



# Rotogravure and Wide-Web Flexographic Printing

## WHAT YOU NEED TO KNOW TO COMPLY

Ecology Fact Sheet

Publication #97-213i

*If you own or operate a publication rotogravure or package-product rotogravure and wide-web flexographic printing operation, the Clean Air Act amendments of 1990 have targeted your business for special requirements.*

*Because printing processes can result in emission of Hazardous Air Pollutants (HAP) from process materials such as inks, new requirements include:*

- *Emission Limits*
- *Compliance Demonstration*
- *Record-keeping*
- *Reporting*



The 1990 Clean Air Act directs the U.S. Environmental Protection Agency (EPA) to regulate emissions into the air of 189 toxic chemicals. To control emissions of these chemicals, the EPA issues National Emission Standards for Hazardous Air Pollutants (NESHAPs).

On May 30, 1996, the EPA finalized a rule covering air emissions of Hazardous Air Pollutants (HAPs) from publication rotogravure, package-product rotogravure and wide-web flexographic printing and publishing. This regulation targets printing and publishing because HAPs are emitted during use of many printing process materials.

If your facility has the potential to emit 10 tons of any one HAP or 25 tons of any combination of HAPs, then your company is considered a major source and must comply with the NESHAP. Reducing your emissions below these levels can eliminate the need to comply with this standard (*See Page 2 for emission reduction opportunities.*) However, if compliance with this NESHAP is unavoidable, then existing printers and publishers must be in compliance by May 30, 1999. New operations must be in compliance at start-up.

The basic requirements of the regulation are:

- Limiting emissions
- Demonstrating compliance with emissions limits
- Recordkeeping
- Reporting

The rule allows you to use control equipment, substitute non-HAP materials for HAP-containing materials, or a combination of both to achieve compliance. Contact your state's Small Business Assistance Program representative (*see back of this fact sheet*) or the air quality authority in your local area to determine all of the specific requirements under this rule. The following table describes emission limits:

PROCESS	EMISSION LIMITS	OTHER REQUIREMENTS
Publication Rotogravure	Control 92 percent of organic HAPs from all activities	Initial performance testing and monthly monitoring of control equipment required
Product Rotogravure, Wide-Web Flexography	Two options: 1. Control 95 percent of organic HAPs to a maximum of 0.2 kilograms per kilogram of <b>solids</b> applied  2. Control 95 percent of organic HAPs to a maximum of 0.4 kilograms per kilogram of <b>materials</b> applied.	Limits are an average figure for a group of commonly controlled presses.

Additional requirements of the NESHAP are listed below:

### **Demonstrating Compliance**

Most compliance demonstrations for materials must be performed monthly, but control devices must be monitored more frequently, some even continuously. For package-product rotogravure and wide-web flexography, an exemption level of 500 kilograms of material and/or 400 kilograms of HAP-containing material per month has been established for incidental printing and ancillary printing equipment. These exemptions provide relief for facilities that use only a small amount of HAP-containing products.

### **Recordkeeping**

Records must be kept for a minimum of five years on:

- All measurements needed to demonstrate compliance with this standard, such as continuous emissions monitoring data, control device and capture system data, material usage, HAP usage, volatile matter usage, and solids usage that support data that the source is required to report
- Rule applicability determinations
- Each continuous monitoring system.

### **Reporting**

An initial notification to the regulating agency is required under this rule and the following reports must also be submitted:

- Notification of Performance Tests. The notification and the site-specific test plan accompanying it shall identify the operation that will be monitored to ensure that the HAP control rate measured during the test is maintained.
- Notification of Compliance Status
- Performance test reports
- Start-up, shutdown, and malfunction reports
- A summary report every six months.

## ACHIEVING COMPLIANCE THROUGH POLLUTION PREVENTION

A small business can take advantage of pollution prevention opportunities in order to minimize its regulatory compliance requirements. This is especially important in reducing your company's emission levels below the thresholds established for major sources of Hazardous Air Pollutants. **If you fall below the thresholds you will not have to comply with the requirements of this rule.**

### **WATER-BASED INKS**

One of the most important emissions reduction opportunities a printer and/or publisher can do is to use water-based inks. The following is a brief analysis of cost and technical issues surrounding water-based inks:

**Emissions Reduction Benefits:** 1) Few or no emissions of volatile organic compounds found in HAP-containing materials, or worker exposure to alcohol; 2) Allows replacement of solvent-based cleaners and fountain solutions with safer substitutes.

**Operational Advantages:** 1) Holds color and viscosity longer during press runs, 2) More coverage per pound of ink, 3) Reduces need for make-up solvent during printing.

**Operational Disadvantages:** 1) Requires more frequent equipment cleaning, 2) Is less forgiving of equipment imperfections, 3) May cause paper curl.

**Costs:** 1) May require new capital equipment and greater energy use, 2) Will reduce hazardous waste disposal and liability costs.

**Product Quality:** Similar quality with new equipment; low ink gloss on porous substrates.

## WHO TO CALL FOR HELP

Through the Washington Department of Ecology's Compliance Assistance Office, non-enforcement assistance is available for small businesses with air quality questions. The purpose of the program is to:

- Explain air quality regulations and recommend ways to comply.
- Provide free, on-site technical assistance visits.
- Help businesses estimate air pollution emissions;

- Refer businesses to needed resources; and
- Provide information on potential sources of financing.

**For more information, contact:**

**Compliance Assistance Office**

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