

**15A NCAC 02D .0936 GRAPHIC ARTS**

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

- (1) "Flexographic printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique in which both the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastometric materials.
- (2) "Packaging rotogravure printing" means printing with a gravure press upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operation, formed into containers and labels for articles to be sold.
- (3) "Printing" means the formation of words, designs and pictures, usually by a series of application rolls each with only partial coverage.
- (4) "Publication rotogravure printing" means printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.
- (5) "Roll printing" means the application of words, designs and pictures to a substrate by means of hard rubber or steel rolls.

(b) This Rule applies to:

- (1) flexographic printing, packaging rotogravure printing and publication rotogravure printing operations; or
- (2) machines that have both coating units and printing units.

(c) This Rule does not apply to facilities where the potential emissions of volatile organic compounds is less than 100 tons per year.

(d) Emissions of volatile organic compounds from any printing press or drying oven of a printing operation subject to this Rule shall not be discharged into the atmosphere unless:

- (1) The captured volatile organic compound emissions are reduced by at least 90 percent by an incineration system or 95 percent by a carbon adsorption system or any other control system; and:
  - (A) For packaging rotogravure printing operations, at least 65 percent overall reduction of the volatile organic compound emissions is achieved;
  - (B) For publication rotogravure printing operations at least 75 percent overall reduction of the volatile organic compound emissions is achieved; and
  - (C) For flexographic printing operations, at least 60 percent overall reduction of the volatile organic compound emissions is achieved;
- (2) The solvent portion of the ink, as it is applied on the substrate, consists of at least 75 percent water by volume and no more than 25 percent organic solvent by volume;
- (3) The ink contains by volume at least 60 percent nonvolatile material;
- (4) The printing system uses a combination of solvent-borne and water-borne ink such that at least a 70 percent by volume overall reduction in solvent usage is achieved when compared to all solvent-borne ink usage, or
- (5) The ink, including any solvents that may be added to it, contains no more than 0.5 pounds of volatile organic compounds per pound of solids in the ink; only flexographic printing and packaging rotogravure printing may use this option.

(e) When a facility complies with this Rule using the provision of Subparagraph (d)(4) of this Rule, the permit shall contain a condition stating the maximum quantity of solvent-borne ink that each printing unit may use or that the facility as a whole may use.

(f) Equivalency calculations for emissions trading, cross-line averaging, or determining compliance with add-on control equipment shall be performed in units of pounds of volatile organic compounds per gallon of solids.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);  
Eff. July 1, 1980;  
Amended Eff. December 1, 1993; December 1, 1989; January 1, 1985; June 1, 1981.*