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TITLE 326 AIR POLLUTION CONTROL BOARD

LSA Document #03-264(F)

DIGEST

Amends 325 IAC 20-25, the state styrene rule, concerning emissions from reinforced plastic composites fabricating emission units to consolidate requirements applicable to reinforced plastic composites production in 326 IAC 20-56. Adds 326 IAC 20-56 to incorporate by reference the national emission standards for hazardous air pollutants from reinforced plastic composites production. Effective 30 days after filing with the secretary of state.

HISTORY

First Notice of Comment Period: October 1, 2003, Indiana Register (27 IR 292).

Second Notice of Comment Period and Notice of First Hearing: January 1, 2004, Indiana Register (27 IR 1304).

Change in Notice of First Hearing: March 1, 2004, Indiana Register (27 IR 1936).

Date of First Hearing: May 5, 2004.

Proposed Rule and Notice of Public Hearing: July 1, 2004, Indiana Register (27 IR 3123).

Change in Notice of First Hearing: August 1, 2004, Indiana Register (27 IR 3590).

Date of Second Hearing: October 6, 2004.

326 IAC 20-25-1

326 IAC 20-56

326 IAC 20-25-2

SECTION 1. 326 IAC 20-25-1 IS AMENDED TO READ AS FOLLOWS:

326 IAC 20-25-1 Applicability

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-17-3

Sec. 1. (a) This rule applies to owners or operators of sources that emit or have the potential to emit ten (10) tons per year of any hazardous air pollutant (HAP) or twenty-five (25) tons per year of any combination of HAPs, and that meet all of the following criteria:

- (1) Manufacture reinforced plastics composites parts, products, or watercraft.
- (2) Have an emission unit where resins and gel coats that contain styrene are applied and cured using the open molding process.
- (3) Have actual emissions of styrene equal to or greater than three (3) tons per year.

(b) Except as provided in section 3(d) of this rule, in the event there is a conflict between this rule and any existing federal or state statute or federal or state rule, the more stringent requirement shall apply.

(c) ~~If a source~~ **An emission unit that** is subject to 326 IAC 20-48 concerning emission standards for hazardous air pollutants for boat manufacturing ~~the source~~ is exempt from this rule after ~~the following compliance dates for 326 IAC 20-48:~~

- ~~(1) August 23, 2004. for an existing source that is a major source on or before August 22, 2001.~~
- ~~(2) One (1) year after becoming a major source for an existing or new nonmajor source.~~
- ~~(3) Upon startup for a new major source.~~

(d) A source that is subject to 326 IAC 20-56 concerning emission standards for hazardous air pollutants from reinforced plastic composites production is exempt from this rule after April 21, 2006, for a major source that existed on or before August 2, 2001. (Air Pollution Control Board; 326 IAC 20-25-1; filed Feb 5, 2001, 9:23 a.m.: 24 IR 2406; filed Mar 25, 2003, 8:10 a.m.: 26 IR 2607; filed Feb 14, 2005, 10:50 a.m.: 28 IR 2017)

SECTION 2. 326 IAC 20-25-2 IS AMENDED TO READ AS FOLLOWS:

326 IAC 20-25-2 Definitions

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-17-3

Sec. 2. The following definitions apply throughout this rule:

- (1) "Air-assisted airless spray technology" means a coating application system in which:
 - (A) the coating fluid (including gel coat or resin) is supplied to the gun under fluid pressure; and
 - (B) air is combined at the spray cap of the gun.
- (2) "Airless spray technology" means a coating application system in which:
 - (A) the coating fluid (including gel coat or resin) is supplied to the gun under fluid pressure; and
 - (B) air is not added to the gun.
- (3) "Base coat gel coat" means an interior gel coat, used in boat building, to protect the laminate.
- (4) "Class I flame and smoke products" means the following:
 - (A) For products meeting a building code, products that meet any one (1) of the following flame spread and smoke intensity numbers as tested by American Society for Testing and Materials (ASTM) E84-99**:
 - (i) Interior; flame spread less than twenty-five (25) and smoke intensity less than four hundred fifty (450).
 - (ii) Exterior; flame spread less than twenty-five (25).
 - (iii) Duct; flame spread less than twenty-five (25) and smoke intensity less than fifty (50).
 - (B) For products designed for mass transit application, products that meet all of the following:
 - (i) Flame spread measured by ASTM E162-98** less than thirty-five (35).
 - (ii) Smoke intensity by ASTM E662-97** less than one and five-tenths (1.5) at one and five-tenths (1.5) minutes and less than two hundred (200) at four (4) minutes.
- (5) "Clear gel coat" means a gel coat that contains no pigments.
- (6) "Compression molding" means the use of a prepared compound, such as sheet molding compound (SMC), composed of resin and fiberglass fibers and a large hydraulic press to produce fiber reinforced plastic parts.
- (7) "Controlled spray" means a work practice standard that reduces emissions by increasing material transfer and reducing overspray. The following are elements of controlled spraying ~~which that~~ work together to reduce emissions:
 - (A) Operation of the spray gun at the lowest fluid tip pressure, which produces an acceptable spray pattern.
 - (B) Operator training that teaches proper spray gun handling techniques.
 - (C) The use of close containment mold flanges to minimize overspray off the mold.
- (8) "Cured resin or gel coat" means resin or gel coat that has changed irreversibly from a liquid to a solid.
- (9) "Delivered to the applicator" means a resin or gel coat actually applied to an open mold, excluding any inert filler, fiberglass mat, or fiberglass roving.
- ~~(10) "Existing sources" means sources or emission units for which the owner or operator has received all necessary construction or reconstruction permits prior to June 28, 1998, as set forth in 326 IAC 2-4.1-1.~~
- ~~(11) (10) "Filament winding" application" means the application of resin to strands of glass using an open molding process for fabricating composites in which reinforcements are fed through a resin bath or other applicator and then winding the wet glass onto the mold or part, and wound onto a rotating mandrel. The materials on the mandrel may be rolled out or worked by using nonmechanical tools prior to curing. Resin application to the reinforcement on the mandrel by means other than the resin bath, such as spray guns, pressure-fed rollers, flow coaters, or brushes, is not considered filament application.~~
- ~~(12) (11) "Filled resin" means a resin containing inert filler material equal to or greater than thirty-five percent (35%) by weight.~~
- ~~(13) (12) "Gel coat" means a thermosetting resin, either pigmented or clear, that contains styrene (CAS No. 100-42-5) and provides a cosmetic enhancement or protects the underlying layers of a plastic composites material. Gel coat does not include thermoplastic material, such as polyethylene or thermosetting coatings, that do not contain styrene, such as epoxies.~~
- ~~(14) (13) "HAP monomer content" means the percent, by weight, of monomer that has been classified as a hazardous air pollutant (HAP) contained in a resin or gel coat, as delivered to the applicator, and excluding any inert filler, fiberglass mat, or fiberglass roving.~~
- ~~(15) (14) "High-volume, low-pressure air atomized spray technology" means a coating application system that is operated at an air pressure of less than ten (10) pounds per square inch gauge (psig) at the air cap of the spray gun.~~
- ~~(16) (15) "Inert filler" means any non-HAP material, such as silica microspheres or microballoons, added to a resin or gel coat to alter density of the resin or gel coat or change other physical properties of the resin or gel coat. The term does not include pigments.~~
- ~~(17) (16) "Manual application" means hand application using bucket and paint brush or bucket and paint roller. or other hand held methods of application.~~

(17) “Mechanical application” means application of resins or gel coats using an applicator from which the material is sprayed from the applicator using:

- (A) air-atomization;**
- (B) air-assisted airless;**
- (C) airless;**
- (D) HVLP;**
- (E) LVLP; or**
- (F) nonatomized;**

applicators or is mechanically dispensed within or onto a paint roller applicator, such as pressure-fed rollers.

(18) “Mold” means a hollow form or matrix for shaping a liquid or plastic substance.

(19) “New sources” means those sources or emission units that must comply with 326 IAC 2-4.1-1.

(20) “Nonatomized application equipment” means the devices where resin or gel coat material does any of the following:

- (A) Flows from the applicator, in a steady state in a observable coherent flow, without droplets, for a minimum distance of three (3) inches from the applicator orifices, such as flow coaters, flow choppers, and fluid impingement equipment.
- (B) Is mechanically dispensed within or on to a paint roller applicator, such as pressure fed rollers.
- (C) Is deposited on fiber reinforcement moving through a resin or gel coat bath, such as resin impregnators.

(21) “Noncorrosion resistant resin” means a resin that does not meet the criteria of corrosion resistant resin in the specialty product resins definition.

(22) “Open molding process” means the application of resin or gel coat to an open mold ~~by any method~~ **using mechanical or manual application, but excluding polymer casting and filament application.**

(23) “Pigmented gel coat” means a gel coat that contains a coloring substance.

(24) “Polymer casting” means a process for fabricating composites in which composite materials are ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

~~(24)~~ **(25) “Pressure fed roller” means a fabric roller that is fed a continuous supply of catalyzed resin from a mechanical fluid pump.**

~~(25)~~ **(26) “Production gel coat” means a gel coat that is used to manufacture parts, products, or watercraft and does not include patch repair or touch-up activities.**

~~(26)~~ **(27) “Production resin” means any thermosetting resin that is used to manufacture parts, products, or watercraft and does not include patch repair or touch-up activities.**

~~(27)~~ **(28) “Resin” means any thermosetting resin that contains styrene (CAS No. 100-42-5) or methyl methacrylate (CAS No. 80-62-6), or both, and is used to manufacture parts, products, or watercraft. Resin does not include:**

- (A) gel coat;**
- (B) tooling gel coat;**
- (C) thermoplastic resin, for example, rotationally molded polyethylene; or**
- (D) thermosetting resin;**

that does not contain styrene or methyl methacrylate, for example, epoxies.

(29) “Resin and gel coat mixing container” means a container that is used for mixing resin or gel coat and is not concurrently used to supply resin or gel coat to an applicator.

~~(28)~~ **(30) “Shrinkage controlled resin” means resin that relies on a balance of solution thermodynamics that permits three (3) phases (thermosetting polymer, styreneated thermoplastic, and styrene monomer) and produces less than or equal to one and five-tenths percent (1.5%) linear shrinkage when tested in neat (unfilled, nonreinforced) form by ASTM D2566-86**.**

~~(29)~~ **(31) “Specialty product resins” includes the following resins:**

(A) Corrosion resistant resin is used to produce a product that meets any of the following criteria:

(i) Will be exposed to any of the following:

- (AA) Materials with a pH equal to or greater than twelve (12.0) pH units or equal to or less than three (3.0) pH units.
- (BB) Oxidizing agents.
- (CC) Reducing agents.
- (DD) Organic solvents.
- (EE) Fuels or fuel additives as defined in 40 CFR 79.2*.

(ii) Complies with industry standards that require specific exposure testing for corrosive media.

(iii) Is manufactured to an accepted federal and industry standard for corrosion resistant, potable water contact or food contact applications.

(iv) Is manufactured specifically for an application that requires increased chemical inertness or resistance to chemical attack.

(B) High strength resin exhibiting a tensile strength of ten thousand (10,000) or more pounds per square inch when tested according to ASTM D638-98**.

(C) Resin used to meet military specifications.

(D) Skin coat resin, a thin protective layer of resin, used in watercraft production or other products, applied between the gel coat and laminate that provides corrosion resistance and prevents osmotic blistering.

~~(30)~~ (32) "Tooling gel coat" means the gel coat used in the construction of molds or prototypes (plugs).

~~(31)~~ (33) "Tooling resin" means the resin used in the construction of molds or prototypes (plugs).

~~(32)~~ (34) "Vacuum bagging" means a partially closed molding technology where, after resin has been applied, a flexible cover is placed over the wet surface, sealed, and a vacuum pump is used to draw the air out from under the cover and press the cover down onto the part.

~~(33)~~ (35) "Vapor suppressed resin" is a polyester resin material that contains additives to reduce volatile organic compound (VOC) evaporation loss to less than sixty (60) grams per square meter of surface area as determined and certified by resin manufacturers.

~~(34)~~ (36) "Watercraft" means any motorized or nonmotorized device in which or by means of which a person may be transported upon the water, excluding seaplanes.

***This document is incorporated by reference. Copies of the Code of Federal Regulations referenced in this article may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20204 or are available for review and copying from at the Indiana Department of Environmental Management, Office of Air Management, Department of Environmental Management, Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana or may be obtained from the Government Printing Office, Washington, D. C. 20204. 46204.**

****This document is incorporated by reference. Copies of American Society for Testing Materials methods are available for review and copying from at the Indiana Department of Environmental Management, Office of Air Management, Department of Environmental Management, Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana ASTM, 1916 Race Street, Philadelphia, PA 19103-1187; or the public library: 46204. (Air Pollution Control Board; 326 IAC 20-25-2; filed Feb 5, 2001, 9:23 a.m.: 24 IR 2407; filed Feb 14, 2005, 10:50 a.m.: 28 IR 2018)**

SECTION 3. 326 IAC 20-56 IS ADDED TO READ AS FOLLOWS:

Rule 56. Reinforced Plastic Composites Production

326 IAC 20-56-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-12-3-1; IC 13-17

Sec. 1. (a) This rule applies to sources as provided in 40 CFR 63.5785 (68 FR 19402, April 21, 2003)*.

(b) The air pollution control board incorporates by reference 40 CFR 63, Subpart WWW (68 FR 19402, April 21, 2003)*, National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Production.

***This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. (Air Pollution Control Board; 326 IAC 20-56-1; filed Feb 14, 2005, 10:50 a.m.: 28 IR 2020)**

326 IAC 20-56-2 Operator training

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-12-3-1; IC 13-17

Sec. 2 (a) Each owner or operator shall train all new and existing personnel, including contract personnel, who are involved in resin and gel coat spraying and applications that could result in excess emissions if performed improperly according to the following schedule:

(1) All personnel hired shall be trained within thirty (30) days of hiring.

(2) To ensure training goals listed in subsection (b) are maintained, all personnel shall be given refresher training annually.

(3) Personnel who have been trained by another owner or operator subject to this rule are exempt from subdivision (1)

if written documentation that the employee's training is current is provided to the new employer.

(b) The lesson plans shall cover, for the initial and refresher training, at a minimum, all of the following topics:

- (1) Appropriate application techniques.**
- (2) Appropriate equipment cleaning procedures.**
- (3) Appropriate equipment setup and adjustment to minimize material usage and overspray.**

(c) The owner or operator shall maintain the following training records on site and make them available for inspection and review:

- (1) A copy of the current training program.**
- (2) A list of the following:**
 - (A) All current personnel, by name, that are required to be trained.**
 - (B) The date the person was trained or date of most recent refresher training, whichever is later.**

(d) Records of prior training programs and former personnel are not required to be maintained. (*Air Pollution Control Board; 326 IAC 20-56-2; filed Feb 14, 2005, 10:50 a.m.: 28 IR 2020*)

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Hearing Held: October 6, 2004

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Approved by Governor: February 10, 2005

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IC 4-22-7-5(c) notice from Secretary of State regarding documents incorporated by reference: Notice received by Publisher March 3, 2005: 40 CFR Part 63, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production