



## MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Environmental Support Division

### **Permit to Install Exemption Record for Lithographic Printers**

Rule 290 of the Michigan Air Pollution Control Rules

This record is provided as a courtesy for printers by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Environmental Support Division, Clean Air Assistance Program, and is not required to be returned or submitted to EGLE.

NOTE: This record can only be used if all air emissions are noncarcinogenic VOCs.

#### **1. Instructions and Assumptions**

These calculations are based on the following assumptions from the USEPA Control Techniques Guidelines for Offset Lithographic Printing:

##### **Inks:**

Heatset web ink = 40% VOC  
Nonheatset web ink = 30% VOC  
Nonheatset sheet ink = 25% VOC

Web press ink usage = 10.3 lb/hr (heatset and nonheatset)  
Sheet press ink usage = 0.25 lb/hr

Ink density = 8.33 lb/gal

##### **Fountain Solutions:**

Dampening aid usage:

Heatset web = 0.90 lb IPA/lb ink  
Nonheatset web = 0.53 lb IPA/lb ink  
Nonheatset sheet = 1.25 lb IPA/lb ink

1 lb non-IPA VOC concentrate = 10 lb IPA

Baseline non-IPA VOC in concentrate = 10% (0.84 lb VOC/gal concentrate)

##### **Cleaning Solutions:**

Usage (all presses) = 0.33 lb/hr

Baseline VOC content = 100%

