

**15A NCAC 02D .0964 MISCELLANEOUS INDUSTRIAL ADHESIVES**

(a) For the purpose of this Rule, the following definitions apply:

- (1) "Air-assisted airless spray" means a system that consists of an airless spray gun with a compressed air jet at the gun tip to atomize the adhesive.
- (2) "Airless spray" means the application using a pump forcing an adhesive through an atomizing nozzle at high pressure of 1,000 to 6,000 pounds per square inch.
- (3) "Application process" means a process that consists of a series of one or more adhesive applicators and any associated drying area or oven where an adhesive is applied, dried, and cured.
- (4) "Dip coating" means application where substrates are dipped into a tank containing the adhesive. The substrates are then withdrawn from the tank and any excess adhesive is allowed to drain.
- (5) "Electrocoating" means a specialized form of dip coating where opposite electric charges are applied to the waterborne adhesive and the substrate.
- (6) "Electrostatic spray" means application where the adhesive and substrate are oppositely charged.
- (7) "Flow coating" means conveying the substrate over an enclosed sink where the adhesive is applied at low pressure as the item passes under a series of nozzles.
- (8) "HVLP" means a system with specialized nozzles that provides better air and fluid flow than conventional air atomized spray systems at low air pressure, shape spray pattern, and guides high volumes of atomized adhesive particles to the substrate using lower air pressure of 10 pounds per square inch or less at the spray cap.
- (9) "Miscellaneous industrial adhesives" means adhesives, including adhesive primers used in conjunction with certain types of adhesives, used at industrial manufacturing and repair facilities for a wide variety of products and equipment that operate adhesives application processes.
- (10) "Roll coating," "brush coating," and "hand application" means application of high viscosity adhesives onto small surface areas.

(b) Control of volatile organic compounds emissions from miscellaneous industrial adhesives product categories covered by 15A NCAC 02D .0923, .0935, .0961, .0962, .0963, .0965, .0966, .0967, and .0968 are exempted from the requirements of this Rule.

(c) This Rule applies to miscellaneous industrial adhesive application sources whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902(b).

(d) With the exception established in Paragraph (b) of this Rule, all volatile organic compounds containing materials applied by each miscellaneous industrial adhesive application processes before control shall:

- (1) not exceed limits established in Tables 1, 2, and 3 of this Rule; and
- (2) be used in one of the following application methods in conjunction with using low volatile organic compounds adhesives or adhesive primers:
  - (A) electrostatic spray;
  - (B) HVLP spray;
  - (C) flow coat;
  - (D) roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;
  - (E) dip coat including electrodes position;
  - (F) airless spray;
  - (G) air-assisted airless spray; or
  - (H) any other adhesive application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(e) Emission limits established in Subparagraph (d)(1) of this Rule shall be:

- (1) met by calculating the arithmetic mean of the volatile organic compounds content of materials used on a single application unit for each day; and
- (2) calculated as mass of volatile organic compounds per volume of adhesive primer, excluding water and exempt compounds, as applied.

(f) If an adhesive is used to bond dissimilar substrates together in a general adhesive application process as set forth in Tables 1, 2, or 3, then the applicable substrate category with the highest volatile organic compounds emission limit shall be established as the limit for such application.

Table 1. Volatile Organic Compounds Emission Limits for General Adhesive Application Processes.

General Adhesive Application Processes	VOC Emission Limit (lb/gal)
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Reinforced Plastic Composite	1.7
Flexible vinyl	2.1
Metal	0.3
Porous Material (Except Wood)	1
Rubber	2.1
Wood	0.3
Other Substrates	2.1

Table 2. Volatile Organic Compounds Emission Limits for Specialty Adhesive Application Processes.

Specialty Adhesive Application Processes	VOC Emission Limit (lb/gal)
Ceramic Tile Installation	1.1
Contact Adhesive	2.1
Cove Base Installation	1.3
Floor Covering Installation (Indoor)	1.3
Floor Covering Installation (Outdoor)	2.1
Floor Covering Installation (Perimeter Bonded Sheet Vinyl)	5.5
Metal to Urethane/Rubber Molding or Casting	7.1
Motor Vehicle Adhesive	2.1
Motor Vehicle Weatherstrip Adhesive	6.3
Multipurpose Construction	1.7
Plastic Solvent Welding (ABS)	3.3
Plastic Solvent Welding (Except ABS)	4.2
Sheet Rubber Lining Installation	7.1
Single-Ply Roof Membrane Installation/Repair (Except EPDM)	2.1
Structural Glazing	0.8
Thin Metal Laminating	6.5
Tire Repair	0.8
Waterproof Resorcinol Glue	1.4

Table 3. Volatile Organic Compounds Emission Limits for Adhesive Primer Application Processes.

Adhesive Primer Application Processes	VOC Emission Limit (lb/gal)
Motor Vehicle Glass Bonding Primer	7.5
Plastic Solvent Welding Adhesive Primer	5.4
Single-Ply Roof Membrane Adhesive Primer	2.1
Other Adhesive Primer	2.1

(g) Any miscellaneous industrial adhesive application process subject to this Rule, which chooses to use add-on control for adhesive application processes rather than to comply with the emission limits established in Paragraph (d) of this Rule, shall install control equipment with overall control efficiency of 85 percent or use a combination of adhesives and add-on control equipment on an application process to meet limits established in Paragraph (d) of this Rule.

(h) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of adhesives, other than reactive adhesives, as defined in 40 CFR 63.3981, and the procedure established in Appendix A of the NESHAP for surface coating of plastic parts (40 CFR Part 63, Subpart PPPP) shall be used to determine the volatile organic compounds content of reactive adhesives unless the facility maintains records to document the volatile organic compounds content of adhesives from the manufacturer.

(i) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

*History Note:* Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);  
Eff. September 1, 2010;  
Readopted Eff. November 1, 2020;  
Amended Eff. November 1, 2023.