



## **PERMIT APPLICATION PACKAGE FOR GRAPHIC ARTS OPERATIONS**

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Graphic arts means all screen, gravure, letterpress, flexographic, ink jet, and lithographic printing processes or related coating or laminating processes (Rule 74.19 Subsection G.11).

Graphic arts operation means any packaging gravure, publication gravure, flexographic printing, screen printing, letterpress, ink jet printing, or lithographic printing operation, or any coating or laminating operation manufacturing converted flexible packaging materials for the packaging industry. These operations include printing application equipment, coating equipment, laminating equipment, flash-off areas, ovens, conveyors or other equipment in an uninterrupted series with such operation. (Rule 74.19 Subsection G.12).

- APCD Rule 74.19 applies to anyone who manufactures or uses any ink, coating, adhesive, fountain solution, or solvent containing ROC (reactive organic compounds) that is used as part of a graphic arts operation.
- Screen printing is subject to Rule 74.19.1, “Screen Printing Operations”, instead of Rule 74.19. Please complete the Permit Application Package for Screen Printing Operations (Form ScreenPrint001) if any screen printing will be performed at your facility.
- A graphic arts operation meeting the following conditions is exempt from the ROC and composite partial vapor pressure limits on graphic arts materials and the requirement to obtain a Permit to Operate:

Graphic arts operations (packaging gravure, publication gravure, flexographic printing, ink jet printing, screen printing, letterpress, or lithographic printing) with total facility emissions from graphic arts operations of not more than 200 pounds of ROC per rolling period of 12 consecutive calendar months from inks, coatings, fountain solutions, solvents, and adhesives used for the binding of books or periodicals. Solvents shall include ink additives and materials used for the clean-up of graphic arts equipment.  
(Rule 23 Subsection F.13 and Rule 74.19 Subsection C.1.a and b).

- Graphic arts operations may use an emission capture and control system to control emissions in lieu of meeting the ROC limits for inks, coatings, and adhesives (Rule 74.19 Subsection B.6).
- APCD rules, including Rule 74.19 regulate ROC, reactive organic compound emissions. Material suppliers often use the term VOC, volatile organic compounds, in describing their products. Under Rule 74.19, these terms are equivalent. (Rule 74.19 Subsection G.43)

# **PERMIT APPLICATION PACKAGE FOR GRAPHIC ARTS OPERATIONS**

Using a separate entry on page 1 of Form GraphArts201 for each piece of printing equipment, supply the following information to help the APCD determine compliance with APCD Rule 74.19 and process the Permit to Operate application:

- 1) Type of Printing Process: flexographic, gravure, ink jet, letterpress, or lithographic
  - Identify the manufacturer and manufacturer's model number for the printing equipment:
  
- 2) Drying Method: Unheated (using unheated ambient air), Heater or Dryer (using infrared radiation), Oven (using gas or electrically heated air, electron beam, or ultraviolet)
  - If an air dryer or blower, heater or dryer, or oven is used for drying, identify the manufacturer and manufacturer's model number.
  - If a natural gas-fired oven is used, provide the heat input rating in Btu/hour.
  
- 3) Indicate the type of ROC Control Equipment: none, carbon adsorption, thermal incineration or catalytic incineration

Use as many Inks, Coatings, and Adhesives Data Sheets, page 2 of Form GraphArts201, as necessary to supply the requested information on ROC containing inks, coatings, and adhesives used.

If the ROC content (less water and exempt materials) of any ink, coating, or adhesive, as applied, exceeds the following limits, ROC control equipment is required.

<u>Category</u>	<u>Grams per Liter (Pounds per Gallon) Less Water and Exempt Compounds</u>
Inks	300 (2.5)
Flexographic Inks on Porous Substrates	225 (1.88)
Coatings	300 (2.5)
Adhesives	150 (1.25)

For low-solids inks, coatings or adhesives, which have 120 grams per liter (1 pound per gallon) or less of solids, the ROC content in on a grams per liter of material basis.

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Use as many Fountain Solution and Solvent Data Sheets, page 3, as are necessary to supply the requested information on ROC containing fountain solutions, blanket washes, and solvents used.

If the ROC content of any material, as used, exceeds the ROC content and/or applicable partial vapor pressure limits listed in the table below, you are in violation of Rule 74.19.

	<u>ROC Limit</u> <u>Grams/liter</u>		<u>ROC Composite</u> <u>Partial Pressure</u>
Fountain Solution	80		N/A
Fountain Solution-Refrigerated	100		N/A
Surface Preparation	70		N/A
Repair and Maintenance Cleaning	50		N/A
Coatings and Adhesives Application Equipment Cleaning	950	and	33 mm Hg
Ink Application Equipment Cleaning:			
General, unless listed below	100	and	3 mm Hg
Flexographic Printing			
Specialty Flexographic	810	and	21 mm Hg
Other Flexographic	100	and	3 mm Hg
Gravure Printing			
Publication	900	and	25 mm Hg
Packaging	100	and	3 mm Hg
Lithographic and Letterpress Printing	800	and	33 mm Hg
Roller Wash	300	or	10 mm Hg
Blanket Wash	300	or	10 mm Hg
Metering Roller Cleaner	300	or	25 mm Hg
Plate Cleaner	300	or	25 mm Hg
Radiation Curing Ink Removal	800	and	33 mm Hg

Additionally, no person shall use a solvent for cleaning purposes if that cleaner contains any methylene chloride.

## Annual Usage Limitations

A Permit to Operate for a graphic arts operation will include usage limitations for each of the following four categories: a) inks, b) coatings and adhesives, c) fountain solutions, and d) associated solvents including roller and blanket wash and cleaning solvents.

The proposed maximum annual usage levels on pages 2 and 3 will be used to establish the usage conditions.

Permits will be processed in accordance with the requirements of Rules 26, "New Source Review."



**RULE 74.19, GRAPHIC ARTS OPERATIONS**

*Please make as many copies as necessary so that a separate section is completed for each printing press.*

**Information on First Printing Press**

Type of Printing or Process (Check One):	<input type="checkbox"/> Lithographic <input type="checkbox"/> Flexographic <input type="checkbox"/> Ink Jet	<input type="checkbox"/> Gravure <input type="checkbox"/> Letterpress
Manufacturer of Printing Equipment		
Model of Printing Equipment		
Drying Method	<input type="checkbox"/> Unheated <input type="checkbox"/> Infrared Heater/Dryer <input type="checkbox"/> Ultraviolet Oven	<input type="checkbox"/> Natural Gas Oven <input type="checkbox"/> Electric Oven <input type="checkbox"/> Electron Beam Oven
Manufacturer of Dryer		
Model of Dryer		
Maximum Heat Input Rating of Dryer – <b>For Natural Gas Fired Ovens Only</b> (Specify Units)	_____	<input type="checkbox"/> Million BTUs Per Hour <input type="checkbox"/> Other _____
ROC Control Equipment	<input type="checkbox"/> None <input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Carbon Adsorption <input type="checkbox"/> Catalytic Incinerator

**Information on Additional Printing Press (If any)**

Type of Printing or Process (Check One):	<input type="checkbox"/> Lithographic <input type="checkbox"/> Flexographic <input type="checkbox"/> Ink Jet	<input type="checkbox"/> Gravure <input type="checkbox"/> Letterpress
Manufacturer of Printing Equipment		
Model of Printing Equipment		
Drying Method	<input type="checkbox"/> Unheated Air/Blower <input type="checkbox"/> Infrared Heater/Dryer <input type="checkbox"/> Ultraviolet Oven	<input type="checkbox"/> Natural Gas Oven <input type="checkbox"/> Electric Oven <input type="checkbox"/> Electron Beam Oven
Manufacturer of Dryer		
Model of Dryer		
Maximum Heat Input Rating of Dryer – <b>For Natural Gas Fired Ovens Only</b> (Specify Units)	_____	<input type="checkbox"/> Million BTUs Per Hour <input type="checkbox"/> Other _____
ROC Control Equipment	<input type="checkbox"/> None <input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Carbon Adsorption <input type="checkbox"/> Catalytic Incinerator

*For more than two printing presses, use additional forms.*

## RULE 74.19, GRAPHIC ARTS OPERATIONS

### INKS, COATINGS, AND ADHESIVES DATA SHEET

*Complete one line for each ink, coating, or adhesive. Use additional sheets if necessary to report all products.*

Type	Low Solids	Manufacturer Name	Product Name or Code	ROC Content <sup>2</sup> As Applied (Lbs/Gal) <sup>3</sup>	Proposed Maximum Annual Usage
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)
<input type="checkbox"/> Ink <input type="checkbox"/> Flex Ink <sup>1</sup> <input type="checkbox"/> Coating <input type="checkbox"/> Adhesive	<input type="checkbox"/> Yes <input type="checkbox"/> No				gallons    pounds (circle units)

1 – Flex ink refers to flexographic inks used on porous substrates.

2 – ROC Content must be specified less water and exempt organic compounds, except for low solids products.

3 – To convert from “Grams per Liter” to “Pounds per Gallon”, divide by 120.

**NOTE: Manufacturer’s supporting ROC documentation which details the ROC content must be submitted for each ink, coating, and adhesive. Except for low solids products, ROC content must be as applied, in grams per liter or pounds per gallon, less water and less exempt organic compounds.**

## RULE 74.19, GRAPHIC ARTS OPERATIONS

### FOUNTAIN SOLUTION AND SOLVENTS DATA SHEET

*Complete one line for each fountain solution or solvent. Use additional sheets if necessary to report all products.*

Type Code (see below)	Manufacturer Name	Product Name or Code	ROC Content As Used <sup>1</sup> (Lbs/Gal) <sup>2</sup>	Solvent Vapor Pressure (mmHg)	Proposed Maximum Annual Usage (Gal/Year)

1 –For fountain solution, provide the mixing and dilution details and state if the gallons per year usage figures include water or do not include water.

2 – To convert from “Grams per Liter” to “Pounds per Gallon”, divide by 120.

Type Code	Description
FS	Fountain Solution
FSR	Fountain Solution - Refrigerated
SP	Surface Preparation
RM	Repair and Maintenance Cleaning
CA	Coatings or Adhesives Application Equipment Cleaning
RC	Radiation Curing Ink Removal Cleaning
IAG	Ink Application Equipment Cleaning – General, Not Listed Below
IAFS	Ink Application Equipment Cleaning – Specialty Flexographic
IAFO	Ink Application Equipment Cleaning – Other Flexographic
IAGP	Ink Application Equipment Cleaning – Publication Gravure
IAGK	Ink Application Equipment Cleaning – Packaging Gravure
IALR	Ink Application Equipment Cleaning – Lithographic or Letterpress Roller Wash
IALB	Ink Application Equipment Cleaning – Lithographic or Letterpress Blanket Wash
IALM	Ink Application Equipment Cleaning – Lithographic or Letterpress Metering Roller Cleaner
IALP	Ink Application Equipment Cleaning – Lithographic or Letterpress Plate Cleaner

**NOTE: Manufacturer’s supporting ROC documentation which details the ROC content, as applied, in grams per liter or pounds per gallon, and the solvent composite vapor pressure in mmHg, if applicable, must be submitted for each fountain solution and solvent**