

**PERMIT FOR PROCESS EQUIPMENT**

STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR MANAGEMENT

1. Legal Firm Name of Permittee: Sartomer Company, Inc.
2. Address: 125 Ontario Street, Stratford, CT 06497
3. Equipment Location: 125 Ontario Street, Stratford
4. Equipment Description (Model, I.D. #): Batch Reactor/ Dryer #3

PERMIT TO:

Construct     Operate     Modify

FEDERAL REQUIREMENTS:

- NSPS (40 CFR Part 60) Subpart: \_\_\_\_\_
- NESHAPS (40 CFR Part 61) Subpart: \_\_\_\_\_
- MACT (40 CFR Part 63) Subpart: \_\_\_\_\_

OZONE NON-ATTAINMENT STATUS:

- severe (Major source if VOC or NOx > 25 TPY)
- serious (Major source if VOC or NOx > 50 TPY)

Date Issued	Exp. Date
6/27/01	
Town No.	Premise No.
178	167
Permit No.	Stack No.
0113	05
Permit Fee:	
\$2000.00	

TYPE OF POLLUTANT FOR WHICH THIS PREMISE IS A MAJOR SOURCE":

EPA SOURCE CLASS:	TSP	SOx	NOx	CO	VOC	PM-10	LEAD	OTHER
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Source	<input type="checkbox"/>							
Major Mod	<input type="checkbox"/>							
Minor Mod	<input checked="" type="checkbox"/>							

TRANSFERRED TO:-

Oray Valley USA, LLC  
125 Ontario St, Stratford CT 06615  
ENGINEER: AMT DATE: 11/22/10

  
ARTHUR J. ROCQUE, JR.  
COMMISSIONER, DEPARTMENT OF  
ENVIRONMENTAL PROTECTION  
OR DESIGNATED AGENT

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### PART I. PROCESS DESCRIPTION

#### A. General Process Description

Sartomer Company, Inc. produces metallic acrylates, mainly zinc acrylates in this batch reactor/dryer. Zinc oxide is combined with heptane under agitation. Acrylic or Methacrylic acid is then added to the vessel and the reaction occurs, water is a by-product of the reaction. The vessel is then heated to strip off the heptane and water. The heptane and water are condensed and collected in a receiving vessel. To complete the stripping process, a vacuum is drawn on the vessel. Water from the process is drained from the receiver and collected in a storage tank. The recovered heptane is recycled into future batches. The recovered water is reused for process equipment cleaning.

#### B. Equipment Design Specifications

Agitated Batch Reactor/Dryer #3 - 150 cu.ft.  
Vacuum Pump #3 - 200 cfm

#### C. Control Equipment Specifications

Pollutant Controlled: VOC  
Type Control: Primary Condenser  
Make & Model No.: Pfaudler R391-1801  
Condenser Area: 204 ft<sup>2</sup>  
Type Control: Secondary Condenser  
Make & Model No.: XCHANGER INC. TV-075-2  
Condenser Area: 83 ft<sup>2</sup>  
Coolant: Chilled Water  
Coolant Inlet Temperature (°F): 40 °F (typical)  
Gas Exit Temperature (°F): 55 °F (typical)  
Minimum Overall Control Efficiency: 95%

#### D. Stack Parameters

Stack No.: 5 (Vacuum Discharge)  
Discharge Height: 23 ft. 5 in.  
Design Flow Rate: 200 acfm  
Minimum Distance to Nearest Property Line: 70 ft

Stack No.: 6 (Rx Tank)  
Discharge Height: 22 ft. 7 in.  
Design Flow Rate: Working and breathing losses only

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**PART I. PROCESS DESCRIPTION, continued**

Stack No.: 7 (Dryer)  
Discharge Height: 22 ft. 2 in.  
Design Flow Rate: Over pressurization venting only

**PART II. OPERATING REQUIREMENTS**

Notwithstanding the design specifications or description provided in Part I, above, the permittee of the subject source shall comply with the following operating requirements.

**A. Operating Parameter Limitations**

Maximum production rate: 18 Batches per day  
Allowable Operating Hours: 8760

**B. O&M Requirements**

The permittee shall operate, inspect, and maintain the control equipment in accordance with the manufacturer's specifications to achieve the removal efficiencies specified in this permit.

**C. Emission Limits**

1. Criteria Pollutants

The permittee shall not exceed the emission limits stated herein at any time.

<u>Equipment</u>	<u>Pollutant</u>	8 hour Average <u>lb/hr</u>	<u>TPY</u>
Reactor/Dryer#3	VOC	5.68	24.9

Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using proprietary emission factors.

2. Hazardous Air Pollutants (HAPs)

See Part V.D.

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#### PART III. STACK EMISSION TEST REQUIREMENTS (see Appendix B for General Requirements if applicable)

Stack emission/performance testing shall be required for the following:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> None at this time |   |
| <input type="checkbox"/> TSP                          | <input type="checkbox"/> PM-10                |
| <input type="checkbox"/> SOx                          | <input type="checkbox"/> NOx                  |
| <input type="checkbox"/> CO                           | <input type="checkbox"/> VOC                  |
| <input type="checkbox"/> Pb                           | <input type="checkbox"/> Other (HAPs): _____, |

#### PART IV. SPECIAL REQUIREMENTS

The Permittee shall conduct an engineering study to determine the lowest practical temperature at which the condenser system can operate without impairment or to investigate an equivalent technology that will achieve further VOC emission reductions. By 1/1/2002, the Permittee shall report to the Commissioner on proposed operating parameters and allowable VOC emissions. New permit operating requirements may be established as a result.

#### PART V. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

##### A. Monitoring Requirements

- The permittee shall operate continuous monitoring and record keeping systems which continuously measures and records the inlet cooling temperature on the chilled water system and the outlet gas temperature on the secondary condenser. The permittee shall calibrate the monitoring device annually and it shall have an accuracy of  $\pm 1\%$  of the temperature being recorded.
- The permittee shall keep calibration and maintenance records and alarm printouts for all continuous monitoring instruments and equipment.

##### B. Material Usage Records

- The permittee shall keep records of all solvents used in the facility on a monthly and consecutive twelve (12) month basis. The permittee shall use engineering calculations to assign the usage to each batch production line. Records shall contain the

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**PART V. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS, cont.**

following information:

- a. Description of each material used, including:
    - i. material name;
    - ii. material density (lb/gallon);
    - iii. volatile organic compound (VOC) content by weight (lb/VOC/gal); and,
    - iv. Material Safety Data Sheet (MSDS) or the manufacturer's formulation data sheet.
  - b. Quantity material used (lbs and/or gallons).
2. The permittee shall keep a record of the monthly and consecutive twelve (12) month VOC emissions. The consecutive 12 month VOC emissions shall be determined by adding the current month's emissions to that of the previous eleven (11) months. The permittee shall make these calculations within 30 days of the previous month.
  3. The permittee shall keep detailed operating and maintenance records for the control equipment, including time of operation, the date removed from service, the cause for removal from service, the date and description of each service performed, the date put back into service and the date of thermocouple calibration or replacement.

**C. Record Keeping Period**

The permittee shall keep all records required by this permit on premises for a period of no less than five (5) years and shall submit such records to the Commissioner upon request.

**D. Hazardous Air Pollutants (HAPs) MASC**

Materials used in this process, now or in the future, either for production or on a trial basis, which contain hazardous air pollutants (HAPs) that are regulated under Section 22a-174-29 of the Regulations of Connecticut State Agencies (hereinafter referred to as RCSA) are allowed provided that:

1. the permittee can demonstrate that the HAPs actual stack concentration (ASC) does not exceed the maximum allowable stack concentration (MASC) using the following equation,

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$$\text{MASC} = 1129.58 \times \text{HLV}$$

where: MASC = Maximum Allowable Stack Concentration (ug/m<sup>3</sup>)  
HLV = Hazard Limiting Value (ug/m<sup>3</sup>)

The MASC is derived using the HAPs corresponding HLV as listed in RCSA Section 22a-174-29 and is based on the stack parameters given in Part I.D. of this permit.

The ASC is derived using the HAPs content in the material as applied (lb HAP/gal), the maximum application rate (gal/hr) as a worst case, and any applicable controls. This gives the actual stack emissions in lb/hr which can be converted to a concentration in ug/m<sup>3</sup>;

2. the change does not otherwise constitute a modification, as defined in RCSA Section 22a-174-1;
3. the permittee keeps records of all materials used, and MSDS's or technical data sheets; and,
4. the permittee submits a report of any changes and a demonstration of compliance with permit limits, within thirty (30) days of such changes, to the Department of Environmental Protection, Bureau of Air Management, Permit Section, 79 Elm Street, 5<sup>th</sup> Floor; Hartford, CT 06106-5127

NOTE: The emissions from any new materials, for production or trial runs, shall be counted toward any applicable emission limit in this permit.

**PART VI. PREMISES REQUIREMENTS**

- A. The permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premise that constitutes a nuisance as set forth in RCSA Section 22a-174-23.
- B. The permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations under RCSA Section 22a-69-1 through 22a-69-7.4, inclusive.

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**PART VI. PREMISES REQUIREMENTS, cont.**

- C. The permittee shall continuously cover all open drums and vessels when not in use that contain solvents, cleaners, coatings, or cleaning rags so as to minimize the amounts of VOCs emitted to the atmosphere.

**PART VII. ADDITIONAL TERMS AND CONDITIONS**

- A. This permit does not relieve the permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.
- B. Any representative of the DEP may enter the permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not parties to this permit.
- E. Any document, including any notice, which is required to be submitted to the Commissioner under this permit shall be signed by a duly authorized representative of the permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in the documents and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be

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**PART VII. ADDITIONAL TERMS AND CONDITIONS, cont.**

punishable as a criminal offense." Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157 of the Connecticut General Statutes.

- F.** Nothing in this permit shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the permittee by the Commissioner.
- G.** Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.
- H.** The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I.** Any document required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Office of Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

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