coating category listed in Table 11-1 of this regulation.

11.6.2.2 The VOC content of the coating, as supplied, calculated in accordance with the requirements of 11.3.1.1 of this regulation and expressed in grams per liter.

11.6.2.3 The month and year on which the automotive coating was manufactured, or a code indicating that date.

11.6.2.3.1 The product date or date-code must be displayed on each automotive coating container, label or package no later than 30 days before the automotive coating is supplied, sold, offered for sale or distributed in Delaware.

11.6.2.3.2 The date or date-code information shall be located on the automotive coating container, label or package so that it is readily observable without irreversibly disassembling a part of the container or packaging. Information may be displayed on the bottom of a container as long as it is clearly legible without removing any product packaging.

11.6.2.3.3 A person may not erase, alter, deface or otherwise remove or make illegible a date or code indicating the month and year of manufacture from a regulated product container without the express authorization of the manufacturer.

11.6.2.3.4 Except as provided for in 11.6.2.3.5 of this regulation, any person using a date-code to comply with 11.6.2.3 of this regulation shall comply with 11.6.2.3.4.1 and 11.6.2.3.4.2 of this regulation.

11.6.2.3.4.1 No later than 30 days before the automotive coating is supplied, sold, offered for sale or distributed in Delaware, submit to the Department an explanation of the code.

11.6.2.3.4.2 Before products displaying any modified code are supplied, sold, offered for sale or distributed in Delaware, submit to the Department an explanation of the modified code.

11.6.2.3.4.3 Date code explanations for codes indicating the month and year of manufacture are public information and may not be claimed as confidential.

1.6.2.3.5 The requirements of 11.6.2.3.4 of this regulation shall not apply to any date-code that is represented separately from other codes on the automotive coating container, label or package so that it is easily recognizable, and that is expressed as follows:

YY DDD
where,
YY = represents the year the coating was manufactured
DDD = represents the Julian date

11.6.3 For each cleaning solvent, include on the container, or on a label affixed to the container, the VOC content for that cleaning solvent, as supplied, expressed in grams per liter, calculated in accordance with the requirements of 11.3.2 of this regulation.

11.7 Test Methods. These methods are in addition to methods included in **Appendix A**, **Appendix B**, **Appendix D**, and **Appendix E** of this regulation. The following test methods are incorporated by reference herein, and shall be used to test automotive coatings, automotive coating components and cleaning solvents subject to this regulation. A source is in violation of this regulation if a measurement by one or more of the listed applicable test methods exceeds the standards of this regulation.

11.7.1 Acid content. Measurement of acid content of coatings shall be determined by using ASTM International D1613-03, Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products, ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959 USA.

11.7.2 Metallic content. The metallic content of a coating shall be determined by South Coast Air Quality Management District (SCAQMD) Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-ray, SCAQMD, 21865 Copley Drive, Diamond Bar, CA, 91765 USA.

11.7.3 Spray equipment transfer efficiency. Spray equipment transfer efficiency shall be determined by using the South Coast Air Quality Management District (SCAQMD) Test Procedure, Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989, SCAQMD, 21865 Copley Drive, Diamond Bar, CA, 91765 USA.

11.7.4 Spray gun cleaning system. The active and passive solvent losses from the use of an enclosed spray gun cleaning system or equivalent cleaning system, shall be determined using South Coast Air Quality Management District (SCAQMD) Method, General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems, October 3, 1989, SCAQMD, 21865 Copley Drive, Diamond Bar, CA, 91765 USA.

11.7.4.1 The test solvent for this determination shall be a lacquer thinner with a minimum vapor pressure of 105 mm of mercury at 20^0 C.

11.7.4.2 The minimum test temperature shall be 15^0 C.

11.7.5 Alternative test methods. The use of other test methods which are determined to be at least equivalent and approved by the Department may be used in place of the test methods specified in 11.7 of this regulation.