

Facility Name	Contact	Phone
<b>Check off the appropriate boxes so that proper air pollution estimates can be made.            Organize your data to try to optimize data quality</b>		
No. of Bulk Storage Tanks for VOCs other than fuel oil _____		
Mixing Room personnel mix formulations to our own specifications		Mixing Room has general ventilation and/or floor sweeps
Mixing Room personnel merely stir formulations already in drums		Mixing Room has all VOC emissions vented to air pollution control equipment
Fabric Coating	Fabric Printing	High Solids Coating
Paper Coating	Roller	Water-Borne Coating
Large Appliances	Rotary Screen	Dip
Magnet Wire Surface Coating	Flat Screen	Spray
Surface Coating of Autos & Light Trucks		Ultraviolet Coating
Metal Can Coating	Paper Printing	Electrostatic Spray
Metal Coil Coating	Flexographic Printing	Interior Coating
Metal Furniture Surface Coating	Rotogravure Printing	Exterior Coating
Wood Furniture Surface Coating	Roll Printing	Filler
Surface Coating of Flat Wood Paneling	Packaging Rotogravure Printing	Sealer
Surface Coating of Plastic Parts	Publication Rotogravure Printing	Electrodeposition
Surface Coating of Large Ships	Specialty Printing	Adhesive
Surface Coating of Large Aircraft	Lithography	Paint
Surface Coating of Miscellaneous Metal Parts	Letter Press	Enamel
Surface Coating of Steel Drums		Varnish/Shellac
Vinyl Coating	Printing/Other (specify) _____	
Wood Product Coating	Pressure Sensitive Tape	
Surface Coating/Other (specify) _____	Formulation/Other (specify) _____	

For each VOC control device utilized by your facility, report the following data:

RI DEM Approval No.					
# days operated June - August, 2016					
# days operated all other months, 2016					
# days by-passed June - August, 2016					
# days by-passed all other months, 2016					

Return to: Air Pollution/Toxics Inventory, Office of Air Resources  
 235 Promenade Street, Providence, RI 02908-5767



Detailed Spreadsheet for Surface Coaters, Printers and Users of Volatile Formulations  
Weight % data

Facility Name: \_\_\_\_\_  
 Production Line: \_\_\_\_\_  
 Substrate for Formulations on this Spreadsheet: \_\_\_\_\_

This spreadsheet presents data from:  
 ^ June - August No. of Summer Days: \_\_\_\_\_  
 ^ All Other Months

These should add  
 <<< up to 100% >>>

Solvent Names Continue in Alphabetical Order with CAS No. >>>>

COATING, INK OR FORMULATION NAME	2016			WEIGHT	CALCULATED	(WT %)	(LBS.)	(WT %)	(LBS.)	(WT %)	(LBS.)	(WT %)	(LBS.)
	AMOUNT USED (GALS.)	PERCENT SOLIDS (WT %)	TOTAL VOC (WT %)	OF ONE GALLON (LBS.)	TOTAL VOCs* (LBS.)								

TOTAL EMITTED OF EACH SOLVENT (lbs.):  
 TOTAL VOC (lbs.):

\* Calculated Total VOCs = (amount of coating used (gals) x weight of 1 gallon (lbs)) x (total VOC weight % / 100)

\*\* Overall Efficiency = Capture Efficiency x Destruction Efficiency

• If there are many water-based formulations, add a column in your spreadsheet for % water.  
 • Please provide chemical analysis of the waste disposed, if available, for proper credit.  
 • Emission Statement Sources only:  
 Apportion and record stack emissions, fugitive emissions, and calculated fuel emissions on Emissions Summary Table. Follow Rule Effectiveness Guidance if you used air pollution control equipment.

Air Pollution Control Equipment	Thermal Oxidizer
Approval Number	
Capture Efficiency	
Destruction Efficiency	
Overall Efficiency**	

Rhode Island Department of Environmental Management  
2016 Air Pollution Inventory

Detailed Sample Spreadsheet for Surface Coaters, Printers and Users of Volatile Formulations  
Weight % data

Facility Name: \_\_\_\_\_  
 Production Line: 4 Stacks: 6, 7, 8  
 Substrate for Formulations on this Spreadsheet: FABRIC

This spreadsheet presents data from:  
 ^ June - August No. of Summer Days: 66  
 ^ All Other Months

These should add  
 <<< up to 100% >>>

Solvent Names Continue in Alphabetical Order with CAS No. >>>>

COATING, INK OR FORMULATION NAME	2016			WEIGHT OF ONE GALLON (LBS.)	CALCULATED TOTAL VOCs* (LBS.)	(WT %)	BUTYL ACRYLATE		2-ETHOXY ETHANOL		METHYL ETHYL KETONE		MISC. VOCs 1 (LBS.)
	AMOUNT USED (GALS.)	PERCENT SOLIDS (WT %)	TOTAL VOC (WT %)				(LBS.)	(WT %)	(LBS.)	(WT %)	(LBS.)	(WT %)	
Heather 857D	1230	48	52	9.42	6025.032	15	1737.99	7	811.062	28	3244.248	2	231.732
Thinner added	55	0	100	6.72	369.6					100	369.6		
Satin Rose 9-348	2465	42	58	9.65	13796.605	45	10704.2625	12	2854.47			1	237.8725
Thinner added	125	0	100	6.72	840					100	840		
Waste Coating(s), Ink(s) or Formulation(s) Disposed	110	85	15	9.04	-149.16	8	-79.552			5	-49.72	2	-19.888

TOTAL EMITTED OF EACH SOLVENT (lbs.): 12362.7005 3665.532 4404.128 449.7165  
 TOTAL VOC (lbs.): 20882.077

Note: Misc. VOCs include benzyl alcohol (84742), ethanol (64175), ethyl acetate (141786), isopropyl alcohol (67630), and 2-phenylphenol (90437) only.

\* Calculated Total VOCs = (amount of coating used (gals) x weight of 1 gallon (lbs)) x (total VOC weight % / 100)

\*\* Overall Efficiency = Capture Efficiency x Destruction Efficiency

- If there are many water-based formulations, add a column in your spreadsheet for % water.
- Please provide chemical analysis of the waste disposed, if available, for proper credit.
- Emission Statement Sources only:  
 Apportion and record stack emissions, fugitive emissions, and calculated fuel emissions on Emissions Summary Table. Follow Rule Effectiveness Guidance if you used air pollution control equipment.

Air Pollution Control Equipment	Thermal Oxidizer
Approval Number	XXXX
Capture Efficiency	95 %
Destruction Efficiency	99 %
Overall Efficiency**	94 %

Return to: Air Pollution/Toxics Inventory, Office of Air Resources,  
 235 Promenade Street, Providence, RI 02908-5767

**Rhode Island Department of Environmental Management**

**2016 Air Pollution Inventory**

Supplemental Chemical Use Survey



Page \_\_\_\_\_ of \_\_\_\_\_

\_\_\_\_\_  
Facility Name

\_\_\_\_\_  
Signature of Person Completing Form

\_\_\_\_\_  
Date

*Note: Report only those substances used at the facility which have not been reported on the Surface Coating/Printing/Formulation Use Spreadsheet.*

VOC or Regulated Substance Name & CAS Number			
	CAS:	CAS:	CAS:
Type of Operation			
Starting Inventory* (1/1/2016)			
Amount Purchased in 2016			
Ending Inventory* (12/31/2016)			
Amount Manifested and % of that manifested waste which was the Regulated Substance*			
	%	%	%
Amount of Substance Released to Air			
Air Pollution Control Equipment and Approval No.	Type:	Type:	Type:
	Appr. No.:	Appr. No.:	Appr. No.:
Capture Efficiency (Percent)			
Overall Efficiency (Percent)			

\*If known

(attach additional sheets if necessary)

Return to: Air Pollution/Toxics Inventory, Office of Air Resources,  
235 Promenade Street, Providence, RI 02908-5767

## Instructions for Supplemental Chemical Use Survey

**Regulated Substance** - List all Volatile Organic Compounds (VOC) **and** all chemicals listed on the list entitled “Listed Toxic Air Contaminants” that were used at and/or emitted from the facility. Provide a CAS number, usually available on your MSDS. **Please note that all miscellaneous volatile organic compounds (VOCs) used in excess of 100 pounds must be reported even if the name is not specifically listed on the Listed Toxic Air Contaminants List.**

**Type of Operation** - Describe the process in which the listed substance was used (for example, degreasing, plating, wipe cleaning, etc.).

**Starting Inventory** - Report the amount of the substance present on site at the start of the year, if known. State whether the amount is given in pounds or gallons. Please provide data in pounds if possible.

**Amount Purchased** - Report the amount of the substance purchased in 2016 and indicate whether the number given is in pounds or gallons. Again, provide data in pounds if possible.

**Ending Inventory** - Report the amount of the substance present on site at the end of the year, if known. State whether the amount is given in pounds or gallons.

**Amount Manifested** - Report the amount (in pounds) of the regulated substance which was manifested as hazardous waste and the percentage of that waste that was this chemical.

**Amount of Substance Released to Air** - Calculate the amount of the substance emitted to air. Include both fugitive and stack emissions. **Attach documentation of the calculations used.** You may find it necessary to make other mass balance adjustments such as an amount disposed in a landfill or discharged to a POTW. Label carefully.

**Describe Air Pollution Control Equipment** - Provide a short description of the equipment used to control emissions of the regulated substance, if any. Examples follow:

Type: Carbon adsorber, venturi scrubber, VOC incinerator, baghouse, etc.  
Include RI DEM Approval Number, if known.

Capture: Give the capture efficiency for this chemical.

Overall: Give the overall control efficiency of the control equipment for this chemical.  
Overall Efficiency = Capture Efficiency x Destruction or Recovery Efficiency

*Note: On a separate sheet, please provide any additional information pertinent to your processes or air pollution control equipment that will assist us in calculating an accurate emissions estimate from your facility for 2016*