



FACT SHEET

R307-351 Graphic Arts

Overview

The Utah Division of Air Quality Rule R307-351, was adopted as part of a package of rules designed to help minimize pollution. The Rule applies to graphic arts printing operations that use a combined 450 gallons or more of all VOC-containing materials per year and are located in Box Elder, Cache, Davis, Salt Lake, Utah and Weber counties.

Exemptions:

- The provisions shall not apply to graphic arts materials that have a VOC content of less than 25 g/L , minus water and exempt VOCs, as applied.
- A graphic arts printing operation may use up to 55 gallons of cleaning materials per year that do not comply with the VOC composite vapor pressure requirement or the VOC content requirement.

Requirements

You have the option of either limiting the amount of VOC coatings applied or limiting VOCs by using add on control systems. (See entire rule for all circumstances.)

VOC Content Limits

Graphic Arts Materials
(values in gram of VOC per liter, minus water and exempt solvents defined in R307-101-2)

Coating Category	VOC Limit (g/L)
Adhesive	150
Coating	300
Flexographic Fluorescent Ink	300
Flexographic Ink-Non-Porous Substrate	300
Flexographic Ink-Porous Substrate	225
Gravure Ink	300
Letterpress Ink	300
Offset Lithographic Ink	300
Heatset Web Offset Lithographic Ink	300
Heatset Web Offset Lithographic Ink:	

Utah Division of Air Quality

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Contact
(801) 536-4000

General Air Quality information, regulations, and contact information:
<https://deq.utah.gov/division-air-quality>

This fact sheet provides general information concerning the Graphic Arts rule. See:
<https://adminrules.utah.gov/public/homef> or the entire rule.

DEQ Social Media

Blog
dequtah.blogspot.com

Facebook
facebook.com/udeq

Twitter
twitter.com/UtahDEQ

(compounds not classified as VOC as

Used on Book Presses and Presses Less Than 22 Inches in Diameter	400
Used on Presses With Potential to Emit Less Than 10 Tons/Year	400

VOC Content Limits

Fountain Solution

(values in gram of VOC per liter, minus water and exempt solvents
(compounds not classified as VOC as defined in R307-101-2))

Coating Category	VOC Limit (g/L)
Heatset Web-Fed:	
Alcohol without Refrigerated Chiller	16
Alcohol with Refrigerated Chiller	30
Alcohol Substitute	50
Sheet Fed:	
Alcohol without Refrigerated Chiller	50
Alcohol with Refrigerated Chiller	85
Alcohol Substitute	50
Non-Heatset Web-Fed:	
All Alcohol Substitutes	50

Alcohol containing fountain solutions shall not be used in non-heatset web-fed operations. Cleaning materials with a VOC composite vapor pressure of less than 10 mm Hg at 68 degrees Fahrenheit or cleaning materials containing less than 50 percent VOC by weight shall be used.

Add-On Controls Systems

If an add-on control system is used, the owner or operator shall install and maintain the add-on emission control system in accordance with the manufacturer recommendations.

- Control devices for individual heatset web offset lithographic printing presses and individual heatset web letterpress printing press dryers that were installed prior to January 1, 2017, must maintain a 90% or greater control efficiency. Similar control devices installed after January 1, 2017, must maintain a 95% or greater control efficiency.
- Control devices for individual flexographic printing presses and individual rotogravure printing presses shall comply with a 90% or greater overall control efficiency.
- As an alternative to the control efficiency, the control device outlet concentration may be reduced to 20 ppmv as hexane on a dry basis to accommodate situations where the inlet VOC concentration is low or there is no identifiable measurable inlet. The control outlet concentration shall be determined using EPA Method 25A.
- The capture efficiency of a VOC emission control system's VOC collection device for flexographic and rotogravure presses shall be determined according to EPA's "Guidelines for Determining Capture Efficiency," January 9, 1995 and 40 CFR Part 51, Appendix M, Methods 204-204F, as applicable.
- The capture efficiency of a VOC emission control system's VOC collection device for a heatset web offset press shall be determined by demonstrating that the airflow in the dryer is negative to the surrounding pressroom during the initial test using an air flow direction indicator, such as a smoke stick or aluminum ribbons, or differential pressure gauge.
- The control efficiency of a VOC emission control system's VOC control device shall be determined using test methods in Appendices A-1, A-6, and A-7 to 40 CFR Part 60, for measuring flow rates, total gaseous organic concentrations, or emissions of exempt compounds, as applicable.
- The overall capture and control efficiency shall be determined using EPA approved methods or an alternative test method may be substituted for the preceding test methods after review and approval by the EPA Administrator.

Work Practices:

Control techniques and work practices shall be implemented at all times to reduce VOC emissions. Control techniques and work practices include:

- Keeping cleaning materials, used shop towels, and solvent wiping cloths in closed containers; and
- Minimizing spills of VOC-containing cleaning materials.

Record Keeping:

Maintain records, for a minimum of two years, of inventory and product data sheets of all graphic arts materials and cleaning solutions. If an add-on control device is used, and the physical characteristics that demonstrate compliance with R307-351. Records shall be made available to the director upon request.