AWARE ENVIRONMENTAL®

**VIA FEDEX - STANDARD**

October 9, 2006

Mr. Jason Waters
Florida Department of Environmental Protection
Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Dept. of Environmental Protection
OCT 10 2006
Southwest District

RE: Air Operating Permit Application
Charlotte Pipe and Foundry Company, Wildwood, Florida
Facility ID: 1190030
AEI Job No. N188-83

Dear Mr. Waters:

On behalf of Charlotte Pipe and Foundry Company, Plastics Division (CPFC), AWARE Environmental® Inc. (AEI) is submitting the required four (4) copies of an Air Operating Permit Application. The Air Operating Permit is being requested so the facility may increase its currently permitted VOC and total hazardous air pollutant (HAP) emission limits from 5.0 tons in any consecutive 12-month period to 15 tons in any consecutive 12-month period. The facility also wishes to establish a permit limit of 9.9 tons in any consecutive 12-month period for individual HAP emissions.

A $1,000 check to cover the permit application fee is included. If you have any questions or concerns regarding the attached permit application, please contact me at (704) 815-1677.

Sincerely,

AWARE Environmental® Inc.

— for —

Marty Stewart
Scientist

cc: File
N. Peth, CPFC
R. Sumrall, CPFC
Z. Young, CPFC
N. Fiss, AEI
M. Smith, AEI
J. Neubauer, AEI

188831001

# AIR OPERATING PERMIT MODIFICATION APPLICATION CHARLOTTE PIPE AND FOUNDRY COMPANY PLASTICS DIVISION WILDWOOD, FLORIDA

AWARE ENVIRONMENTAL®

# AIR OPERATING PERMIT
# MODIFICATION APPLICATION
# CHARLOTTE PIPE AND FOUNDRY COMPANY
# PLASTICS DIVISION
# WILDWOOD, FLORIDA

**PREPARED FOR:**

**CHARLOTTE PIPE AND FOUNDRY COMPANY**
**PLASTICS DIVISION**
**MONROE, NORTH CAROLINA**

**PREPARED BY:**

**AWARE ENVIRONMENTAL ® INC.**
**9305-J MONROE ROAD**
**CHARLOTTE, NORTH CAROLINA**
**AEI Job No. N188-83**
**AEI Document No. 18883r001**

**October 2006**

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# SECTION 1.0
# INTRODUCTION

Charlotte Pipe and Foundry Company, Plastics Division (CPFC) is requesting an Air Operating Permit Modification for its Polyvinyl Chloride (PVC) and Chlorinated Polyvinyl Chloride (CPVC) pipe manufacturing facility. The facility is located in Wildwood, Florida (Figure 1) and currently operates under a Synthetic Minor Non-Title V Air Operating Permit (Permit No. 1190030-009-AO). The Air Operating Permit Modification is being requested to incorporate the facility's increase in its currently permitted VOC and total hazardous air pollutant (HAP) emission limits from 5.0 tons in any consecutive 12-month period to 15 tons in any consecutive 12-month period as detailed in Construction Permit No. 1190030-010-AC.

The Air Operating Permit Modification is also being requested to incorporate the facility's increase in its currently permitted individual HAP emission limits from 5.0 tons in any consecutive 12-month period to 9.9 tons in any consecutive 12-month period as detailed in Construction Permit No. 1190030-010-AC.

The facility is considered a Synthetic Minor Non-Title V source of air emissions. The increase of its currently permitted VOC and total HAP emission limits to 15 tons in any consecutive 12-month period, along with the increase of its currently permitted individual HAP emission limits to 9.9 tons in any consecutive 12-month period, will not change the facility's Synthetic Minor classification. If not subject to limitations, the facility would emit VOCs from its inkjet printing process above Title V thresholds if the facility's inkjet printers were running constantly at full capacity. The inkjet printers are not reasonably expected to run at full capacity and their potential emissions have been limited based on the facility's permitted production throughput rate. The ink and additive use associated with the inkjet printing process is directly related to pipe production.

On December 14, 2005, the United State Environmental Protection Agency delisted Methyl Ethyl Ketone (MEK) as a HAP. The Florida Department of Environmental Protection followed this action by delisting MEK as a HAP on April 1, 2006. To maintain consistency with Construction Permit No. 1190030-010-AC, the emission limits established in the permit are

being requested in this Air Operating Permit Modification Application; however, MEK is no longer included in the attached calculations as it is no longer considered a HAP.

# SECTION 2.0
# APPLICATION FOR AIR PERMIT – LONG FORM

# Department of Environmental Protection

## Division of Air Resources Management

## APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

### I. APPLICATION INFORMATION

**Identification of Facility**

| | |
|---|---|
| 1. Facility Owner/Company Name: Charlotte Pipe and Foundry Company | |
| 2. Site Name: Charlotte Pipe and Foundry Company- Plastics Division, Wildwood, Florida | |
| 3. Facility Identification Number:1190030 [ ] Unknown | |
| 4. Facility Location:<br>Street Address or Other Locator: County Road 124 A<br>City: Wildwood County: Sumter Zip Code: 34785 | |
| 5. Relocatable Facility?<br>[ ] Yes [X] No | 6. Existing Permitted Facility?<br>[X] Yes [ ] No |

**Application Contact**

| |
|---|
| 1. Name and Title of Application Contact: Marty Stewart, Scientist |
| 2. Application Contact Mailing Address:<br>Organization/Firm: AWARE Environmental ® Inc.<br>Street Address: 9305 Monroe Road Suite J<br>City: Charlotte State: NC Zip Code: 28270 |
| 3. Application Contact Telephone Numbers:<br>Telephone: (704) 815-1677 Fax: (704) 845-1759 |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | 10-10-06 |
| 2. Permit Number: | 1190030-011-AO |

**Purpose of Application**

**Air Operation Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.

[ ] Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number: _____

[ ] Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number: _____

Operation permit number to be revised: _____

[ ] Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

_____

[ X ] Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised: 1190030-009-AO

Reason for revision: To address changes outlined in Construction Permit No. 1190030-010-AC

**Air Construction Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

**Owner/Authorized Representative**

1. Name and Title of Owner/Authorized Representative:
Reese Sumrall, Jr.

2. Owner/Authorized Representative Mailing Address:
Organization/Firm: Charlotte Pipe and Foundry Company- Plastics Division
Street Address: 4210 Old Charlotte Highway
City: Monroe State: NC Zip Code: 28110

3. Owner/Authorized Representative Telephone Numbers:
Telephone: (704) 291-3211 Fax: (704) 291-3204

4. Owner/Authorized Representative Statement:

*I, the undersigned, am the owner or authorized representative* of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Reese Sumrall Jr. August 30, 2006

Signature Date

* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Edward C. Fiss, Jr.
Registration Number: 40330

2. Professional Engineer Mailing Address:
Organization/Firm: AWARE Environmental ® Inc.
Street Address: 9305 Monroe Road Suite J
City: Charlotte State: NC Zip Code: 28270

3. Professional Engineer Telephone Numbers:
Telephone: (704) 845-1697 Fax:(704) 845-1759

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ X ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

Signature

Date 10/04/06

(seal)

* Attach any exception to certification statement.

EDWARD C. FISS, JR.
LICENSE
No. 40330
STATE OF FLORIDA
PROFESSIONAL ENGINEER

**Scope of Application**

| Emissions Unit ID | Description of Emissions Unit | Permit Type | Processing Fee |
|---|---|---|---|
| 009 | Ink Jet Printing | AO2B | $1,000 |
| | | | |
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**Application Processing Fee**

Check one: [ X ] Attached - Amount:$1,000.00 [ ] Not Applicable

**Construction/Modification Information**

| |
|---|
| 1. Description of Proposed Project or Alterations:<br><br>Charlotte Pipe and Foundry Company – Plastics Division (CPFC) is requesting a non-Title V Air Operating Permit Modification for its PVC and CPVC pipe manufacturing facility. The Air Operating Permit Modification is being requested so the facility may increase its currently permitted VOC and Total HAPs emission limits from 5.0 tons in any consecutive 12-month period to 15 tons in any consecutive 12-month period. The facility also wishes to establish a permit limit of 9.9 tons in any consecutive 12-month period for individual HAPs. These modification activities are detailed in Construction Permit No. 1190030-010-AC. |
| 2. Projected or Actual Date of Commencement of Construction: Currently Constructed |
| 3. Projected Date of Completion of Construction: Currently Constructed |

**Application Comment**

| |
|---|
| All facility equipment is currently constructed. This permit application is being submitted to increase currently permitted VOC and Total HAPs emission limits for the facility and establish an individual HAP emission limit for the facility as outlined in Construction Permit No. 1190030-010-AC, which was issued on July 6, 2006. |

## II. FACILITY INFORMATION

## A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

| | | | |
|---|---|---|---|
| 1. Facility UTM Coordinates:<br>Zone: 17 East (km): 399.0 North (km): 3,197 | | | |
| 2. Facility Latitude/Longitude:<br>Latitude (DD/MM/SS): 28/53/45 Longitude (DD/MM/SS): 82/02/00 | | | |
| 3. Governmental Facility Code:<br>O | 4. Facility Status Code:<br>A | 5. Facility Major Group SIC Code:<br>30 | 6. Facility SIC(s):<br>3084 |
| 7. Facility Comment (limit to 500 characters):<br><br>This facility is located at County Road 124A Wildwood, Florida, 34785. This facility is a PVC/CPVC pipe extrusion facility. | | | |

**Facility Contact**

| |
|---|
| 1. Name and Title of Facility Contact: Reese Sumrall, Jr. |
| 2. Facility Contact Mailing Address:<br>Organization/Firm: Charlotte Pipe and Foundry Company- Plastics Division<br>Street Address: 4210 Old Charlotte Highway<br>City: Monroe State: NC Zip Code: 28110 |
| 3. Facility Contact Telephone Numbers:<br>Telephone: (704) 291-3211 Fax: (704) 291-3204 |

**Facility Regulatory Classifications**

**Check all that apply:**

| | |
|---|---|
| 1. [ ] Small Business Stationary Source? | [ ] Unknown |
| 2. [ X ] Synthetic Non-Title V Source? | |
| 3. [ X ] Synthetic Minor Source of Pollutants Other than HAPs? | |
| 4. [ X ] Synthetic Minor Source of HAPs? | |
| 5. [ ] One or More Emissions Units Subject to NSPS? | |
| 6. [ ] One or More Emission Units Subject to NESHAP Recordkeeping or Reporting? | |
| 7. Facility Regulatory Classifications Comment (limit to 200 characters):<br><br>The facility is currently classified as a Synthetic Minor Non-Title V Source of volatile organic compounds (VOC) and hazardous air pollutants (HAPs) emissions, as defined by Rule 62-210.200, F.A.C. This application is being submitted so the facility may increase its currently permitted VOC and Total HAPs emission limits from 5.0 tons in any consecutive 12-month period to 15 tons in any consecutive 12-month period. The facility also wishes to establish a permit limit of 9.9 tons in any consecutive 12-month period for individual HAPs. Construction Permit No. 1190030-010-AC details this restriction. | |

**Rule Applicability Analysis**

| | |
|---|---|
| 62-4.050 | Procedures to obtain permits and other applications |
| 62-296.100,200,300 | Stationary Source Emissions Standards |

## B. FACILITY POLLUTANTS

**List of Pollutants Emitted**

| 1. Pollutant Emitted | 2. Pollutant Classif. | 3. Requested Emissions Cap | | 4. Basis for Emissions Cap | 5. Pollutant Comment |
|---|---|---|---|---|---|
| | | lb/hour | tons/year | | |
| PM | B | 17.2 | 4.5 | Rule and Other | Requested hourly emission cap is based on Rule 62-296.320 and the pneumatic conveyor's max rate of 12.5 tons/hr (PVC raw material). The annual emissions will be below five (5) tons per year. The facility annual potential emissions is approximately 1.174 tons/yr |
| VOCs | SM | 3.42 | 15.0 | ESCTIII | The annual emission cap is being requested so the facility's annual VOC emissions will be below the TitleV threshold value of 100 tons/yr. |
| INDIVIDUAL HAPS | B | 2.26 | 9.9 | OTHER | The annual emission cap is being requested in accordance with the facility's current construction permit (Permit No. 1190030-010-AC). With the removal of MEK from FDEP's HAP list on 4/1/06, it is not anticipated that the facility will exceed the Title V threshold value of 10 tons/yr for any individual HAP. |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL HAPS | B | 3.42 | 15.0 | OTHER | The annual emission cap is being requested in accordance with the facility's current construction permit (Permit No. 1190030-010-AC). With the removal of MEK from FDEP's HAP list on 4/1/06, it is not anticipated that the facility will exceed the Title V threshold value of 25 tons/yr for total HAPs. |

## C. FACILITY SUPPLEMENTAL INFORMATION

**Supplemental Requirements**

| |
|---|
| 1. Area Map Showing Facility Location:<br>[X ] Attached, Document ID: Figure #1 [ ] Not Applicable [ ] Waiver Requested |
| 2. Facility Plot Plan:<br>[ ] Attached, Document ID:_____ [ X ] Not Applicable [ ] Waiver Requested |
| 3. Process Flow Diagram(s):<br>[X ] Attached, Document ID:Figure#2, #3[ ] Not Applicable [ ] Waiver Requested |
| 4. Precautions to Prevent Emissions of Unconfined Particulate Matter:<br>[ ] Attached, Document ID:_____ [ X ] Not Applicable [ ] Waiver Requested |
| 5. Supplemental Information for Construction Permit Application:<br>[ ] Attached, Document ID:_____ [ X ] Not Applicable |
| 6. Supplemental Requirements Comment:<br><br>Not applicable to this facility |

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

### A. GENERAL EMISSIONS UNIT INFORMATION

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Ink Jet Printing

| 3. Emissions Unit Identification Number: ID: 009 | | [ ] No ID<br>[ ] ID Unknown |
|---|---|---|
| 4. Emissions Unit Status Code: A | 5. Initial Startup Date: 10/99 | 6. Emissions Unit Major Group SIC Code: 30 |

7. Emissions Unit Comment: (Limit to 500 Characters)

The facility's ink jet printing process consists of printing bar codes and specification information on manufactured PVC and CPVC pipe. The facility's ink jet printing process utilizes twelve (12) Imaje-Model JAIME 100S8 and eleven (11) Video Jet-Model EXCEL 1701 ink jet printers. Air emissions from this emission unit include the Individual HAPs in the form of Methanol and Isophorone, as well as VOCs.

**Emissions Unit Information Section 1 of 1**

**Emissions Unit Control Equipment**

| |
|---|
| 1. Control Equipment/Method Description (limit to 200 characters per device or method):<br><br>NA |
| 2. Control Device or Method Code(s): NA |

**Emissions Unit Details**

| | | |
|---|---|---|
| 1. Package Unit: NA<br>Manufacturer: | Model Number: | |
| 2. Generator Nameplate Rating: NA | MW | |
| 3. Incinerator Information: NA<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | | °F<br>seconds<br>°F |

**Emissions Unit Operating Capacity and Schedule**

| | | |
|---|---|---|
| 1. Maximum Heat Input Rate: NA | | mmBtu/hr |
| 2. Maximum Incineration Rate: NA | lb/hr | tons/day |
| 3. Maximum Process or Throughput Rate: Please See Attachment A | | |
| 4. Maximum Production Rate: NA | | |
| 5. Requested Maximum Operating Schedule:<br>24 hours/day<br>52 weeks/year | | 7 days/week<br>8760 hours/year |
| 6. Operating Capacity/Schedule Comment (limit to 200 characters):<br><br>The maximum process rate is the total potential purchases of each individual ink and additive used in the inkjet printing process. Please see Attachment A for an explanation of how the potential purchases were determined. | | |

## B. EMISSION POINT (STACK/VENT) INFORMATION

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram? F-01 | 2. Emission Point Type Code: 4 |

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

This emission unit produces fugitive emissions inside a facility building.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

NA

| | | |
|---|---|---|
| 5. Discharge Type Code: F | 6. Stack Height: See attached Table #1 | 7. Exit Diameter: See attached Table #1 |
| 8. Exit Temperature: See attached Table #1 | 9. Actual Volumetric Flow Rate: See attached Table #1 | 10. Water Vapor: NA |

| | |
|---|---|
| 11. Maximum Dry Standard Flow Rate: NA dscfm | 12. Nonstack Emission Point Height: See attached Table #1 |

13. Emission Point UTM Coordinates: Not Available

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

This emission unit produces fugitive emissions that include Individual HAPs in the form of Methanol and Isophorone, as well as VOCs. Please see attached Figure #2- Process Schematic Diagram (PVC) and the attached Figure #3- Process Schematic Diagram (CPVC).

**Emissions Unit Information Section 1 of 1**

## C. SEGMENT (PROCESS/FUEL) INFORMATION

**Segment Description and Rate:** Segment 0 of 0

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters):<br><br>NA | | |
| 2. Source Classification Code (SCC): | 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment (limit to 200 characters): | | |

**Segment Description and Rate:** Segment 0 of 0

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type ) (limit to 500 characters):<br><br>NA | | |
| 2. Source Classification Code (SCC): | 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment (limit to 200 characters): | | |

**Emissions Unit Information Section 1 of 1**

**Pollutant Detail Information Page 1 of 3**

## D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

**Potential Emissions**

| | | |
|---|---|---|
| 1. Pollutant Emitted: VOCs | 2. Pollutant Regulatory Code: EL | |
| 3. Primary Control Device Code: NA | 4. Secondary Control Device Code: NA | 5. Total Percent Efficiency of Control: NA |
| 6. Potential Emissions: 3.42 lb/hour 15.0 tons/year | | 7. Synthetically Limited? [ X ] |
| 8. Emission Factor: See Attachment A<br>Reference: | | 9. Emissions Method Code: 2 |
| 10. Calculation of Emissions (limit to 600 characters)<br>See Attachment A | | |
| 11. Pollutant Potential Emissions Comment (limit to 200 characters):<br>The potential emissions listed in Item #6 represent the same values as the equivalent allowable emissions listed below. | | |

**Allowable Emissions** Allowable Emissions 1 of 1

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: ESCTV | 2. Future Effective Date of Allowable Emissions: NA |
| 3. Requested Allowable Emissions and Units: See Field 4 | 4. Equivalent Allowable Emissions: NA<br>3.42 lb/hour 15.0 tons/year |
| 5. Method of Compliance (limit to 60 characters):<br>Ink and additive usage (qts or L) and VOC content (lb/qt or lb/L) | |
| 6. Allowable Emissions Comment (limit to 200 characters):<br>The equivalent allowable emissions are requested so that annual VOC emissions will be below the one hundred (100) tons per year Title V threshold. | |

## D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

**Potential Emissions**

| | | |
|---|---|---|
| 1. Pollutant Emitted: Individual HAPs | 2. Pollutant Regulatory Code: EL | |
| 3. Primary Control Device Code: NA | 4. Secondary Control Device Code: NA | 5. Total Percent Efficiency of Control: NA |
| 6. Potential Emissions: 2.26 lb/hour 9.9 tons/year | | 7. Synthetically Limited? [ ] |
| 8. Emission Factor: See Attachment A<br>Reference: | | 9. Emissions Method Code: 2 |
| 10. Calculation of Emissions (limit to 600 characters):<br><br>See Attachment A | | |
| 11. Pollutant Potential Emissions Comment (limit to 200 characters):<br><br>The potential emissions listed in Item #6 represent the same value as the equivalent allowable emissions listed below. | | |

**Allowable Emissions** Allowable Emissions __1____ of ___1___

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: OTHER | 2. Future Effective Date of Allowable Emissions: NA |
| 3. Requested Allowable Emissions and Units: See Field 4 | 4. Equivalent Allowable Emissions:<br>2.26 lb/hour 9.9 tons/year |
| 5. Method of Compliance (limit to 60 characters):<br><br>Ink and additive usage (qts or L) and Individual HAP content (lb/qt or lb/L). | |
| 6. Allowable Emissions Comment (limit to 200 characters):<br><br>The equivalent allowable emissions represent the emission limits set in the facility 's construction permit (Permit No.: 1190030-010-AC). | |

**Emissions Unit Information Section** 1 **of** 1

**Pollutant Detail Information Page** 3 **of** 3

## D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

**Potential Emissions**

| | | |
|---|---|---|
| 1. Pollutant Emitted: Total HAPs | 2. Pollutant Regulatory Code: EL | |
| 3. Primary Control Device Code: NA | 4. Secondary Control Device Code: NA | 5. Total Percent Efficiency of Control: NA |
| 6. Potential Emissions: 3.42 lb/hour 15.0 tons/year | | 7. Synthetically Limited? [ ] |
| 8. Emission Factor: See Attachment A<br>Reference: | | 9. Emissions Method Code: 2 |
| 10. Calculation of Emissions (limit to 600 characters):<br><br>See Attachment A | | |
| 11. Pollutant Potential Emissions Comment (limit to 200 characters):<br><br>The potential emissions listed in Item #6 represent the same value as the equivalent allowable emissions listed below. | | |

**Allowable Emissions** Allowable Emissions __1____ of ___1___

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: OTHER | 2. Future Effective Date of Allowable Emissions: NA |
| 3. Requested Allowable Emissions and Units: See Field 4 | 4. Equivalent Allowable Emissions: 3.42 lb/hour 15.0 tons/year |
| 5. Method of Compliance (limit to 60 characters):<br><br>Ink and additive usage (qts or L) and Total HAPs content (lb/qt or lb/L). | |
| 6. Allowable Emissions Comment (limit to 200 characters)<br><br>The equivalent allowable emissions represent the emission limits set in the facility 's construction permit (Permit No.: 1190030-010-AC). | |

## E. VISIBLE EMISSIONS INFORMATION
## (Only Emissions Units Subject to a VE Limitation)

**Visible Emissions Limitation:** Visible Emissions Limitation 0 of 0

| | |
|---|---|
| 1. Visible Emissions Subtype: NA | 2. Basis for Allowable Opacity: NA<br>[ ] Rule [ ] Other |
| 3. Requested Allowable Opacity: NA<br>Normal Conditions: % Exceptional Conditions: %<br>Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: NA | |
| 5. Visible Emissions Comment (limit to 200 characters):<br><br>This emission unit produces fugitive emissions and vents inside a facility building and is therefore exempt from visible emissions compliance testing. The emission unit is however, subject to general visible emissions requirements. | |

## F. CONTINUOUS MONITOR INFORMATION
## (Only Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor 0 of 0

| | |
|---|---|
| 1. Parameter Code: NA | 2. Pollutant(s): NA |
| 3. CMS Requirement: NA | [ ] Rule [ ] Other |
| 4. Monitor Information: NA<br>Manufacturer:<br>Model Number: Serial Number: | |
| 5. Installation Date: NA | 6. Performance Specification Test Date: NA |
| 7. Continuous Monitor Comment (limit to 200 characters):<br><br>NA | |

## G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

**Supplemental Requirements**

| |
|---|
| 1. Process Flow Diagram<br>[X] Attached, Document ID: Figure #2 and #3 [ ] Not Applicable [ ] Waiver Requested |
| 2. Fuel Analysis or Specification<br>[ ] Attached, Document ID:_____ [X ] Not Applicable [ ] Waiver Requested |
| 3. Detailed Description of Control Equipment<br>[ ] Attached, Document ID:_____ [X ] Not Applicable [ ] Waiver Requested |
| 4. Description of Stack Sampling Facilities<br>[ ] Attached, Document ID:_____ [X ] Not Applicable [ ] Waiver Requested |
| 5. Compliance Test Report<br>[ X ] Attached, Document ID: Attachment C<br>[ ] Previously submitted, Date:_____<br>[ ] Not Applicable |
| 6. Procedures for Startup and Shutdown<br>[ ] Attached, Document ID:_____ [X ] Not Applicable [ ] Waiver Requested |
| 7. Operation and Maintenance Plan<br>[ ] Attached, Document ID:_____ [X ] Not Applicable [ ] Waiver Requested |
| 8. Supplemental Information for Construction Permit Application<br>[ ] Attached, Document ID:_____ [X ] Not Applicable |
| 9. Other Information Required by Rule or Statute<br>[ X ] Attached, Document ID: Attachment D [ ] Not Applicable |
| 10. Supplemental Requirements Comment:<br><br>NA |

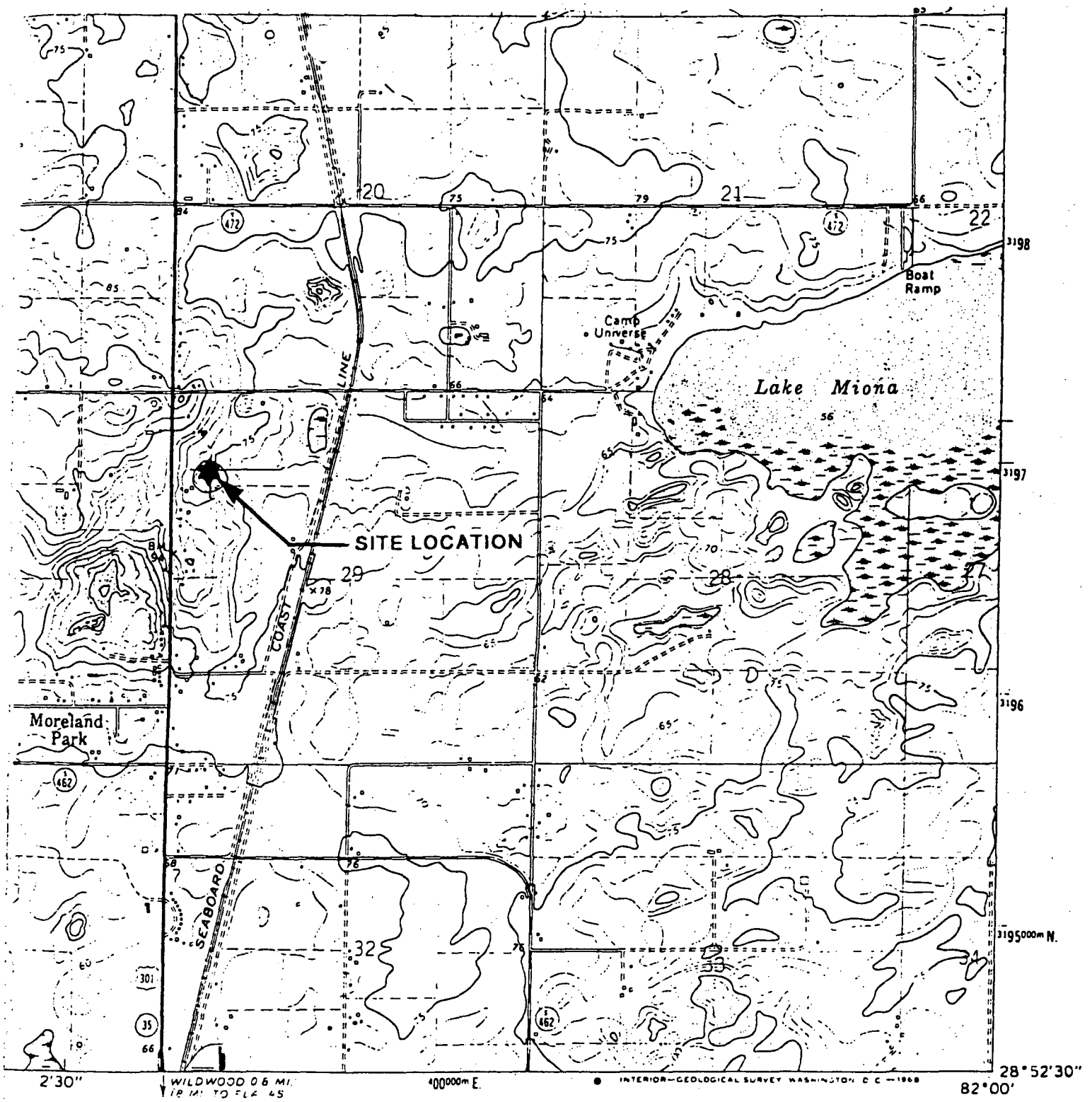
# TABLES

**TABLE 1**
**FACILITY EQUIPMENT INFORMATION**

| Emission Source Information | | | | | Control Device Information | | | | | Emission Point Information | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emission Unit ID # | Emission Source ID # | Emission Source Description | Source Manufacturer | Source Capacity | Emission Point ID # | Control Device | Control Device Manufacturer | Minimum Control (%) | Filter Cloth Area | Exhaust Height | Exhaust Diameter | Exhaust Temp. | Volumetric Flow Rate | Exhaust Direction |
| 001 | ES-01 | PVC Railcar Unloading | O.A Newton | 417 lbs/min. | EP-01 | Cartridge Filter | O.A. Newton | 99 | 360 sq. Ft. | Ground Level | 6 inches | Ambient | 900 CFM | H |
| | | | | | | | | | | | | | | |
| 002 | ES-02 | PVC Storage Silo 2 | Peabody-TecTank | 4925 cu. Ft. | EP-02 | Bin Vent (Cartridge) | O.A. Newton | 99 | 270 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| 002 | ES-03 | PVC Storage Silo 3 | Peabody-TecTank | 4925 cu. Ft. | EP-03 | Bin Vent (Cartridge) | O.A. Newton | 99 | 270 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| 002 | ES-04 | PVC Storage Silo 4 | Peabody-TecTank | 4925 cu. Ft. | EP-04 | Bin Vent (Cartridge) | O.A. Newton | 99 | 270 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| 002 | ES-05 | PVC Storage Silo 5 | Peabody-TecTank | 4925 cu. Ft. | EP-05 | Bin Vent (Cartridge) | O.A. Newton | 99 | 270 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| 002 | ES-06 | PVC Storage Silo 6 | Peabody-TecTank | 4925 cu. Ft. | EP-06 | Bin Vent (Cartridge) | O.A. Newton | 99 | 270 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| 002 | ES-07 | PVC Resin Silo Silo 7 | Peabody-TecTank | 4925 cu. Ft. | EP-07 | Bin Vent (Cartridge) | O.A. Newton | 99 | 560 sq. Ft. | 64 ft. | 1.93 sq. Ft. | Ambient | 700 CFM | D |
| | | | | | | | | | | | | | | |
| 004 | ES-16 | Extruder Hopper Receiver 1A | Universal Dynamics | 23 cu. Ft. | EP-10 | Bagfilter | Universal Dynamics | 99 | 44.4 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-17 | Extruder Hopper Receiver 1B | Universal Dynamics | 27 cu. Ft. | EP-10 | Bagfilter | Universal Dynamics | 99 | 44.4 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-18 | Extruder Hopper Receiver 2A | O.A Newton | 27 cu. Ft. | EP-11 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-19 | Extruder Hopper Receiver 2B | O.A Newton | 27 cu. Ft. | EP-11 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-20 | Extruder Hopper Receiver 3A | O.A Newton | 27 cu. Ft. | EP-12 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-21 | Extruder Hopper Receiver 3B | O.A Newton | 27 cu. Ft. | EP-12 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-22 | Extruder Hopper Receiver 4 | O.A Newton | 27 cu. Ft. | EP-13 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-23 | Extruder Hopper Receiver 5 | O.A Newton | 27 cu. Ft. | EP-14 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-24 | Extruder Hopper Receiver 6 | O.A Newton | 27 cu. Ft. | EP-15 | Cartridge Filter | O.A Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 004 | ES-35 | Extruder Hopper Receiver 7 | Universal Dynamics | 27 cu. Ft. | EP-23 | Bagfilter | Universal Dynamics | 99 | 44.4 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| | | | | | | | | | | | | | | |
| 005 | ES-25 | Scrap Grinder Receiver | Rapid Granulator | 1500 lbs/hr | EP-16 | Bagfilter | Rapid Granulator | 99 | 97.5 sq. Ft. | 6.8 ft | NA | Ambient | 2000 CFM | H |
| 005 | ES-26 | Pulverizer Receiver | O.A Newton | 2 cu. Ft. | EP-17 | Cartridge Filter | O.A Newton | 99 | 112.5 sq. Ft. | Ground Level | 4 inches | Ambient | 250 CFM | H |
| 005 | ES-27 | Pulverized Material Hopper Receiver | New Herbold | 80.5 cu. Ft | EP-18 | Baghouse Filter | Torit | 99 | 483 sq. Ft. | 16.5 ft | 16 inches | Ambient | 1550 CFM | V |
| 005 | ES-28 | Day Bin 1 | O.A Newton | 120 cu Ft. | EP-17 | Cartridge Filter | O.A. Newton | 99 | 112.5 sq. Ft. | Ground Level | 4 inches | Ambient | 250 CFM | H |
| 005 | ES-29 | Day Bin 2 | O.A Newton | 120 cu Ft. | EP-19 | Cartridge Filter | O.A. Newton | 99 | 112.5 sq. Ft. | Ground Level | 4 inches | Ambient | 250 CFM | H |
| 005 | ES-30 | Day Bin 3 | O.A Newton | 120 cu Ft. | EP-20 | Cartridge Filter | O.A. Newton | 99 | 112.5 sq. Ft. | Ground Level | 4 inches | Ambient | 250 CFM | H |
| 005 | ES-31 | Blender 1 Virgin Receiver | O.A Newton | 5 cu. Ft | EP-21 | Cartridge Filter | O.A. Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 005 | ES-32 | Blender 1 Pulverized Receiver | O.A Newton | 5 cu. Ft | EP-21 | Cartridge Filter | O.A. Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 005 | ES-33 | Blender 2 Virgin Receiver | O.A Newton | 5 cu. Ft | EP-22 | Cartridge Filter | O.A. Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 005 | ES-34 | Blender 2 Pulverized Receiver | O.A Newton | 5 cu. Ft | EP-22 | Cartridge Filter | O.A. Newton | 99 | 135 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 005 | ES-38 | CPVC Scrap Grinder Receiver | Rapid Granulator | 500 lbs/hr | EP-26 | Polyester Filter | Novatec | 99 | 240.5 sq. Ft. | 7 ft | NA | Ambient | 650 CFM | V |
| | | | | | | | | | | | | | | |
| 006 | ES-08 | Compounder Resin Scale Hopper | O.A Newton | 40 cu. Ft. | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| 006 | ES-09 | Compounder Microingredient Receiver | O.A Newton | 13 cu. Ft. | EP-09 | Cartridge Filter | O.A. Newton | 99 | 157.5 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 006 | ES-10 | Compounder CaCO3 Receiver | O.A Newton | 13 cu. Ft. | EP-09 | Cartridge Filter | O.A. Newton | 99 | 157.5 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 006 | ES-11 | Microingredient Units (7 units) | O.A Newton | 2450 lbs. | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| 006 | ES-12 | Compounder Hot Mixer | O.A Newton | 32 cu. Ft | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| 006 | ES-13 | Double Batch Hopper | O.A Newton | 40 cu. Ft. | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| 006 | ES-14 | Compounder Cooler | O.A Newton | 90 cu. Ft | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| 006 | ES-15 | Takeaway Hopper | O.A Newton | 3000 lbs. | EP-08 | Cartridge Filter | O.A. Newton | 99 | 1781 sq. Ft. | 7.5 ft | 3.18 sq. ft. | Ambient | 11,000 CFM | D |
| | | | | | | | | | | | | | | |
| 007 | ES-36 | CPVC Compound Storage Silo 1 | Columbian-TecTank | 4,590 cu. Ft. | EP-24 | Cartridge Filter | Ultra | 99 | 174 sq. Ft. | 56 ft | 6 inches | Ambient | 600 CFM | D |
| | | | | | | | | | | | | | | |
| 008 | ES-37 | CPVC Extruder Hopper Receiver 8 | Universal Dynamics | 23 cu. Ft. | EP-25 | Bagfilter | Universal Dynamics | 99 | 44.4 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| 008 | ES-39 | CPVC Extruder Hopper Receiver 9 | Walter Stout | 20 cu. Ft. | EP-27 | Bagfilter | Walter Stout | 99 | 75 sq. Ft. | Ground Level | 4 inches | Ambient | 420 CFM | H |
| | | | | | | | | | | | | | | |
| 009 | F-01 | Inkjet Printers | Imaje/Video Jet | NA | F-01 | Uncontrolled | NA | NA | NA | 4 ft | Fugitive | Ambient | NA | Fugitive |

**NA = Not Applicable

# FIGURES




SCALE: 1:24000

1 1/2 0 1 MILE

1000 0 2000 4000 6000 8000 FEET

N

CHARLOTTE PIPE & FOUNDRY
WILDWOOD, FLORIDA

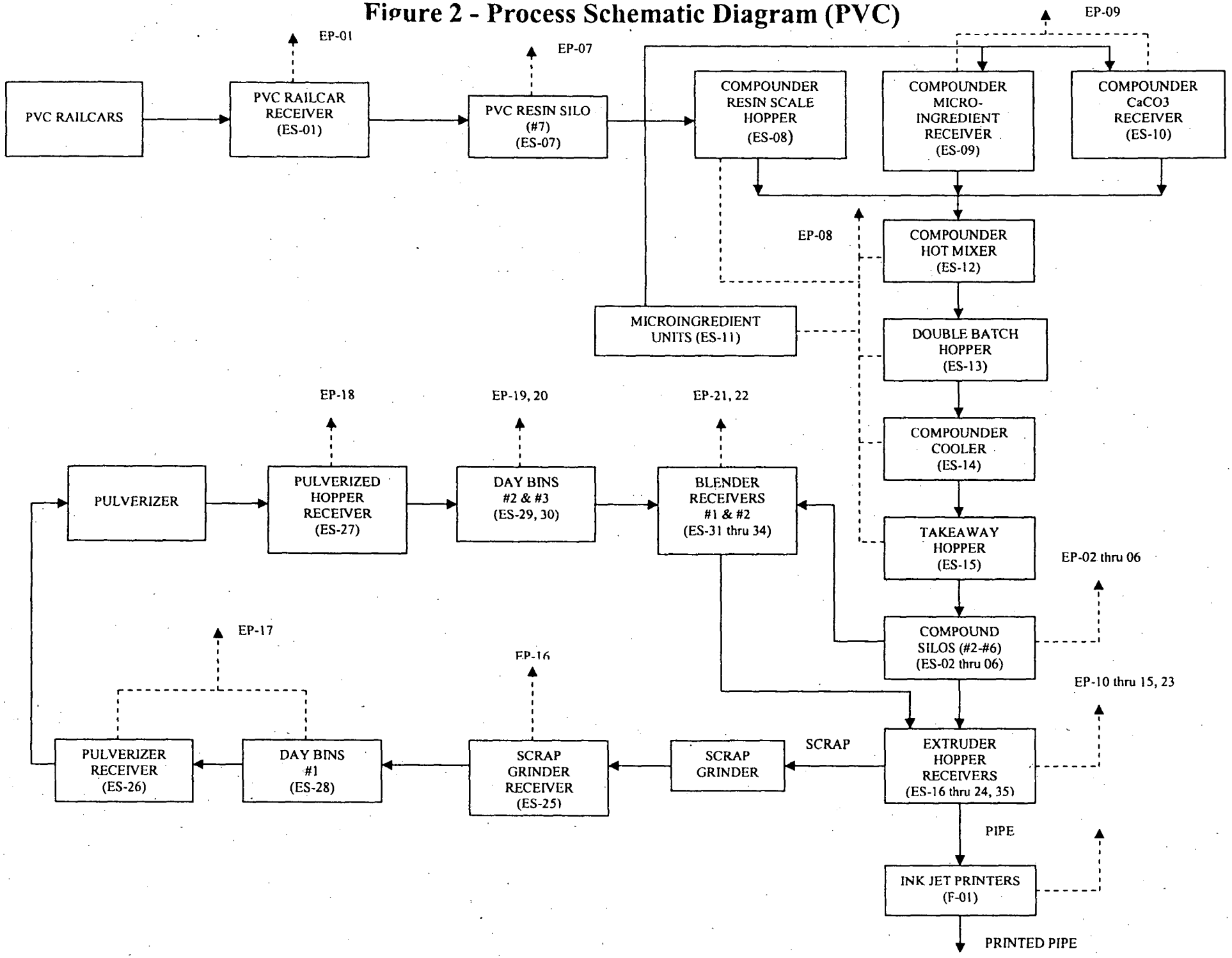
FIGURE-1
SITE LOCATION MAP

REFERENCE:
BASE MAP TAKEN FROM USGS QUADRANGLE MAP:
OXFORD, FLORIDA, DATED 1966

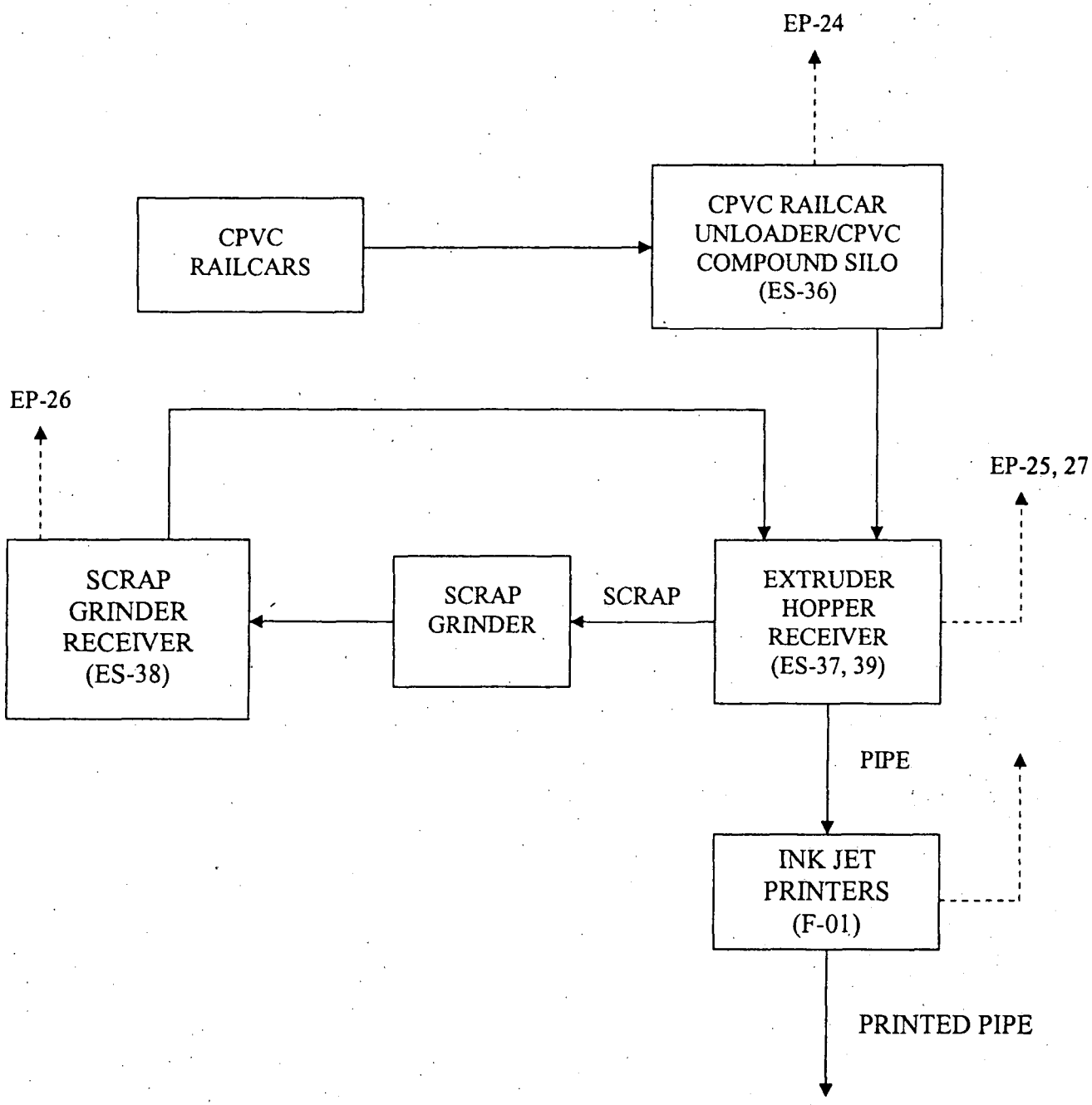
AWARE ENVIRONMENTAL INC

AEI PROJECT NO. N188-83

# Figure 2 - Process Schematic Diagram (PVC)



# Figure . - Process Schematic Diagram (CPVC)



# ATTACHMENT A

# INK JET PRINTING PROCESS EMISSION CALCULATIONS AND EMISSION FACTOR SELECTION

**ATTACHMENT A**
**INK JET PRINTING PROCESS**
**EMISSION CALCULATIONS AND EMISSION FACTOR SELECTION**
Charlotte Pipe & Foundry Company
Wildwood, Florida

CPFC's ink jet printing process consists of printing bar codes and specification information on PVC and CPVC pipe. The products used in the ink jet printing process contain HAPs in the form of Methanol and Isophorone, as well as VOCs.

Table **A-1** summarizes the potential HAP/VOC emissions from the ink jet printing process. In determining the potential emissions of Methanol, Isophorone, and VOCs from CPFC's ink jet printing process, estimated potential ink and additive purchases as well as the calculated product Methanol, Isophorone, and VOC contents were used. Taking a conservative approach, the maximum possible Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the worst case air emissions of the individual HAPs. The VOC content used is the actual content provided by the product's MSDS or vendor. Calculations determining the maximum HAPs and actual VOC contents of each product can be found in tables **A-2** through **A-7**. A copy of each product's MSDS can be found in Attachment B of this application.

Potential ink and additive usages for the facility were determined using the 2005 annual ink and additive purchases from CPFC. A ratio was determined using CPFC's 2005 ink and additive purchases and its total 2005 production of PVC pipe (57,619,632 lbs. corresponding to 104,756,330 ft.) and CPVC pipe (3,698,854 lbs. corresponding to 34,899,250 ft.). The ratio was then used to determine CPFC's potential ink and additive usage based on its permitted production rate of 140,000,000 pounds per year (PVC=120,000,000 lbs. or approximately 218,167,995 ft. and CPVC=20,000,000 lbs. or approximately 188,703,042 ft.).

Ink and additive use is directly related to the total length of pipe produced. In 2005, the total length of PVC and CPVC pipe produced was 139,655,580 feet. Based on the ratio of weight of pipe produced to length of pipe produced in 2005, CPFC's permitted production rate of 140,000,000 pounds per year will likely yield approximately 406,871,037 feet of PVC and

CPVC pipe. Therefore, 2005 ink and additive usages were multiplied by 2.9134 (ratio of estimated total feet of pipe produced from permitted production rate to total feet of pipe produced in 2005) to estimate the facility's potential ink and additive purchases.

Depending on the diameter of the PVC and CPVC pipe produced by the facility, the ratio of weight of pipe produced to length of pipe produced may vary. This would directly affect the amount of ink and additive used in the facility's inkjet printing process since ink and additive use is directly related to the total length of pipe produced. For example, higher diameter pipes would result in higher weights and shorter lengths of pipe produced, thus requiring the facility to use less ink and additive for inkjet printing than lower diameter pipes that would result in lower weights and higher lengths of pipe produced. Emissions in this application were calculated based on typical weights and lengths of pipe produced by the facility in 2005 and may be an overestimate, depending on the diameters of pipe produced at the facility in any given year.

The above method was a reasonable method of determining the potential emissions from the facility's ink jet printing process; however, the above method did not calculate the potential emissions based on each printer running constantly at full capacity. The ink jet printers are not reasonably expected to run at full capacity so their potential emissions have been limited based on the permitted production throughput rate. CPFC has estimated that if the printers were to run at full capacity, they would use approximately 10 times the amount of ink and additive of the previously calculated limited potential emissions. This factor was then adjusted to 10.11 since the limited potential emissions were calculated based on the printers only running for 8,664 of the potential 8,760 hours per year. It is assumed that 100% of all the HAPs and VOCs contained in the products used in the ink jet printing process are emitted to the atmosphere.

**TABLE A-1**
**POTENTIAL HAPS/VOC EMISSIONS**
**INK JET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

| Product | 2005 Product Usage (qt/yr) or (l/yr) | | Potential[1] Product Usage (qt/yr) or (l/yr) | | Total HAPs | | | | Methanol | | | | Isophorone | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Product[2] Content (lb/qt) or (lb/l) | | Limited[3] Potential Emissions (lbs/yr) | Maximum[4] Potential Emissions (lbs/yr) | Product[2] Content (lb/qt) or (lb/l) | | Limited[3] Potential Emissions (lbs/yr) | Maximum[4] Potential Emissions (lbs/yr) | Product[2] Content (lb/qt) or (lb/l) | | Limited[3] Potential Emissions (lbs/yr) | Maximum[4] Potential Emissions (lbs/yr) |
| Ink Jet T-17Q Red | 216 | qt/yr | 629.29 | qt/yr | 0.0907 | lb/qt | 57.08 | 577.05 | 0.0907 | lb/qt | 57.08 | 577.05 | 0.0000 | lb/qt | 0.00 | 0.00 |
| Ink Jet 175 I Clear (make-up) | 495 | qt/yr | 1,442.13 | qt/yr | 0.5020 | lb/qt | 723.95 | 7,319.14 | 0.5020 | lb/qt | 723.95 | 7,319.14 | 0.0000 | lb/qt | 0.00 | 0.00 |
| Imaje 5135-9 Black Ink | 469 | l/yr | 1,366.38 | l/yr | 0.0000 | lb/l | 0.00 | 0.00 | 0.0000 | lb/l | 0.00 | 0.00 | 0.0000 | lb/l | 0.00 | 0.00 |
| Imaje 5191-9 Additive | 3,163 | l/yr | 9,215.08 | l/yr | 0.0000 | lb/l | 0.00 | 0.00 | 0.0000 | lb/l | 0.00 | 0.00 | 0.0000 | lb/l | 0.00 | 0.00 |
| Imaje 5122 Red Ink | 246 | l/yr | 716.70 | l/yr | 0.0191 | lb/l | 13.69 | 138.39 | 0.0191 | lb/l | 13.69 | 138.39 | 0.0000 | lb/l | 0.00 | 0.00 |
| Matthews M149 Yellow | 246 | qt/yr | 716.70 | qt/yr | 1.3201 | lb/qt | 946.11 | 9,565.18 | 0.0000 | lb/qt | 0.00 | 0.00 | 1.3201 | lb/qt | 946.11 | 9,565.18 |
| **TOTALS (lbs/yr)** | | | | | | | **1,740.83** | **17,599.77** | | | **794.72** | **8,034.59** | | | **946.11** | **9,565.18** |
| **TOTALS (tons/yr)** | | | | | | | **0.87** | **8.80** | | | **0.40** | **4.02** | | | **0.47** | **4.78** |

| Product | 2005 Product Usage (qt/yr) or (l/yr) | | Potential[1] Product Usage (qt/yr) or (l/yr) | | VOC | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Product[2] Content (lb/qt) or (lb/l) | | Limited[3] Potential Emissions (lbs/yr) | Maximum[4] Potential Emissions (lbs/yr) |
| Ink Jet T-17Q Red | 216 | qt/yr | 629.29 | qt/yr | 1.3145 | lb/qt | 827.21 | 8,363.07 |
| Ink Jet 175 I Clear (make-up) | 495 | qt/yr | 1,442.13 | qt/yr | 1.6733 | lb/qt | 2,413.12 | 24,396.65 |
| Imaje 5135-9 Black Ink | 469 | l/yr | 1,366.38 | l/yr | 1.9180 | lb/l | 2,620.73 | 26,495.54 |
| Imaje 5191-9 Additive | 3,163 | l/yr | 9,215.08 | l/yr | 1.6860 | lb/l | 15,536.63 | 157,075.35 |
| Imaje 5122 Red Ink | 246 | l/yr | 716.70 | l/yr | 1.9070 | lb/l | 1,366.74 | 13,817.74 |
| Matthews M149 Yellow | 246 | qt/yr | 716.70 | qt/yr | 1.6443 | lb/qt | 1,178.46 | 11,914.27 |
| **TOTALS (lbs/yr)** | | | | | | | **23,942.89** | **242,062.62** |
| **TOTALS (tons/yr)** | | | | | | | **11.97** | **121.03** |

***Notes:***

[1] Potential Product Usages were determined by using a calculated ratio of total feet of pipe produced per total amount of ink and additive used in 2005. The ratio was then used to determine CPFC's potential ink and additive usage based on its permitted production rate of 140,000,000 pounds per year or approximately 406,871,037 feet of pipe (PVC=120,000,000 lbs. corresponding to approximately 218,167,995 ft. and CPVC=20,000,000 lbs. corresponding to approximately 188,703,042 ft). With this explanation, the 2005 Product Usages were multiplied by 2.9134 to get Potential Product Usages. Ink and additive use is directly related to the total length of pipe produced.

[2] The maximum Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the inkjet printing process. The VOC contents are the actual values provided by the product's MSDS or vendor. In some cases the VOC content is less than the total maximum HAPs contents because the HAPs content ranges from the MSDS were used.

[3] Limited potential emissions were estimated by multiplying the facility's potential product usages by each pollutants maximum content in the inks and additives.

[4] Maximum emissions were estimated by multiplying the facility's limited potential emissions by 10.11. An explanation of how the multiplier value was determined can be found in the text portion of this attachment.

***Example Calculations:***

1. Limited Potential VOC Emissions - Ink Jet T-17Q Red (lb/yr) = Product Usage (qt/yr) x Product Content (lb/qt)
   = 629.29 (qt/yr) x 1.3145 (lb/qt)
   = **827.21 lb/yr**
2. Maximum Potential VOC Emissions- Ink Jet T-17Q (lb/yr) = Limited Emissions (lb/yr) x (10.11)
   = 827.21 (lb/yr) x (10.11)
   = **8,363.07 lb/yr**

**TABLE A-2**
**MSDS PRODUCT INFORMATION**
**MAXIMUM CHEMICAL COMPONENTS**
**INKJET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

**Ink Jet T-17Q Red**

| | | | | | |
|---|---|---|---|---|---|
| Density | 0.869 | kg/L | | | |
| Methanol | 1 to 5 | % | Maximum | 5 | % |
| Isophorone | 0 | % | Maximum | 0 | % |
| VOC | 72.5 | % | Maximum | 72.5 | % |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Density** | 0.869 | Kg | | 2.2046 | Lb | 0.9464 | L | 1.8131 | Lb/qt |
| | 1 | L | | 1 | Kg | 1 | qt | | |
| **Methanol** | 0.869 | Kg | 0.05 | 2.2046 | Lb | 0.9464 | L | 0.0907 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | |
| **Isophorone** | 0.869 | Kg | 0 | 2.2046 | Lb | 0.9464 | L | 0.0000 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | |
| **VOC** | 0.869 | Kg | 0.725 | 2.2046 | Lb | 0.9464 | L | 1.3145 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | |

** The average Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

**TABLE A-3**
**MSDS PRODUCT INFORMATION**
**MAXIMUM CHEMICAL COMPONENTS**
**INKJET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

**Ink Jet 175 I Clear (make-up)**

| | | | | | |
|---|---|---|---|---|---|
| Density | 0.802 | kg/L | | | |
| Methanol | 10 to 30 | % | Maximum | 30 | % |
| Isophorone | 0 | % | Maximum | 0 | % |
| VOC | 100 | % | Maximum | 100 | % |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Density** | 0.802 | Kg | | 2.2046 | Lb | 0.9464 | L | | 1.6733 | Lb/qt |
| | 1 | L | | 1 | Kg | 1 | qt | | | |
| **Methanol** | 0.802 | Kg | 0.3 | 2.2046 | Lb | 0.9464 | L | | 0.5020 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |
| **Isophorone** | 0.802 | Kg | 0 | 2.2046 | Lb | 0.9464 | L | | 0.0000 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |
| **VOC** | 0.802 | Kg | 1 | 2.2046 | Lb | 0.9464 | L | | 1.6733 | Lb/qt |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |

** The average MEK, Methanol, and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

**TABLE A-4**
**MSDS PRODUCT INFORMATION**
**MAXIMUM CHEMICAL COMPONENTS**
**INKJET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

**5135-9 Blk (imaje)**

| | | | | | |
|---|---|---|---|---|---|
| Density | 0.87 | kg/L | | | |
| Methanol | 0 | % | Maximum | 0 | % |
| Isophorone | 0 | % | Maximum | 0 | % |
| VOC | 100 | % | Maximum | 100 | % |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Density** | 0.87 | Kg | | 2.2046 | Lb | | 1.9180 | Lb/L |
| | 1 | L | | 1 | Kg | | | |
| **Methanol** | 0.87 | Kg | 0 | 2.2046 | Lb | | 0.0000 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |
| **Isophorone** | 0.87 | Kg | 0 | 2.2046 | Lb | | 0.0000 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |
| **VOC** | 0.87 | Kg | 1 | 2.2046 | Lb | | 1.9180 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |

** The average Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

TABLE A-5
MSDS PRODUCT INFORMATION
MAXIMUM CHEMICAL COMPONENTS
INKJET PRINTING PROCESS
Charlotte Pipe & Foundry Company - Plastics Division
Wildwood, Florida

**5191-9 Additive (imaje) (clear)**

| | | | | | |
|---|---|---|---|---|---|
| Density | 0.805 | kg/L | | | |
| Methanol | 0 | % | Maximum | 0 | % |
| Isophorone | 0 | % | Maximum | 0 | % |
| VOC | 95 | % | Maximum | 95 | % |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Density** | 0.805 | Kg | 2.2046 | Lb | | 1.7747 | Lb/L |
| | 1 | L | 1 | Kg | | | |
| **Methanol** | 0.805 | Kg | 0 | 2.2046 | Lb | 0.0000 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | |
| **Isophorone** | 0.805 | Kg | 0 | 2.2046 | Lb | 0.0000 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | |
| **VOC** | 0.805 | Kg | 0.95 | 2.2046 | Lb | 1.6860 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | |

** The average Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

**TABLE A-6**
**MSDS PRODUCT INFORMATION**
**MAXIMUM CHEMICAL COMPONENTS**
**INKJET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

**5122 Red (imaje)**

| | | | | | |
|---|---|---|---|---|---|
| Density | 0.865 | kg/L | | | |
| Methanol | <1 | % | Maximum | 1 | % |
| Isophorone | 0 | % | Maximum | 0 | % |
| VOC | 100 | % | Maximum | 100 | % |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Density** | 0.865 | Kg | | 2.2046 | Lb | | 1.9070 | Lb/L |
| | 1 | L | | 1 | Kg | | | |
| **Methanol** | 0.865 | Kg | 0.01 | 2.2046 | Lb | | 0.0191 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |
| **Isophorone** | 0 | Kg | 0 | 2.2046 | Lb | | 0.0000 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |
| **VOC** | 0.865 | Kg | 1 | 2.2046 | Lb | | 1.9070 | Lb/L |
| | 1 | L | 1 | 1 | Kg | | | |

** The average Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

**TABLE A-7**
**MSDS PRODUCT INFORMATION**
**MAXIMUM CHEMICAL COMPONENTS**
**INKJET PRINTING PROCESS**
**Charlotte Pipe & Foundry Company - Plastics Division**
**Wildwood, Florida**

**Matthews M149 Yellow**

| | | | | | |
|---|---|---|---|---|---|
| Density | 1.11 | kg/L | | | |
| Methanol | 0 | % | Maximum | 0 | % |
| Isophorone | 35 to 57 | % | Maximum | 57 | % |
| VOC | 71 | % | Maximum | 71 | % |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Density** | 1.11 | Kg | 2.2046 | Lb | 0.9464 | L | 2.3159 | Lb/qt | | |
| | 1 | L | 1 | Kg | 1 | qt | | | | |
| **Methanol** | 1.11 | Kg | 0 | 2.2046 | Lb | 0.9464 | L | 0.0000 | Lb/qt | |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |
| **Isophorone** | 1.11 | Kg | 0.57 | 2.2046 | Lb | 0.9464 | L | 1.3201 | Lb/qt | |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |
| **VOC** | 1.11 | Kg | 0.71 | 2.2046 | Lb | 0.9464 | L | 1.6443 | Lb/qt | |
| | 1 | L | 1 | 1 | Kg | 1 | qt | | | |

** The average Methanol and Isophorone contents, taken from the product's MSDS chemical content range, were used to determine the air emissions of the individual HAPs from the ink jet printing process. The VOC content is the actual content provided by the product's MSDS or vendor and in some cases is less than the total maximum HAPs contents.

# ATTACHMENT B

# MATERIAL SAFETY DATA SHEETS

# MSDS LIST

1. Ink Jet T-17Q Red
2. Ink Jet 175 I Clear (make-up)
3. Imaje 5135-9 Black Ink
4. Imaje 5191-9 Additive
5. Imaje 5122 Red
6. Matthews M149 Yellow

Rev. DD0001

# MSDS #1



## MATERIAL SAFETY DATA SHEET

**Ink**
**17 RED**

## SECTION I - PREPARATION INFORMATION

This MSDS complies with 29 CFR 1910.1200, and was prepared by the Environmental, Health, and Safety Manager of InkJet, Inc. 11111 InkJet Way, Willis, TX 77378. Non-Emergency Phone (936) 856-6600.

| | |
|---|---|
| Product Name | 17 RED Ink |
| Product Code | X(01,19,21,45)0111 |
| Emergency Phone | contact CHEMTREC at (800) 424-9300 |

**Original document date: 01/98** **Date of revisions: 10/02**

## SECTION II - IDENTIFICATION

| | |
|---|---|
| Product Name | 17 RED Ink |
| Product Use | Ink Jet Printers |
| Description | Dark liquid with solvent odor |

**HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS)**

**HAZARD RATINGS:** 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Extreme B Hand & Eye Protection
HEALTH 1 FLAMMABILITY 3 REACTIVITY 0 PERSONAL PROTECTION B

NOTICE: These ratings are for general rapid interpretation. The end-user is responsible for determining the proper protective procedures.

## SECTION III - HAZARDOUS INGREDIENTS

| Ingredient | CAS# | % | TLV* | PEL* | $LD_{50}$** g/kg | $LC_{50}$** $g/m^3$ |
|---|---|---|---|---|---|---|
| Methyl Ethyl Ketone | 78-93-3 | 60-100 | 200 | 200 | 2.7 | 23.5 $g/m^3$ / 8hr |
| Ethanol | 64-17-5 | 10-30 | 1000 | 1000 | 7.0 | 20,000ppm/10h |
| Isopropanol | 67-63-0 | 1-5 | 400 | 400 | 5.04 | 12,000ppm/ 8hr |
| Methanol | 67-56-1 | 1-5 | 200 | 200 | 5.6 | 64,000ppm/ 4hr |

## SECTION IV - PHYSICAL DATA

| | |
|---|---|
| Boiling Range | 80° C |
| Melting Range | -80 to -85° C |
| Freezing Range | -80 to -85° C |
| Vapor Pressure | 70 mm of Hg @ 20° C |
| Vapor Density (Air=1) | Greater than air |
| Solubility In Water | Miscible |
| Solubility In Organic Solvents | Miscible |
| Specific Gravity (Water 1) | 0.869 |
| Percent Volatile By Volume (%) | 72.8% |
| Evaporation Rate (N-Butyl Acetate=1) | 3.8 |
| pH in concentrate | Not Applicable |
| pH in dilution as used | Not Applicable |
| Appearance And Odor | Dark liquid with solvent odor |
| Odor Threshold | Not Available |

## SECTION V - FIRE AND EXPLOSION HAZARD

| | |
|---|---|
| Flash Point (Tcc) | -5° C |
| Auto Ignition Temperature | --500° C |
| Upper Flammable Limit (%By Vol.) | 36.5 |
| Lower Flammable Limit (%By Vol.) | 2.1 |
| Hazardous Combustion Products | Carbon Monoxide, Carbon Dioxide & Acrid Smoke |
| Extinguishing Media | Regular foam or dry chemical |
| Explosion Data (Sensitive To Mechanical Impact) | No |
| Explosion Data (Sensitive To Static Discharge) | Yes |

FIRE FIGHTING PROCEDURES. Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode

## SECTION VI - REACTIVE DATA

| | |
|---|---|
| Condition Of Instability | None Known |
| Incompatibility | None Known |
| Conditions Of Reactivity | Not applicable |
| Hazardous Decomposition Products | Carbon Monoxide, Carbon Dioxide, & Acrid Smoke |

## SECTION VII - TOXICOLOGICAL PROPERTIES (HEALTH HAZARD)

ROUTES OF ENTRY: Skin contact, skin absorption, ingestion, inhalation, and eyes

EFFECT OF ACUTE EXPOSURE:

| | |
|---|---|
| Eyes | May cause extreme eye irritation. Symptoms may include burning, tearing, redness, swelling and eye damage. |
| Skin | Exposure may cause skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying, cracking, and skin damage. |
| Breathing | Excessive inhalation of vapors can cause nasal and respiratory irritation. Central nervous system effects include dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even death. Inhalation of material into the lungs can cause chemical pneumonitis, which can be fatal. |
| Swallowing | Can cause gastrointestinal irritation, nausea, vomiting, diarrhea, blindness and death. |

| | |
|---|---|
| Exposure Limits | See section III |
| Sensitization To Product | Not Available |
| Carcinogenicity | Not Available |
| Reproductive Toxicity | Not Available |
| Teratogenicity | Not Available |
| Mutagenicity | Not Available |
| Toxicological Synergistic Products | None known |

EFFECTS OF CHRONIC EXPOSURE:

**Methyl Ethyl Ketone** - Minor embryotoxic/fetotoxic effects have been observed in laboratory rats exposed to methyl ethyl ketone by inhalation at levels greater than 1000 ppm (5 times the OSHA-PEL/TWA) for most of the gestation period. Methyl ethyl ketone may potentiate (shorten the time of onset) peripheral neuropathy, but methyl ethyl ketone, by itself, has not been shown to cause peripheral neuropathy.

**Ethanol** - Nausea, vomiting, flushing, mental excitement or depression, drowsiness, impaired perception, uncoordination, stupor, coma and death may occur.

**Methanol** - Poisoning may occur from ingestion. Other symptoms of over-exposure may be headaches, acidosis, convulsions, mydriasis, circulatory collapse, respiratory failure and death.

**Isopropanol** - Ingestion or inhalation of large quantities of vapor may cause flushing, headache, dizziness, mental depression, nausea, vomiting, narcosis, anesthesia, coma and death.

## SECTION VIII - PREVENTATIVE MEASURES

PERSONAL PROTECTION:

| | |
|---|---|
| Respiratory protection | If workplace exposure limit(s) of product or any other component is exceeded, a NIOSH/OSHA approved respirator is advised. (See your safety equipment supplier for specific details.) |
| Ventilation | Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/ TLV. |
| Protective gloves | Wear chemical resistant gloves. (Consult your safety equipment supplier.) |
| Eye protection | Wear chemical splash goggles in compliance with OSHA regulations. However, OSHA regulations also permit other types of safety glasses. |
| Other protective equipment | Wear impervious clothing and boots to prevent prolonged exposure. |

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep away all sources of ignition from spill. If spill is indoors, ventilate areas of spill and soak up the spill with absorbent material. Do not let spilled or leaking material enter watercourse.

DISPOSAL METHOD: Absorb in vermiculite, floor absorbent or other absorbent material and dispose in licensed facility. Observe all federal, state and local regulations.

HANDLING AND STORAGE: Protect from freezing. Overheating may cause container to rupture. Covered storage is preferable.

SPECIAL SHIPPING INFORMATION: SEE SECTION X

## SECTION IX - FIRST AID MEASURES

| | |
|---|---|
| Oral Ingestion | Seek immediate medical attention. |
| Eye Contact | Flush with water for 15 minutes and seek medical attention. |
| Skin Contact | Wash with soap and water. Wash contaminated clothing before reuse. |
| Skin Absorption | If skin irritation persists, seek medical attention. |
| Inhalation | Remove to fresh air, give artificial respiration and seek medical attention. |
| Effects Of Overexposure | May cause headaches if inhaled. Seek medical attention. If swallowed, can cause drunken-type behavior followed by severe systemic illness. |

## SECTION X - TRANSPORTATION

| | |
|---|---|
| DOT / TDG Proper Shipping Name | Printing Ink UN1210 |
| DOT / TDG Hazard Class | 3 |
| DOT / TDG Label | FLAMMABLE LIQUID |

## SECTION XI - DISCLAIMER

Every effort has been made to ensure that the information in this MSDS is accurate, and as complete as reasonably possible and of course all data herein are given in good faith. However, all information is furnished without warranty of any kind, and InkJet, Inc., expressly negates any warranty of accuracy, expressed or implied; and InkJet, Inc. assumes no responsibility for personal injury or damage to property to customers, vendors, or third parties if any information herein proves to be incorrect in any respect. Purchasers are encouraged to make independent determination of suitability and completeness of information from all sources to assure proper use and compatibility of product.

*NIOSH Publication #94-116 **Sax's Dangerous Properties of Industrial Mtls. 8th Ed.

Rev. DD0004

# MSDS #2



## MATERIAL SAFETY DATA SHEET

**Make-Up**
**175i**

## SECTION I - PREPARATION INFORMATION

This MSDS complies with 29 CFR 1910.1200, and was prepared by the Environmental, Health, and Safety Manager of InkJet, Inc., 11111 InkJet Way, Willis, TX 77378. Non-Emergency Phone (936) 856-6600

| | |
|---|---|
| Product Name | 175i |
| Product Code | X(01,19,21,29,35,36,40,41,45,50,65,66,67,68)0097 |
| Emergency Phone | contact CHEMTREC at (800) 424-9300 |

Original document date: 09/99 Date of revisions: 06/03

## SECTION II - IDENTIFICATION

| | |
|---|---|
| Product Name | 175i |
| Product Use | Ink Jet Printers |
| Description | Clear liquid with solvent odor |

**HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS)**

**HAZARD RATINGS:** 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Extreme B Hand & Eye Protection
HEALTH 1 FLAMMABILITY 3 REACTIVITY 0 PERSONAL PROTECTION B

NOTICE: These ratings are for general rapid interpretation. The end-user is responsible for determining the proper protective procedures

## SECTION III - HAZARDOUS INGREDIENTS

| Ingredient | CAS# | % | TLV* | PEL* | $LD_{50}$** g/kg | $LC_{50}$** g/m³ |
|---|---|---|---|---|---|---|
| Methyl Ethyl Ketone | 78-93-3 | 60-100 | 200 | 200 | 2.7 | 23.5 g/m³ / 8hr |
| Methanol | 67-56-1 | 10-30 | 200 | 200 | 5.6 | 64,000ppm/ 4hr |
| Ethanol | 64-17-5 | 3-7 | 1000 | 1000 | 7.0 | 20,000ppm/10h |

## SECTION IV - PHYSICAL DATA

| | |
|---|---|
| Boiling Range | 78 to 80° C |
| Melting Range | -80° C |
| Freezing Range | -80° C |
| Vapor Pressure | ~82mm of Hg @ 20° C |
| Vapor Density (Air=1) | Greater than air |
| Solubility In Water | Miscible |
| Solubility In Organic Solvents | Miscible |
| Specific Gravity (Water=1) | 0.802 |

Rev. DD0004



## SECTION V - FIRE AND EXPLOSION HAZARD

| | |
|---|---|
| Flash Point (Tcc) | -2° C |
| Auto Ignition Temperature | 422 to 516° C |
| Upper Flammable Limit (%By Vol.) | 37 |
| Lower Flammable Limit (%By Vol.) | 1.7 |
| Hazardous Combustion Products | Carbon Monoxide, Carbon Dioxide |
| Extinguishing Media | Regular foam or dry chemical |
| Explosion Data (Sensitive To Mechanical Impact) | No |
| Explosion Data (Sensitive To Static Discharge) | Yes |

FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode.

## SECTION VI - REACTIVE DATA

| | |
|---|---|
| Condition Of Instability | None Known |
| Incompatibility | Strong oxidizing agents |
| Conditions Of Reactivity | Not applicable |
| Hazardous Decomposition Products | Carbon Monoxide, Carbon Dioxide |

## SECTION VII - TOXICOLOGICAL PROPERTIES (HEALTH HAZARD)

ROUTES OF ENTRY: Skin contact, skin absorption, ingestion, inhalation, and eyes
EFFECT OF ACUTE EXPOSURE

## SECTION V - FIRE AND EXPLOSION HAZARD

| | |
|---|---|
| Flash Point (Tcc) | -2° C |
| Auto Ignition Temperature | 422 to 516° C |
| Upper Flammable Limit (%By Vol.) | 37 |
| Lower Flammable Limit (%By Vol.) | 1.7 |
| Hazardous Combustion Products | Carbon Monoxide, Carbon Dioxide |
| Extinguishing Media | Regular foam or dry chemical |
| Explosion Data (Sensitive To Mechanical Impact) | No |
| Explosion Data (Sensitive To Static Discharge) | Yes |

FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode.

## SECTION VI - REACTIVE DATA

| | |
|---|---|
| Condition Of Instability | None Known |
| Incompatibility | Strong oxidizing agents |
| Conditions Of Reactivity | Not applicable |
| Hazardous Decomposition Products | Carbon Monoxide, Carbon Dioxide |

## SECTION VII - TOXICOLOGICAL PROPERTIES (HEALTH HAZARD)

ROUTES OF ENTRY: Skin contact, skin absorption, ingestion, inhalation, and eyes

EFFECT OF ACUTE EXPOSURE:

| | |
|---|---|
| Eyes | May cause extreme eye irritation. Symptoms may include burning, tearing, redness, swelling and eye damage. |
| Skin | Exposure may cause skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying, cracking, and skin damage. |
| Breathing | Excessive inhalation of vapors can cause nasal and respiratory irritation. Central nervous system effects include dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even death. Inhalation of material into the lungs can cause chemical pneumonitis, which can be fatal. |
| Swallowing | Can cause gastrointestinal irritation, nausea, vomiting, diarrhea, blindness and death. |

| | |
|---|---|
| Exposure Limits | See section III |
| Sensitization To Product | Not Available |
| Carcinogenicity | Not Available |
| Reproductive Toxicity | Not Available |
| Teratogenicity | Not Available |
| Mutagenicity | Not Available |
| Toxicological Synergistic Products | None known |

EFFECTS OF CHRONIC EXPOSURE:

Methyl Ethyl Ketone - Minor embryotoxic/fetotoxic effects have been observed in laboratory rats exposed to methyl ethyl ketone by inhalation at levels greater than 1000 ppm (5 times the OSHA-PEL/TWA) for most of the gestation period. Methyl ethyl ketone may potentiate (shorten the time of onset) peripheral neuropathy, but methyl ethyl ketone, by itself, has not been shown to cause peripheral neuropathy.

Methanol - Poisoning may occur from ingestion. Other symptoms of over-exposure may be headaches, acidosis, convulsions, mydriasis, circulatory collapse, respiratory failure and death.

Ethanol - Nausea, vomiting, flushing, mental excitement or depression, drowsiness, impaired perception, uncoordination, stupor, coma and death may occur.

## SECTION VIII - PREVENTATIVE MEASURES

PERSONAL PROTECTION:

| | |
|---|---|
| Respiratory protection | If workplace exposure limit(s) of product or any other component is exceeded, a NIOSH/OSHA approved respirator is advised. (See your safety equipment supplier for specific details.) |
| Ventilation | Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/ TLV. |
| Protective gloves | Wear chemical resistant gloves. (Consult your safety equipment supplier.) |
| Eye protection | Wear chemical splash goggles in compliance with OSHA regulations. However, OSHA regulations also permit other types of safety glasses. |
| Other protective equipment | Wear impervious clothing and boots to prevent prolonged exposure. |

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep away all sources of ignition from spill. If spill is indoors, ventilate areas of spill and soak up the spill with absorbent material. Do not let spilled or leaking material enter watercourse.

DISPOSAL METHOD: Absorb in vermiculite, floor absorbent or other absorbent material and dispose in licensed facility. Observe all federal, state and local regulations.

HANDLING AND STORAGE: Protect from freezing. Overheating may cause container to rupture. Covered storage is preferable.

SPECIAL SHIPPING INFORMATION: SEE SECTION X

## SECTION IX - FIRST AID MEASURES

| | |
|---|---|
| Oral Ingestion | Seek immediate medical attention. |
| Eye Contact | Flush with water for 15 minutes and seek medical attention. |
| Skin Contact | Wash with soap and water. Wash contaminated clothing before reuse. |
| Skin Absorption | If skin irritation persists, seek medical attention. |
| Inhalation | Remove to fresh air, give artificial respiration and seek medical attention. |
| Effects Of Overexposure | May cause headaches if inhaled. Seek medical attention. If swallowed, can cause drunken-type behavior followed by severe systemic illness. |

## SECTION X - TRANSPORTATION

| | |
|---|---|
| DOT / TDG Proper Shipping Name | Flammable Liquid NOS (Methyl Ethyl Ketone, Methanol) UN 1993 |
| DOT / TDG Hazard Class | 3 |
| DOT / TDG Label | Flammable Liquid |

## SECTION XI - DISCLAIMER

Every effort has been made to ensure that the information in this MSDS is accurate, and as complete as reasonably possible and of course all data herein are given in good faith. However, all information is furnished without warranty of any kind, and InkJet, Inc., expressly negates any warranty of accuracy, expressed or implied; and InkJet, Inc. assumes no responsibility for personal injury or damage to property to customers, vendors, or third parties if any information herein proves to be incorrect in any respect. Purchasers are encouraged to make independent determination of suitability and completeness of information from all sources to assure proper use and compatibility of product.

*NIOSH Publication #94-116 **Sax's Dangerous Properties of Industrial Mtls. 10th Ed.

# MSDS #3



*The attention of the user is drawn to the risks brought upon by the misuse of the product. This data sheet does not exempt the user from knowing and applying the relevant regulations. It is responsibility of the user to take all precautions necessary to the use of the product. The information contained in this publication is given in good faith, and to the best of our knowledge at the time of edition*

## 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

Name : 5135E
Chemical family : Ketone-based ink
Synonyms : n/a

1.2 COMPANY IDENTIFICATION
IMAJE INK JET PRINTING CORPORATION
1650 Airport Road, Suite 101
Kennesaw, Georgia 30144
Tel : (770) 421 7700
Fax : (770) 421 7702

DISTRIBUTOR IDENTIFICATION
(if other than the company)

1.3 EMERGENCY PHONE NUMBER

**1-800-424-9300**

## 2 - COMPOSITION / INFORMATION ON INGREDIENTS

**Type of product: PREPARATION**

| INGREDIENTS CONTRIBUTING TO THE HAZARD | CAS N° | EEC N° | % | RISK | RISK SYMBOL(S) |
|---|---|---|---|---|---|
| Methyl ethyl ketone (#) | 78-93-3 | 606-002-00-3 | 75-85 | Highly flammable | R11 |
| | | | | Irritating to eyes and respiratory system | R36/37 |
| | | | | Repeated exposure may cause skin dryness or cracking | R66 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |
| Amine salt of 1:2 chromium monoazo complex | / | | <10 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment | R51/53 |
| Cellulose nitrate | / | 603-037-01-3 | <10 | Highly flammable | R11 |
| Propan-2-ol | 67-63-0 | 603-117-00-0 | <3 | Highly flammable | R11 |
| | | | | Irritating to eyes | R36 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |

The ingredients not listed are not considered as dangerous substances according to amended directive 67/548/EEC; and to 29 CFR 1910-1200 (USA).

(#) This component is subject to the reporting requirements of Section 313 of SARA Title III and 40CFR 372

| | |
|---|---|
| **reference :** | **5135E** |
| **designation :** | **INK - BASE 1 - BLACK** |

S H - 5 1 3 5 E A

## 3 - HAZARDS IDENTIFICATION

HEALTH HAZARDS

Irritating to eyes and respiratory system. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

PHYSICAL AND CHEMICAL HAZARDS : FIRE AND EXPLOSION HAZARDS

Highly flammable. Leaks of gas or spills of liquid can readily form flammable mixtures at temperatures at or above flashpoint.

| | HMIS* | NFPA* |
|---|---|---|
| Health | 2 | 2 |
| Flammability | 3 | 3 |
| Reactivity | 0 | 0 |

## 4 - FIRST AID MEASURES

**Inhalation**

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Have the person rest. Call for prompt medical attention

**Skin contact**

Rinse with large amounts of water, use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse. Get medical attention if irritation persists.

**Eye contact**

Immediately flush out eyes with large amounts of water for at least 15 minutes. Use an eye flush Get medical attention rapidly

**Ingestion**

If swallowed, do not induce vomiting. Have the person rest. Give activated medical carbon. Get medical attention rapidly

## 5 - FIRE-FIGHTING MEASURES

FIRE FIGHTING PROCEDURE

Use water spray to cool fire-exposed surfaces and to protect personnel. Stop leak if possible. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect those attempting to stop a leak. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam
Do not use a water extinguisher when printers are on fire.

SPECIAL FIRE PRECAUTIONS

See also Section 4 "First aid measures" as well as Section 10 "Stability and Reactivity"

HAZARDOUS COMBUSTION PRODUCTS

No unusual products.

## 6 - ACCIDENTAL RELEASE MEASURES

LAND OR WATER SPILL

Eliminate sources of ignition. Warn occupants of room of fire and explosion hazard. Prevent liquid from entering sewers, waterways, or low areas. Shut off source if possible. Advise authorities if product has entered a watercourse or sewer or has contaminated soil or vegetation. Take measures to minimize the effect on ground water. Absorb and prevent spread of spilled liquid with sand, sawdust or earth by means of shovels and buckets, and transfer to secure containers to facilitate its disposal and recycling. Recovery by pumping with an explosion-proof or hand pump is also permissible

In the event of uncontrolled release of this material the user should determine if the release is reportable under applicable laws and regulations

Disposal of recovered material must be made according to local regulations.

## 7 - HANDLING AND STORAGE

Storage temperature : < 35 °C (< 95 °F)
Transport temperature : < 35 °C (< 95 °F) Keep the product in its original polyethylene container

Storage/handling, general notes
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Handle and store in a cool, well-ventilated place away from incompatible materials, ignition and heat source. Protect material from direct sunlight. The floor of the shop must be incombustible and act as a retainer so that spilled liquid will not spread out. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers without commercial cleaning or reconditioning. Container remains hazardous when empty. Continue to observe all precautions

## 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES
The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperature or otherwise to maintain ambient concentration below the thresnold limits. Use explosion-proof ventilation equipment.

WORKPLACE EXPOSURE LIMITS

| European Community: | Limit value (8 hours) | Limit value (short-term) |
|---|---|---|
| Methylethylketone | 200ppm (600mg/m³) | 300ppm (900 mg/m³) |
| Propoan-2-ol | | 400ppm (980 mg/m³) |

| USA: | OSHA* PEL-TWA* | ACGIH* TLV-TWA* | ACGIH TLV-STEL* |
|---|---|---|---|
| Methylethylketone | 200ppm (590mg/m3) | 200ppm (590mg/m3) | 300ppm (885 mg/m3) |
| 2-Propanol | 400ppm (985 mg/m3) | 400ppm (985 mg/m3) | 500ppm (1230 mg/m3) |

PERSONAL PROTECTION
Handle in the presence of adequate ventilation.
**Respiratory protection :**
Where exposure is likely to exceed acceptable criteria use approved respiratory protection equipment.
**Protective clothing :**
Wear natural or butyl rubber gloves and protective clothing, which are impervious to the product for the duration of the anticipated exposure. Gloves should be replaced immediately if signs of degradation are observed.
**Eye protection :**
Wear safety glasses

## 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state | liquid |
| Form/color | black liquid |
| Odor | characteristic, ketone |
| pH (at 20°C (68°F)) | not applicable |
| Freezing/melting point | <-85°C (-121°F) |
| Boiling point | >75°C (167°F) |
| Flashpoint (in a closed cup) | about - 9 °C (16 °F) |
| Self-ignition temperature | > 400 °C (> 752 °F) |
| Explosive limits (in air) | 1.8 – 12.0 Vol. % |
| Vapor pressure (at 25 °C , 77 °F) | 13.3 kPa (Methylethylketone) |
| Density (20 / 20) | 0.86 < < 0.87 |
| Vapor density (/air) | > 1 |
| Solubility in water (at 20 °C , 68 °F) | partial |
| Is material hygroscopic ? | slightly |
| n-octanol / water partition coefficient (logP(o/w)) | 0.26 (Methylethylketone) |

Note : The flashpoint of the product has not been determined. The flashpoint indicated is that of the solvent with the lowest one .

## 10 - STABILITY AND REACTIVITY

| | |
|---|---|
| Stability | stable |
| Hazardous polymerization | no |
| Materials and conditions to avoid (incompatibility) | strong oxidizing agents |
| Hazardous decomposition products | none |

## 11 - TOXICOLOGICAL INFORMATION

ACUTE

**Inhalation :**

Vapor concentrations above recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may cause other effects on the central nervous system.
$LC_{50}$*(rat, 4 hours) > 9000ppm (methlethylketone)

**Skin contact:**

Frequent or prolonged contact may defeat and dry the skin, leading to discomfort and dermatitis.
$LD_{50}$*(rabbit) = 13g/kg (Methylethylketone)

**Eye contact:**

Irritating. Will injure eye tissue if not removed promptly.

**Ingestion:**

Small amounts of liquid aspirated into the respiratory system during ingestion or vomiting may cause bronchopneumonia or pulmonary edema.
$LD_{50}$*(rat) = 3000mg/kg (Methylethylketone)

CHRONIC

There is no evidence that exposure to Methylethylketone alone causes progressive or irreversible neurotoxic effects. However, simultaneous over-exposure to Methylethylketone and to n-Hexane or 2-Hexanone or Toluene can increase the risk of neuropathy linked to them.

OTHERS

Pregnant women should avoid handling and exposure
No component of this product has been identified as a carcinogen by the International Agency for Research on Cancer (IARC).

## 12 - ECOLOGICAL INFORMATION

Methyl ethyl ketone

| | |
|---|---|
| **WGK*** | 1 |
| **Mobility:** | This substance is relatively volatile. |
| **Degradability:** | Readily biodegradable |
| **Ecotoxicity:** | $LC_{50}$* (fish, 96 hours) = 4600mg/l |
| | $EC_{50}$* (daphnia, 48 hours) = 7060mg/l |
| | $EC_{50}$* (bacteria, 16 hours) = 1150mg/l |

Amine salt of 1:2 chromium/monoazo complex

| | |
|---|---|
| **Degradability:** | Not biodegradable |
| **Ecotoxicity:** | $LC_{50}$* (fish, 96 hours) = 2mg/l |
| | $EC_{50}$* (daphnia, 24 hours) = 1000mg/l |

Propan-2-ol

**WGK*** 1

## 13 - DISPOSAL CONSIDERATIONS

Empty containers should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. This product is not suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product can be burned directly in the appropriate facility. Disposal of material must be made according to local regulations.

## 14 - TRANSPORT INFORMATION

Land: road/railway (RTMDR/F, ADR/RID) Name of substance: Printing Ink

| Classification | | Label | Identification | | |
|---|---|---|---|---|---|
| Class | Enumeration figure and letter | Label N° of the packaging | danger code | material code | Label plates of tank trucks |
| 3 | 5° (b) | 3 | 33 | 1210 | 3 |

Partial exemption: 300 liters
Total exemption: 5 Liters per inner container and 20 Liters per package

**Sea** (IMDG) Proper Shipping Name: Printing Ink

| UN N° | Class | Subsidiary risk labels | Packing group | Special Provisions | Limited Quantities | Packing / IBC° | | Safety Sheet N° | Stowage and Segregation |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | instructions | Provisions | | |
| 1210 | 3 | | II | 163 | 1L | P001/IBC02 | PP1/ - | 3-05 | Category B |

Marine pollutant: no

Air (OACI/IATA) Proper Shipping Name: Printing Ink

| UN N° | Class | Subsidiary Risk labels | Hazard Labels | Packing Group | Passenger aircraft | | Cargo aircraft | | Special Provisions | ERG° code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Packing instructions | Net quantity max / packaging | Packing instructions | Net quantity max / packaging | | |
| 1210 | 3 | - | 3 | II | Y305/305 | 5L/1L | 307 | 60L | A72 | 3L |

## 15 - REGULATORY INFORMATION

CLASSIFICATION AND LABELLING ACCORDING TO EEC DIRECTIVES
Governing directives: amended 67/548/EEC (dangerous substances) and Directive 1999/45/EC (dangerous preparations)
Label name: 5135E
Symbols and indications of danger


F Highly flammable


Xi Irritant

NATURE OF SPECIAL RISK
R11 Highly flammable
R36/37 Irritating for eyes and respiratory system
R66 Repeated exposure may cause skin dryness or cracking
R67 Vapors may cause drowsiness and dizziness
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

SAFETY ADVICE
S9 Keep container in a well ventilated place
S16 Keep away from sources of ignition - No smoking
S25 Avoid contact with eyes
S33 Take precautionary measures against static discharges

## 16 - OTHER INFORMATION

In the United States the dangerous components of this product are mentioned in the following lists

1A Toxic Substance Control Act (TSCA) Section 4(a) Final Test and Consent Agreement Substances
1Mb Toxic Substance Control Act (TSCA) Section12(b) One-Time Export Notification Substances
2 Toxic Substance Control Act (TSCA) chemical Hazard Information Profile (CHIP) Substances
5B Clean Air Act Section 111 Volatile Organic Compound
5D Clean Air Act Section 112 Statutory Air Pollutants (1990 Amendments)
6 National Institute for Occupational Safety and Health (NIOSH) Recommendation Substances
7A Resource Conservation and Recovery Act (RCRA) Hazardous Substances
7B Resource Conservation and Recovery Act (RCRA) Hazardous Constituents for Ground Water Monitoring
8A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances
8C Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 Toxic Chemicals
8D Superfund Amendments and Reauthorization Act (SARA) Title III Section 110 Priority List of CERCLA Hazardous Substances
9A Occupational Safety and Health Administration (OSHA) Air Contaminants (Tables Z1, Z2 and Z3)
9D American Council of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value Chemicals
9F International Agency for Research on Cancer (IARC) Unclassifiable and Probably Noncarcinogenic Substances and Exposures (Group 3 or 4)
9H Occupational Safety and Health Administration (OSHA) Table Z-1-A [revoked]
11B Drug Enforcement Agency (DEA) Essential Chemicals
13A Department of Transportation (DOT) Hazardous Materials Table
13B Department of Transportation (DOT) Appendix A (CERCLA List) Hazardous Substances Other Than Radionuclides
MA1 Massachusetts Substance List
NJ1 New Jersey Right to Know Hazardous Substance List
PA1E Pennsylvania Hazardous Substances List – Environmental Hazard

In Canada, the dangerous components of this product are mentioned in the following lists

CN1 Canadian Workplace Hazardous Materials Information System (WHMIS) Ingredient Disclosure List – ingredient must be disclosed at concentration of 1%

The user of the product must refer to official regulations concerning his obligations

ABBREVIATIONS

EEC European Economic Community
ISO International Organization for Standardization
INRS Institut national de recherche et de securite
CAS N° Chemical Abstracts Service Number
HMIS Hazardous Material Information System
NFPA National Fire Protection Association
PEL Permissible Exposure Level
TWA Time Weighed Average
TLV Threshold Limit Value
STEL Short Term Exposure Limit
IBC Intermediate bulk container
ERG Emergency Response Drill
IMDG International Maritime Dangerous Goods
IATA International Air Transportation Association
EINECS European inventory of existing commercial chemical substances
$LC_{50}$ Lethal concentration 50%
$LD_{50}$ Lethal dose 50%
$EC_{50}$ Effect concentration 50%
WGK Wassergefahrdungsklasse
ADR European Agreement concerning the international carriage of dangerous goods by road
UN United Nations
EC European Community

# MSDS #4



*The attention of the user is drawn to the risks brought upon by the misuse of the product. This data sheet does not exempt the user from knowing and applying the relevant regulations. It is responsibility of the user to take all precautions necessary to the use of the product. The information contained in this publication is given in good faith, and to the best of our knowledge at the time of edition.*

## 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

Name : 5191
Chemical family Ketone-based additive
Synonyms n/a

1.2 COMPANY IDENTIFICATION

IMAJE INK JET PRINTING CORPORATION
1650 Airport Road, Suite 103
Kennesaw, Georgia 30144
Tel : (770) 421 7700
Fax : (770) 421 7702

DISTRIBUTOR IDENTIFICATION
(if other than the company)

1.3 EMERGENCY PHONE NUMBER

**1-800-424-9300**

## 2 - COMPOSITION / INFORMATION ON INGREDIENTS

**Type of product: PREPARATION**

| INGREDIENTS CONTRIBUTING TO THE HAZARD | CAS N°* | EEC N° | % | RISK | RISK SYMBOL(S) |
|---|---|---|---|---|---|
| Methylethylketone | 78-93-3 | 606-002-00-3 | >90 | Highly flammable | R11 |
| | | | | Irritating to eyes | R36 |
| | | | | Repeated exposure may cause skin dryness or cracking | R66 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |

The ingredients not listed are not considered as dangerous substances according to directive 67/548/EEC, point 4 : and to 29 CFR 1910-1200 (USA).

## 3 - HAZARDS IDENTIFICATION

ADVERSE HUMAN HEALTH AND ENVIRONMENTAL EFFECTS

Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

PHYSICAL AND CHEMICAL HAZARDS

Highly flammable. Leaks of gas or spills of liquid can readily form flammable mixtures at temperatures at or above flashpoint.

| | HMIS* | NFPA* |
|---|---|---|
| Health | 2 | 2 |
| Flammability | 3 | 3 |
| Reactivity | 0 | 0 |

| | |
|---|---|
| reference : | 5191 |
| designation : | ADDITIVE |

## 4 - FIRST AID MEASURES

**Inhalation:** Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Have the person rest. Call for prompt medical attention.
**Skin contact:** Rinse with large amounts of water, use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse. Get medical attention if irritation persists.
**Eye contact:** Immediately flush out eyes with large amounts of water for at least 15 minutes. Get medical attention rapidly.
**Ingestion:** If swallowed, do not induce vomiting. Have the person rest. Get medical attention rapidly.

## 5 - FIRE-FIGHTING MEASURES

Use water spray to cool fire-exposed surfaces and to protect personnel. Stop leak if possible. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect those attempting to stop a leak. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.
Do not use a water extinguisher when printers are on fire.

## 6 - ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Warn occupants of downwind areas of fire and explosion hazard. Prevent liquid from entering sewers, waterways, or low areas. Keep public away. Shut off source if possible to do so without hazard. Advise authorities if product has entered a waterway or sewer or has contaminated soil or vegetation. Take measures to minimize the effect on ground water. Contain spilled liquid with sand or earth. Dilute contained spill with water. Recover by pumping (use an explosion-proof or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels and buckets, and transfer to secure containers to facilitate its disposal and recycling. In the event of uncontrolled release of this material the user should determine if the release is reportable under applicable laws and regulations.
Disposal of recovered material must be made according to local regulations.

## 7 - HANDLING AND STORAGE

HANDLING
Handle containers with care. Open slowly in order to control possible pressure release. Do not handle or open near an open flame, source of heat or sources of ignition. Do not pressurize, cut heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers without commercial cleaning or reconditioning. Container remains hazardous when empty. Continue to observe all precautions.
STORAGE
Keep container closed. Store in a cool, well-ventilated place away from incompatible materials. Do not store near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. The floor of the premises must be incombustible, impermeable and act like a reservoir so that in case of breaking liquid will not spill outside. Keep product in its original packaging. Store below 35°C (95°F).

## 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES
The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above the ambient temperature or otherwise to maintain ambient concentration below the recommended threshold exposure limits. Use explosion-proof ventilation equipment.

WORKPLACE EXPOSURE LIMITS

| **European Community:** | **Limit Value (8 hours)** | **Limit Value (short-term)** | |
|---|---|---|---|
| Methylethylketone | 200ppm (600mg/m³) | 300ppm (900mg/m³) | |
| **USA:** | **OSHA*** | **ACGIH*** | **ACGIH*** |
| | **PEL-TWA*** | **TLV-TWA*** | **TLV-STEL*** |
| Methylethylketone | 200ppm (590mg/m³) | 200ppm (590mg/m³) | 300ppm (885mg/m³) |

PERSONAL PROTECTION
Handle in the presence of adequate ventilation.
**Respiratory protection :**
Where concentrations in air may exceed the limits given in this section, using a half-face filter mask is recommended to protect from overexposure by inhalation.
**Protective clothing :**
When handling this product, wearing is chemical resistant (butyl rubber) gloves is recommended. Gloves should be replaced immediately if signs of degradation are observed.
**Eye protection :**
When handling this product, wearing splash-resistant goggles is recommended. An eye wash should be available.

## 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state and color | pink liquid |
| Odor | ketone |
| pH (at 20°C (68°F)) | not applicable |
| Melting point | < -85 °C (-121°F) |
| Boiling point | > 75°C (167°F) |
| Flashpoint (in a closed cup) | about - 9°C (16 °F) |
| Self-ignition temperature | > 500 °C (932 °F) |
| Explosive limits (volume % in air) | 1.8 - 11.5 |
| Vapor pressure (at 25 °C , 77 °F) | 13.3 kPa at 25°C (77°F) (Methylethylketone) |
| Vapor density (/ air) | > 1 |
| Density (at 20°C (68°F)) | 0.80 - 0.81 |
| Water solubility | partial |
| n-octanol / water partition coefficient (log P(o/w)) | 0.26 (Methylkethylketone) |

Note: The flashpoint of the preparation has not been determined. The flashpoint indicated is the one of the solvent with the lowest value

## 10 - STABILITY AND REACTIVITY

| | |
|---|---|
| Stability | stable |
| Hazardous polymerization | no |
| Materials and conditions to avoid (incompatibility) | strong oxidizing agents |
| Hazards decomposition products | none |

## 11 - TOXICOLOGICAL INFORMATION

ACUTE

**Inhalation :**

Vapor concentrations above recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may have other central nervous system effects.

$LC_{50}$(rat, 4 hours) > 9000ppm (Methylethylketone)

**Skin contact:**

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis

$LD_{50}$(rabbit) = 13g/kg (Methylethylketone)

**Eye contact:**

Irritating and will injure eye tissue if not removed promptly

**Ingestion :**

Small amounts of liquid aspirated into the respiratory system during ingestion or vomiting may cause bronchopneumonia or pulmonary edema.

$LD_{50}$(rat) = 3000mg/kg (Methylethylketone)

CHRONIC

There is no evidence that exposure to Methylethylketone alone causes progressive or irreversible neurotoxic effects. However, simultaneous over-exposure to Methylethylketone and to n-Hexane can potentiate the known irreversible effects of n-hexane.

OTHERS

Avoid exposure for pregnant women.

## 12 - ECOLOGICAL INFORMATION

Methylethylketone

**WGK:** 1

**Mobility:** This substance is relatively volatile.

**Degradability:** Readily biodegradable

**Ecotoxicity:** $LC_{50}$(fishes, 96 hours) = 4600mg/l

$EC_{50}$(daphnia, 48 hours) = 7060mg/l

$EC_{50}$(bacteria, 16 hours) = 1150mg/l

## 13 - DISPOSAL CONSIDERATIONS

Empty containers should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. This product is not suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product can be burned directly in appropriate equipment.
Care should be taken to ensure compliance with national and local regulations.

## 14 - TRANSPORT INFORMATION

Land: road/railway (RTMDR/F, ADR/RID) Name of substance: methyl ethyl ketone

| Substance identification number | Hazard identification number | Label(s) | Class | Item number and letter |
|---|---|---|---|---|
| 1193 | 33 | 3 | 3 | 3° (b) |

Partial exemption: 300 liters
Total exemption: 3 Liters per inner container and 12 Liters per package

Sea (IMDG) Proper shipping name: methyl ethyl ketone

| UN N° | Class | Subsidiary risk(s) | Packing group | Special provisions | Limited quantities | Packing / IBC* | | Emergency schedule No | Stowage and segregation |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Instructions | Provisions | | |
| 1193 | 3 | | II | | 1L | P001 / IBC02 | - / - | 3-06 | Category B |

Marine pollutant: no

Air (OACI/IATA) Proper shipping name: methyl ethyl ketone

| UN N° | Class | Subsidiary risk(s) | Hazard label(s) | Packing group | Passenger & cargo aircraft | | Cargo aircraft only | | Special provisions | ERG* code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Packing instructions | Maxi net quantity/ package | Packing instructions | Maxi net quantity/ package | | |
| 1193 | 3 | | 3 | II | Y305 / 305 | 1L / 5L | 307 | 60L | | 3L |

## 15 - REGULATORY INFORMATION

CLASSIFICATION AND LABELLING ACCORDING TO EEC DIRECTIVES
Governing Directive: 67/548/EEC (dangerous substances.) and Directive 1999/45/EC* (dangerous preparations)
Label name: 5191

Symbols and indications of danger


F Highly flammable


Xi Irritant

NATURE OF SPECIAL RISK
R11 Highly flammable
R36 Irritating to eyes
R66 Repeated exposure may cause skin dryness or cracking
R67 Vapors may cause drowsiness and dizziness

SAFETY ADVICE
S9 Keep container in a well ventilated place
S16 Keep away from sources of ignition - No smoking

In the USA, the hazardous components of this product are mentioned in the following lists

| | |
|---|---|
| 5B | Clean Air Act Section 111 Volatile Organic Compound |
| 5D | Clean Air Act Section 112 Statutory Air Pollutants (1990 Amendments) |
| 6 | National Institute for Occupational Safety and Health (NIOSH) Recommendation Substances |
| 7A | Resource Conservation and Recovery Act (RCRA) Hazardous Substances |
| 7B | Resource Conservation and Recovery Act (RCRA) Hazardous Constituents for Ground Water Monitoring |
| 8A | Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances |
| 8C | Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 Toxic Chemicals |
| 8D | Superfund Amendments and Reauthorization Act (SARA) Title III Section 110 Priority List of CERCLA Hazardous Substances |
| 9A | Occupational Safety and Health Administration (OSHA) Air Contaminants (Tables Z1, Z2 and Z3) |
| 9D | American Council of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value Chemicals |
| 9H | Occupational Safety and Health Administration (OSHA) Table Z-1-A [revoked] |
| 11B | Drug Enforcement Agency (DEA) Essential Chemicals |
| 13A | Department of Transportation (DOT) Hazardous Materials |
| 13B | Department of Transportation (DOT) Hazardous Substances and Radionuclides |
| MA1 | Massachusetts Substance List |
| NJ1 | New Jersey Right to Know Hazardous Substance List |
| PA1E | Pennsylvania Hazardous Substances List – Environmental hazard |

In Canada, the hazardous components of this product are mentioned in the following lists

| | |
|---|---|
| CN1 | Canadian Workplace Hazardous Materials Information System (WHMIS) Ingredient Disclosure List – Ingredient must be disclosed at a concentration of 1%. |

The user of the product must refer to official regulations concerning his obligations

## 16 - OTHER INFORMATION

ABBREVIATIONS

| | |
|---|---|
| EEC | European Economic Community |
| ISO | International Organization for Standardization |
| INRS | Institut national de recherche et de securite |
| CAS N° | Chemical Abstracts Service Number |
| HMIS | Hazardous Material Information System |
| NFPA | National Fire Protection Association |
| PEL | Permissible Exposure Level |
| TWA | Time Weighed Average |
| TLV | Threshold Limit Value |
| STEL | Short Term Exposure Limit |
| IBC | Intermediate bulk container |
| ERG | Emergency Response Drill |
| IMDG | International Maritime Dangerous Goods |
| IATA | International Air Transportation Association |
| EINECS | European inventory of existing commercial chemical substances |
| $LC_{50}$ | Lethal concentration 50% |
| $LD_{50}$ | Lethal dose 50% |
| $EC_{50}$ | Effect concentration 50% |
| WGK | Wassergefahrdungsklasse |
| ADR | European Agreement concerning the international carriage of dangerous goods by road |
| UN | United Nations |
| EC | European Community |
| VME | Valeur limite de Moyenne d'Exposition (Average exposure limit value) |

# MSDS #5



*The attention of the user is drawn to the risks brought upon by the misuse of the product. This data sheet does not exempt the user from knowing and applying the relevant regulations. It is responsibility of the user to take all precautions necessary to the use of the product. The information contained in this publication is given in good faith, and to the best of our knowledge at the time of edition.*

## 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

Name : 5122
Chemical family : Ketone-based ink
Synonyms : n/a

1.2 COMPANY IDENTIFICATION

IMAJE INK JET PRINTING CORPORATION
1650 Airport Road, Suite 103
Kennesaw, Georgia 30144
Tel : (770) 421 7700
Fax : (770) 421 7702

DISTRIBUTOR IDENTIFICATION
(if other than the company)

1.3 EMERGENCY PHONE NUMBER

**1-800-424-9300**

## 2 - COMPOSITION / INFORMATION ON INGREDIENTS

**Type of product: PREPARATION**

| INGREDIENTS CONTRIBUTING TO THE HAZARD | CAS N° | EEC N° | % | RISK | RISK SYMBOL(S) |
|---|---|---|---|---|---|
| Methylethylketone | 78-93-3 | 606-002-00-3 | 65-75 | Highly flammable | R11 |
| | | | | Irritating to eyes | R36 |
| | | | | Repeated exposure may cause skin dryness or cracking | R66 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |
| Cellulose nitrate | | 603-037-01-3 | 5-15 | Highly flammable | R11 |
| Quaternary ammonium salt | | | <10 | Causes burns | R34 |
| | | | | Harmful if swallowed | R22 |
| Ethanol | 64-17-5 | 603-002-00-5 | <10 | Highly flammable | R11 |
| Propan-2-ol | 67-63-0 | 603-117-00-0 | <5 | Highly flammable | R11 |
| | | | | Irritating to eyes | R36 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |
| Butan-1-ol | 71-36-3 | 603-004-00-6 | <2 | Flammable | R10 |
| | | | | Harmful if swallowed | R22 |
| | | | | Irritating to respiratory system and skin | R37/38 |
| | | | | Risk of serious damage to eyes | R41 |
| | | | | Vapors may cause drowsiness and dizziness | R67 |
| Methanol | 67-56-1 | 603-001-00- | <1 | Highly flammable | R11 |
| | | | | Toxic by inhalation, in contact with skin and if swallowed | R23/24/25 |
| | | | | Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed | R39/23/24/25 |

The ingredients not listed are not considered as dangerous substances according to directive 67/548/EEC, point 4 ; and to 29 CFR 1910-1200 (USA).

| | |
|---|---|
| reference : | 5122 |
| designation : | INK – CARMINE |

| S | H | - | 5 | 1 | 2 | 2 | | | | | E |
|---|---|---|---|---|---|---|---|---|---|---|---|

## 3 - HAZARDS IDENTIFICATION

ADVERSE HUMAN HEALTH AND ENVIRONMENTAL EFFECTS

Irritating to skin. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

PHYSICAL AND CHEMICAL HAZARDS

Highly flammable. Leaks of gas or spills of liquid can readily form flammable mixtures at temperatures at or above flashpoint

| | HMIS* | NFPA* |
|---|---|---|
| Health | 2 | 2 |
| Flammability | 3 | 3 |
| Reactivity | 0 | 0 |

## 4 - FIRST AID MEASURES

**Inhalation**

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Have the person rest. Call for prompt medical attention

**Skin contact**

Rinse with large amounts of water, use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse. Get medical attention if irritation persists

**Eye contact**

Immediately flush out eyes with large amounts of water for at least 15 minutes. Get medical attention rapidly

**Ingestion**

If swallowed, do not induce vomiting. Have the person rest. Get medical attention rapidly.

## 5 - FIRE-FIGHTING MEASURES

Use water spray to cool fire-exposed surfaces and to protect personnel. Stop leak if possible. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect those attempting to stop a leak. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.

Do not use a water extinguisher when printers are on fire.

## 6 - ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Warn occupants of downwind areas of fire and explosion hazard. Prevent liquid from entering sewers, waterways, or low areas. Keep public away. Shut off source if possible to do so without hazard. Advise authorities if product has entered a waterway or sewer or has contaminated soil or vegetation. Take measures to minimize the effect on ground water.

Contain spilled liquid with sand or earth. Dilute contained spill with water. Recover by pumping (use an explosion-proof or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels and buckets, and transfer to secure containers to facilitate its disposal and recycling.

In the event of uncontrolled release of this material the user should determine if the release is reportable under applicable laws and regulations

Disposal of recovered material must be made according to local regulations.

## 7 - HANDLING AND STORAGE

HANDLING

Handle containers with care. Open slowly in order to control possible pressure release. Do not handle or open near an open flame, source of heat or sources of ignition. Do not pressurize, cut heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers without commercial cleaning or reconditioning Container remains hazardous when empty. Continue to observe all precautions

STORAGE

Keep container closed. Store in a cool, well-ventilated place away from incompatible materials. Do not store near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. The floor of the premises must be incombustible, impermeable and act like a reservoir so that in case of breaking liquid will not spill outside. Keep product in its original packaging. Store below 35°C (95°F)

## 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above the ambient temperature or otherwise to maintain ambient concentration below the recommended threshold exposure limits. Use explosion-proof ventilation equipment

WORKPLACE EXPOSURE LIMITS

| European Community: | Limit Value (8 hours) | Limit Value (short-term) |
|---|---|---|
| Methylethylketone | 200ppm (600mg/m³) | 300ppm (900mg/m³) |
| Ethanol | 1000ppm (1900mg/m³) | 5000ppm (9500mg/m³) |
| Propan-2-ol | | 400ppm (980mg/m³) |
| Butan-1-ol | | 50ppm (150mg/m³) |
| Methanol | 200ppm (260mg/m³) | 1000ppm (1300mg/m³) |

| USA: | OSHA* PEL-TWA* | ACGIH* TLV-TWA* | ACGIH* TLV-STEL* |
|---|---|---|---|
| Methylethylketone | 200ppm (590mg/m³) | 200ppm (590mg/m³) | 300ppm (885mg/m³) |
| Ethanol | 1000ppm (1880mg/m³) | 1000ppm (1880mg/m³) | |
| Propan-2-ol | 400ppm (985mg/m³) | 400ppm (985mg/m³) | 500ppm (1230mg/m³) |
| Butan-1-ol | | | 25ppm (76mg/m³) |
| Methanol | 200ppm (262mg/m³) | 200ppm (262mg/m³) | 250ppm (328mg/m³) |

PERSONAL PROTECTION

Handle in the presence of adequate ventilation.

**Respiratory protection :**

Where concentrations in air may exceed the limits given in this section, using a half-face filter mask is recommended to protect from overexposure by inhalation

**Protective clothing :**

When handling this product, wearing is chemical resistant (butyl rubber) gloves is recommended. Gloves should be replaced immediately if signs of degradation are observed

**Eye protection :**

When handling this product, wearing splash-resistant goggles is recommended. An eye wash should be available.

## 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state and color | red liquid |
| Odor | ketone |
| pH (at 20°C (68°F)) | not applicable |
| Melting point | < -85 °C (-121°F) |
| Boiling point | > 60°C (140°F) |
| Flashpoint (in a closed cup) | about - 9°C (16 °F) |
| Self-ignition temperature | > 300 °C (572 °F) |
| Explosive limits (volume % in air) | 1.4 - 36.5 |
| Vapor pressure (at 25 °C ; 77 °F) | 13.3 kPa at 25°C (77°F) (Methylethylketone) |
| Vapor density (/ air) | > 1 |
| Density (at 20°C (68°F)) | 0.86 - 0.87 |
| Water solubility | partial |
| n-octanol / water partition coefficient (log P(o/w)) | 0.26 (Methylkethylketone) |

Note: The flashpoint of the preparation has not been determined. The flashpoint indicated is the one of the solvent with the lowest value.

## 10 - STABILITY AND REACTIVITY

| | |
|---|---|
| Stability | stable |
| Hazardous polymerization | no |
| Materials and conditions to avoid (incompatibility) | strong oxidizing agents |
| Hazards decomposition products | none |

## 11 - TOXICOLOGICAL INFORMATION

ACUTE

**Inhalation :**

Vapor concentrations above recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may have other central nervous system effects.

$LC_{50}$(rat, 4 hours) > 9000ppm (Methylethylketone)

**Skin contact:**

Irritant. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

$LD_{50}$(rabbit) = 13g/kg (Methylethylketone)

**Eye contact:**

Irritating and will injure eye tissue if not removed promptly

**Ingestion :**

Small amounts of liquid aspirated into the respiratory system during ingestion or vomiting may cause bronchopneumonia or pulmonary edema.

$LD_{50}$(rat) = 3000mg/kg (Methylethylketone)

CHRONIC

There is no evidence that exposure to Methylethylketone alone causes progressive or irreversible neurotoxic effects. However, simultaneous over-exposure to Methylethylketone and to n-Hexane can potentiate the known irreversible effects of n-hexane

OTHERS:

Avoid exposure for pregnant women.

## 12 - ECOLOGICAL INFORMATION

Methylethylketone

**WGK:** 1

**Mobility:** This substance is relatively volatile

**Degradability:** Readily biodegradable.

**Ecotoxicity:** $LC_{50}$(fishes, 96 hours) = 4600mg/l

$EC_{50}$(daphnia, 48 hours) = 7060mg/l

$EC_{50}$(bacteria, 16 hours) = 1150mg/l

Ethanol

**WGK:** 0

Propan-2-ol

**WGK:** 1

Butan-1-ol

**WGK:** 1

Methanol

**WGK:** 1

## 13 - DISPOSAL CONSIDERATIONS

Empty containers should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. This product is not suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product can be burned directly in appropriate equipment.

Care should be taken to ensure compliance with national and local regulations.

## 14 - TRANSPORT INFORMATION

**Land: road/railway (RTMDR/F, ADR/RID)** Name of substance: printing ink

| Substance identification number | Hazard identification number | Label(s) | Class | Item number and letter |
|---|---|---|---|---|
| 1210 | 33 | 3 | 3 | 5° (b) |

Partial exemption: 300 liters

Total exemption: 5 Liters per inner container and 20 Liters per package

**Sea (IMDG)** Proper shipping name: printing ink

| UN N° | Class | Subsidiary risk(s) | Packing group | Special provisions | Limited quantities | Packing / IBC* | | Emergency schedule No. | Stowage and segregation |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Instructions | Provisions | | |
| 1210 | 3 | - | II | 163 | 1L | P001 / IBC02 | PP1 / - | 3-05 | Category B |

Marine pollutant: no

Air (OACI/IATA) Proper shipping name: printing ink

| UN N° | Class | Subsidiary risk(s) | Hazard label(s) | Packing group | Passenger & cargo aircraft | | Cargo aircraft only | | Special provisions | ERG° code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Packing instructions | Maxi net quantity/ package | Packing instructions | Maxi net quantity/ package | | |
| 1210 | 3 | | 3 | II | Y305 / 305 | 1L / 5L | 307 | 60L | A72 | 3L |

## 15 - REGULATORY INFORMATION

CLASSIFICATION AND LABELLING ACCORDING TO EEC DIRECTIVES

Governing Directive: 67/548/EEC (dangerous substances.) and Directive 1999/45/EC° (dangerous preparations)

Label name: 5122

Symbols and indications of danger

F Highly flammable

Xi Irritant

NATURE OF SPECIAL RISK

R11 Highly flammable

R36/38 Irritating to eyes and skin

R66 Repeated exposure may cause skin dryness or cracking

R67 Vapors may cause drowsiness and dizziness

SAFETY ADVICE

S9 Keep container in a well ventilated place

S16 Keep away from sources of ignition - No smoking

In the USA, the hazardous components of this product are mentioned in the following lists

1A Toxic Substance Control Act (TSCA) Section 4(a) Final Test Rule and Consent Agreement Substances

1M(b) Toxic Substance Control Act (TSCA) Section 12(b) One-Time Export Notification Substances

2 Toxic Substance Control Act (TSCA) Chemical Hazard Information Profile (CHIP) Substances

5B Clean Air Act Section 111 Volatile Organic Compound

5D Clean Air Act Section 112 Statutory Air Pollutants (1990 Amendments)

6 National Institute for Occupational Safety and Health (NIOSH) Recommendation Substances

7A Resource Conservation and Recovery Act (RCRA) Hazardous Substances

7B Resource Conservation and Recovery Act (RCRA) Hazardous Constituents for Ground Water Monitoring

8A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

8C Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 Toxic Chemicals

8D Superfund Amendments and Reauthorization Act (SARA) Title III Section 110 Priority List of CERCLA Hazardous Substances

9A Occupational Safety and Health Administration (OSHA) Air Contaminants (Tables Z1, Z2 and Z3)

9D American Council of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value Chemicals

9F International Agency for Research on Cancer (IARC) Unclassifiable and Probably Noncarcinogenic Substances and Exposures (Group 3 or 4)

9G International Agency for Research on Cancer (IARC) Substances Not Assigned an Overall Evaluation

9H Occupational Safety and Health Administration (OSHA) Table Z-1-A [revoked]

11B Drug Enforcement Agency (DEA) Essential Chemicals

12 National Toxicology Program (NTP) Testing Program Substances

13A Department of Transportation (DOT) Hazardous Materials

13B Department of Transportation (DOT) Hazardous Substances and Radionuclides

MA1 Massachusetts Substance List

NJ1 New Jersey Right to Know Hazardous Substance List

PA1 Pennsylvania Hazardous Substances List

In Canada, the hazardous components of this product are mentioned in the following lists

CN1 Canadian Workplace Hazardous Materials Information System (WHMIS) Ingredient Disclosure List – Ingredient must be disclosed at a concentration of 1%

CN2 Canadian Workplace Hazardous Materials Information System (WHMIS) Ingredient Disclosure List – Ingredient must be disclosed at a concentration of 0.1%.

The user of the product must refer to official regulations concerning his obligations.

## 16 - OTHER INFORMATION

ABBREVIATIONS

| | |
|---|---|
| EEC: | European Economic Community |
| ISO: | International Organization for Standardization |
| INRS: | Institut national de recherche et de securite |
| CAS N°: | Chemical Abstracts Service Number |
| HMIS: | Hazardous Material Information System |
| NFPA: | National Fire Protection Association |
| PEL: | Permissible Exposure Level |
| TWA: | Time Weighed Average |
| TLV: | Threshold Limit Value |
| STEL | Short Term Exposure Limit |
| IBC: | Intermediate bulk container |
| ERG: | Emergency Response Drill |
| IMDG | International Maritime Dangerous Goods |
| IATA: | International Air Transportation Association |
| EINECS: | European inventory of existing commercial chemical substances |
| $LC_{50}$: | Lethal concentration 50% |
| $LD_{50}$: | Lethal dose 50% |
| $EC_{50}$: | Effect concentration 50% |
| WGK: | Wassergefahrdungsklasse |
| ADR: | European Agreement concerning the international carriage of dangerous goods by road |
| UN: | United Nations |
| EC: | European Community |
| VME | Valeur limite de Moyenne d'Exposition (Average exposure limit value) |

# MSDS #6

## MATERIAL SAFETY DATA SHEET

MSDS ID#: 100005

Date Prepared: October 19, 1995
Revision: February 10, 2003

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: M-149 OFFSET INK Product Code: 10006
Colors Covered: Black; Blue; Green; White; UV Readable; Standard Grey; NL Red; NL Yellow; NL Orange; NL Brown; FR Black; Silver; Purple; Process Blue; Spectra Blue; NL Red/Orange; Deep Red; Copper; Black Low Odor; SP Orange, PMS 9U/10U Grey; SP Green
Supplier Name: Matthews International Corporation Address: 101 Fairview Avenue
City: Pittsburgh State/Zip: Pennsylvania, USA, 15238
Phone: (412)665-2500 Fax: (412)828-4545 24 Hour Emergency Phone: (412)456-7499

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

[ ] Substance [X] Mixture

| Hazardous Components | Percent | CAS No. | TLV | Carcinogen | R-Phrase | S-Phrases |
|---|---|---|---|---|---|---|
| Cyclohexanone | 11-17 | 108-94-1 | 25 ppm | No | R10, R20 | S25 |
| Isophorone | 35-57 | 78-59-1 | 5 ppm | No | R21/22, R36/37, R40 | S13, S23, S36/37/39, S46 |

### 3. HAZARDS IDENTIFICATION

**Most Important Hazards:** Severe eye irritant. Flammable liquid.
**Main Symptoms of Overexposure:** EYES- Causes severe irritation, experienced as discomfort or pain, excess blinking, marked redness and swelling of the conjunctiva, may cause chemical burns or the cornea; SKIN- Moderate skin irritation. Prolonged contact may cause chemical burns, seen as marked redness or swelling; INHALATION- May cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain, coughing, headache, nausea, vomiting, dizziness, drowsiness, disturbed vision and unconsciousness. Repeated or prolonged exposures to high concentrations may cause kidney and liver damage. INGESTION- May cause nausea, vomiting, burning sensation in mouth and throat, and abdominal discomfort.

### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.
**Skin Contact:** Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation persists. Wash clothing before reuse.
**Eye Contact:** Immediately flush eyes with water for at least 15 minutes raising upper and lower eyelids occasionally. Get immediate medical attention.
**Ingestion:** DO NOT induce vomiting. Keep person warm and quiet and get medical attention. Aspiration of the material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media:** Water spray, dry chemical, carbon dioxide, and alcohol foam.

**Specific Hazards:** Flammable liquid. Do not pressurize, cut, weld or expose containers to flame or other sources of ignition. Vapors are heavier than air and may travel along the ground or be moved by ventilation and be ignited by heat, pilot lights or other flames.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Eliminate all ignition sources.

**Environmental precautions:** Prevent runoff from entering drains, sewers or streams. May be toxic to fish

**Methods of cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Small spills should be flushed with large amounts of water. Larger spills should be collected for disposal.

### 7. HANDLING AND STORAGE

**Handling-Precautions:** May cause eye burns. Harmful if absorbed through the skin. Wash thoroughly after handling.
**Safe handling Advice:** Keep away from heat, sparks and flames.
**Storage-Conditions:** Avoid excessive heat and sources of ignition. Store in a cool, clean, well ventilated non-smoking area in a sealed grounded container.
**Incompatible Products:** Keep from contact with strong oxidizing agents.

MSDS ID#: 100005

Date Prepared: October 19, 1995
Revision: February 10, 2003
Product Code: 10006

Product Name: M-149 OFFSET INK

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

**Engineering Measures**: Good general ventilation should be used. Use local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits.
**Personal Protective Equipment**: Eliminate all ignition sources.
**Respiratory Protection**: If engineering controls do not maintain concentrations below recommended exposure limits, an approved respirator should be used. Type: organic vapor.
**Hand Protection**: Where prolonged or repeated skin contact will occur, impervious gloves should be worn. Type: butyl
**Eye Protection**: Wear safety glasses with side shield or goggles.
**Skin and Body Protection**: Recommended Decontamination facilities: eye bath, safety shower, washing facilities.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State**: Liquid
**Flashpoint**: 43-50° C (110-122° F)
**Density**: 1.00-1.22
**Vapor Density**: >3.0
**Boiling Point**: 157° C (314° F) for Cyclohexanone
**V.O.C.**: 642-734
**Color**: Various
**Autoignition temperature**: N/A
**Vapor Pressure**: N/A
**Solubility in Water**: negligible
**Freezing Point**: N/A
**Evaporation rate(Butyl Acetate=1)**: .38 for Cyclohexanone
**Odor**: Characteristic ketone odor
**pH**: N/A

## 10. STABILITY AND REACTIVITY

**Stable**: Yes **Conditions to avoid**: Avoid heat, sparks and open flames.
**Materials to avoid**: Avoid strong oxidizing agents.
**Hazardous decomposition products**: Carbon dioxide, carbon monoxide

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**: Oral LD50 (rat, for Cyclohexanone)- 1.9 g/kg Dermal LD50 (rat, for Cyclohexanone)- 3.2 g/kg
**Chronic Toxicity**: Isophorone, when administered by stomach tube in corn oil at dosage levels of 250 or 500 mg/kg, of body weight, was associated with a slightly increased incidence of renal and preputial tumors in male rats and of liver tumors in male mice but did not exhibit similar potential in either female rates or mice Guinea pigs exposed to 4000 ppm of Cyclohexanone for a 6 hr period showed signs of CNS depression, lacrimation, salivation, depression of body temperature and respiratory heart rate and opacity of the cornea Liver and kidney damage reported in monkeys and rabbits (190 ppm) and rats (105.2 mg/m$^3$) due to Cyclohexanone
**Target Organs**: Eyes, skin, respiratory system, central nervous system, liver, kidneys
**Sensitization**: No **Specific Effects**: May aggravate an existing condition of dermatitis.

## 12. ECOLOGICAL INFORMATION

**Possible Environmental Effects**: This product may be toxic to fish. Avoid discharge to natural waters. Do not discharge into sewers or drains without the proper authority.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal**: Dispose of in accordance with all local, state and federal regulations.

## 14. TRANSPORT INFORMATION

**Land**: (DOT)- regulated, Flammable liquid, Class 3, packaging group III, Proper Shipping Name: Printing Ink, UN 1210
**Inland Waterways**: (ADR)- N/A
**Sea**: (IMDG)- regulated, Flammable liquid, Class 3.3, packaging group III, Proper Shipping Name: Printing Ink, UN 1210
**Air**: (IATA)- regulated, Flammable liquid, Class 3, packaging group III, Proper Shipping Name: Printing Ink, UN 1210

## 15. REGULATORY INFORMATION

**Hazard and Safety Information**: CA Prop 65- none; PA hazardous substance list- Cyclohexanone, listed; SARA 313- none; SARA 311,312- Immediate health hazard, Delayed health hazard, Fire hazard *(from Cyclohexanone and Isophorone)*, TSCA- all components listed. EINECS- Cyclohexanone: #203-631-1, Isophorone #201-126-0: **Cyclohexanone**- R10- Flammable, R20- Harmful by inhalation, S25- Avoid contact with eyes; **Isophorone** R21/22- Harmful in contact with skin and if swallowed, R36/37- Irritating to eyes and respiratory system, R40- Limited evidence of a carcinogenic effect, S13- Keep away from food, drink and animal feedingstuffs, S23- Do not breathe vapor, S36/37/39- Wear suitable protective clothing, gloves and eye/face protection, S46- If swallowed, seek medical advice immediately and show container/label
**Ozone Depleting Chemicals Present**: None

## 16. OTHER INFORMATION

Containers of this material may be hazardous when emptied, all hazard precautions given in the data sheet must be observed. The information contained herein is based upon what we believe to be reliable data. However, we make no warranty or guarantees, expressed or implied, concerning the accuracy of such information and disclaim all liability from reliance thereon. You should evaluate the information through your own sources prior to use.

Reference ISO 11014-1

# ATTACHMENT C

# VISIBLE EMISSIONS TEST REPORTS

# Air Observations, Inc.

September 21, 2006

Mr. James Neubauer
Aware Environmental
9305-J Monroe Road
Charlotte, NC 28270

RE: Charlotte Pipe & Foundry Company

Dear James,

Enclosed please find one (1) copy of the completed visible emission compliance tests that were recently performed on the seven (7) storage silos at the above facility. The required copies of these tests have been previously submitted to the regulatory agency(s) as per our new procedure. Copies have also been sent to James Young at the facility.

If you have any questions or if I may be of further service at this time, please feel free to give me a call.

Thank you for allowing Air Observations, Inc. to perform your testing.

Sincerely,

Pamela LeBoss

Pamela LeBoss

Enclosures
Copy To: James Young/Charlotte Pipe & Foundry Company

# Air Observations, Inc.

September 21, 2006

Mr. James Young
Charlotte Pipe & Foundry Company
P.O. Box 220
Wildwood, Florida 34785

Dear Zip,

Enclosed please find your copies of the completed visible emission compliance tests that were recently performed on the seven (7) storage silos at your facility. The required copies of these tests have been previously submitted to the regulatory agency(s) as per our new procedure. Copies have also been sent to James Neubauer at Aware Environmental.

Also enclosed is your Invoice.

If you have any questions or if I may be of further service at this time, please feel free to give me a call.

Thank you for allowing Air Observations, Inc. to perform your testing.

Sincerely,

Pamela LeBoss

Pamela LeBoss

Enclosures
Copy To: James Neubauer/Aware Environmental

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe & Foundry Company Plastics Division

SOURCE NAME: Kiln No. 2

PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young

PHONE NO: 352/748-8100

PROCESS/PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse

OPERATING MODE: Continuous

FUEL TYPE/RATE: None

PRODUCTION RATE: ~12.5 TPH

PERMITTED RATE: 12.5 TPH

DESCRIBE EMISSION POINT: SE most of six identical White silos located at SW corner of property

HEIGHT ABOVE GROUND LEVEL: ~61 FT

HEIGHT RELATIVE TO OBSERVER: ~61 FT

## Emissions Description

DESCRIBE EMISSIONS

START: None

END: None

PLUME COLOR: No Plume

PLUME TYPE

WATER DROPLETS PRESENT? YES ☐ NO ☐

IF YES IS PLUME ATTACHED ☐ DETACHED ☐

## Meteorological Information

BACKGROUND: Sky

BACKGROUND COLOR: Blue/White

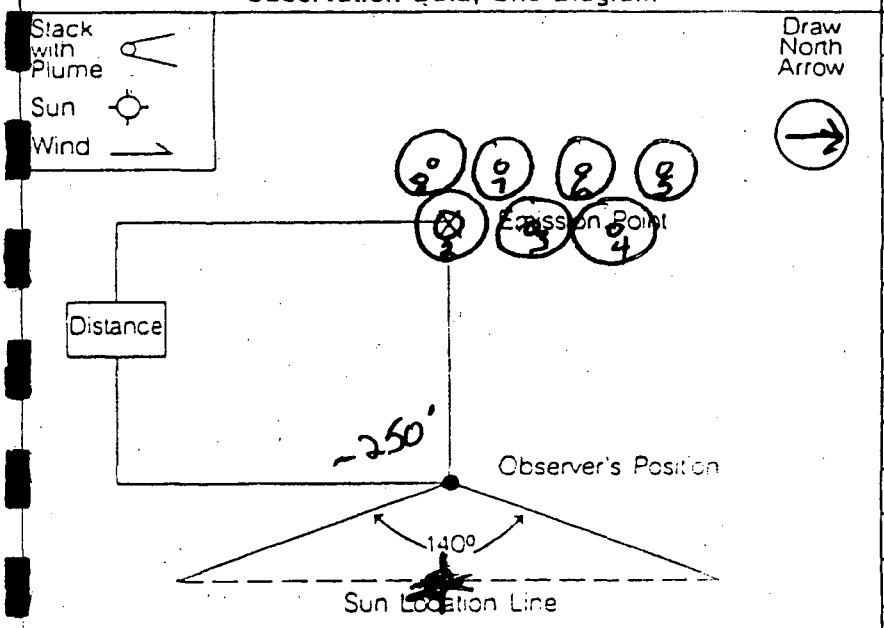
SKY CONDITIONS CLOUD COVER: Broken

AMBIENT TEMP: ~80°F

WIND SPEED: ~0-3mph

WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06

START TIME: 1015

STOP TIME: 1045

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS MIN 0 MAX 0

AVERAGE OF HIGHEST 24 CONSECUTIVE PERIODS 0%

SHORT TERM AVERAGE DATA

AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

James Young

## Certification Data, Signatures

OBSERVER'S NAME: Pamela LeBoss

OBSERVER'S SIGNATURE: Pamela LeBoss

DATE: 9/20/06

CERTIFIED BY: ETA

DATE: 8/06

APIS NUMBER: 119 0030 002/EP-02

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

COMPANY NAME: Charlotte Pipe + Foundry Company Plastics Division

SOURCE NAME: Silo No. 3 — PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young — PHONE NO: 352/748-8100

PROCESS/PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse — OPERATING MODE: Continuous

FUEL TYPE/RATE: None — PRODUCTION RATE: ~12.5 TPH — PERMITTED RATE: 13.5 TPH

DESCRIBE EMISSION POINT: Eastmost of six identical white silos located at SW corner of property

HEIGHT ABOVE GROUND LEVEL: ~61 m — HEIGHT RELATIVE TO OBSERVER: ~61 m

## Emissions Description

DESCRIBE EMISSIONS: None — PLUME: None

PLUME COLOR: No Plume — PLUME TYPE:

WATER DROPLETS PRESENT? YES ☐ NO ☐ — IF YES, IS PLUME ATTACHED ☐ DETACHED ☐

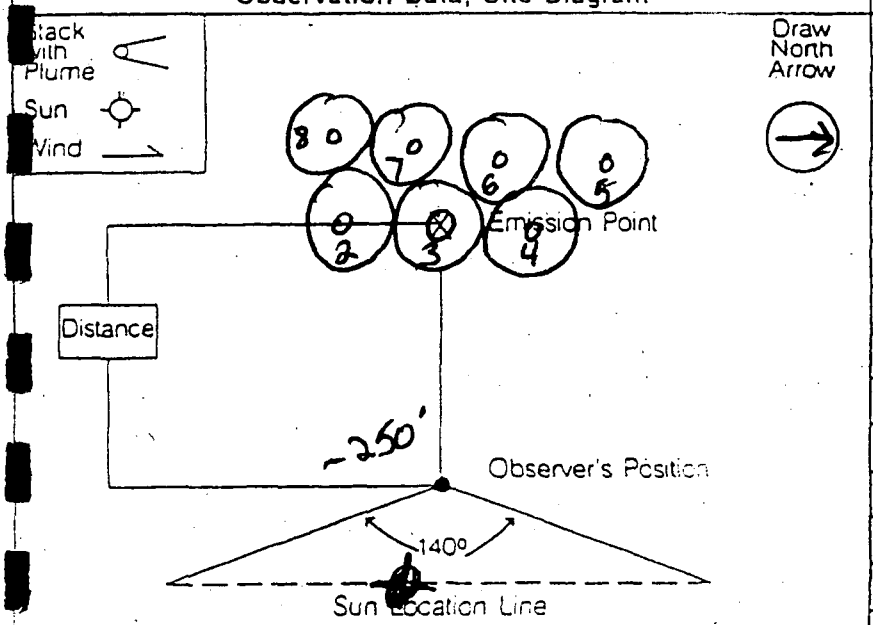
## Meteorological Information

BACKGROUND: Sky — BACKGROUND COLOR: Blue/white

SKY CONDITIONS (CLOUD COVER): Broken — AMBIENT TEMP: ~82°F

WIND SPEED: ~0-3mph — WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06 — START TIME: 1050 — STOP TIME: 1120

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS: MIN 0 MAX 0

AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%

SHORT TERM AVERAGE DATA

AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

Jim Young

## Certification Data, Signatures

OBSERVER'S NAME: Pamela LeBoss

OBSERVER'S SIGNATURE: Pamela LeBoss — DATE: 9/20/06

CERTIFIED BY: ETA — DATE: 8/06

APIS NUMBER: 119 0030 002/EP03

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe + Foundry Company Plastics Division

SOURCE NAME: Kiln No. 4

PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young

PHONE NO: 352/748-8100

PROCESS PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse

OPERATING MODE: Continuous

FUEL TYPE RATE: None

PRODUCTION RATE: ~12.5 TPH

PERMITTED RATE: 17.5 TPH

DESCRIBE EMISSION POINT: NE Most of six identical white silos located at SW Corner of property

HEIGHT ABOVE GROUND LEVEL: ≈61 m

HEIGHT RELATIVE TO OBSERVER: ~61 m

## Emissions Description

DESCRIBE EMISSIONS

START: None

END: None

PLUME COLOR: No Plume

PLUME TYPE:

WATER DROPLETS PRESENT? YES ☐ NO ☐

IF YES, IS PLUME ATTACHED ☐ DETACHED ☐

## Meteorological Information

BACKGROUND: Sky

BACKGROUND COLOR: Blue / White

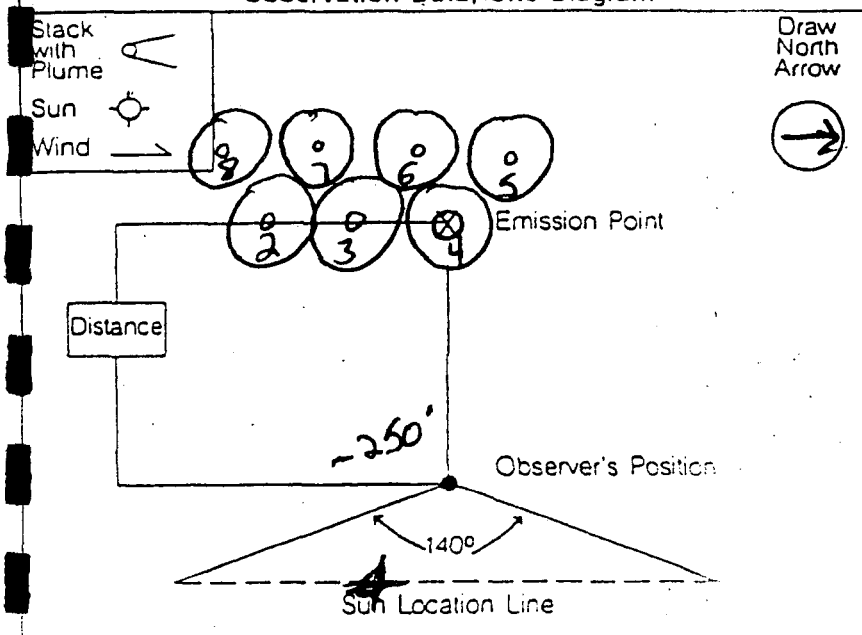
SKY CONDITIONS % CLOUD COVER: Broken

AMBIENT TEMP: ~82°F

WIND SPEED: ~0-3mph

WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06

START TIME: 1125

STOP TIME: 1155

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS: MIN 0 MAX 0

AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%

SHORT TERM AVERAGE DATA

AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

Jim Young

## Certification Data, Signatures

OBSERVERS NAME: Pamela LeBoss

OBSERVERS SIGNATURE: Pamela LeBoss

DATE: 9/20/06

CERTIFIED BY: ETA

DATE: 8/06

APIS NUMBER: 119 0030 002/EP04

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe + Foundry Company Plastics Division

SOURCE NAME: Silo No. 5 — PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young — PHONE NO: 352/748-8100

PROCESS/PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse — OPERATING MODE: Continuous

FUEL TYPE/RATE: None — Production Rate/ - 12.5 TPH — PERMITTED RATE: 12.5 TPH

DESCRIBE EMISSION POINT: NW most of six identical white silos located at SW Corner of Property

HEIGHT ABOVE GROUND LEVEL: ~61 ft — HEIGHT RELATIVE TO OBSERVER: ~61 ft

## Emissions Description

DESCRIBE EMISSIONS

START: None — END: None

PLUME COLOR: No Plume — PLUME TYPE:

WATER DROPLETS PRESENT? YES ☐ NO ☐ — IF YES, IS PLUME ATTACHED ☐ DETACHED ☐

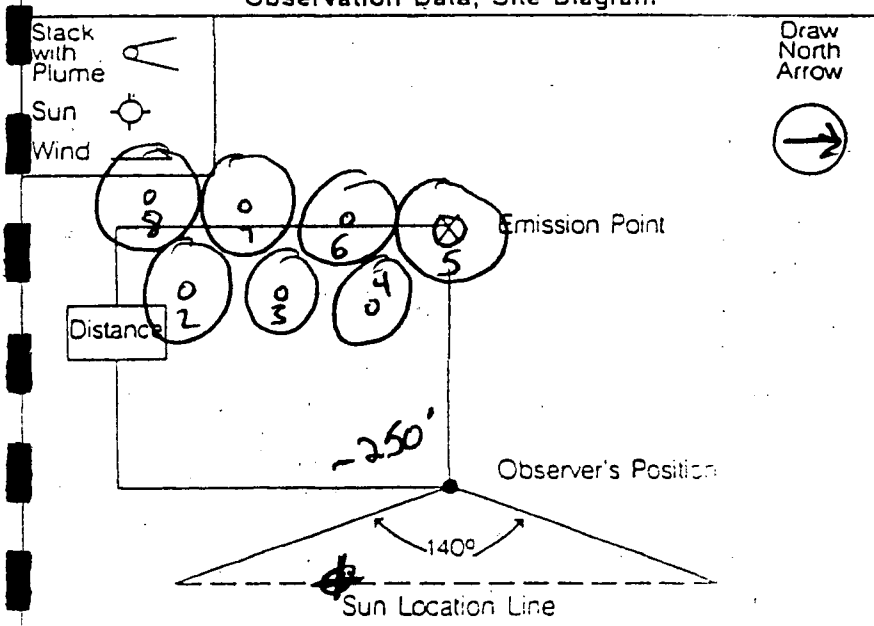
## Meteorological Information

BACKGROUND: Sky — BACKGROUND COLOR: Blue / White

SKY CONDITIONS: CLOUD COVER: Broken — AMBIENT TEMP: ~83°F

WIND SPEED: ~0-3mph — WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06 — START TIME: 1210 — STOP TIME: 1240

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS: MIN 0 MAX 0

AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%

SHORT TERM AVERAGE DATA

AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____ %

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

Jim Young

## Certification Data, Signatures

OBSERVERS NAME: Pamela LeBoss

OBSERVERS SIGNATURE: Pamela LeBoss — DATE: 9/20/06

CERTIFIED BY: ETA — DATE: 8/06

APIS NUMBER: 119 0030 002/EP05

**Air Observations, Inc.**
TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe + Foundry Company Plastics Division
SOURCE NAME: Silo No. 6
PERMIT NO: 1190030007 A0
LOCATION ADDRESS: CR 124A; Wildwood FL
CONTACT: Jim Young
PHONE NO: 352/748-8100
PROCESS/PRODUCTION RATE: N/A
CONTROL EQUIPMENT: Baghouse
OPERATING MODE: Continuous
FUEL TYPE/RATE: None
PRODUCTION RATE: 12.5 TPH
PERMITTED RATE: 12.5 TPH
DESCRIBE EMISSION POINT: Westmost of six centrally white silos located at SW corner of property
HEIGHT ABOVE GROUND LEVEL: ~61 ft
HEIGHT RELATIVE TO OBSERVER: ~61 ft

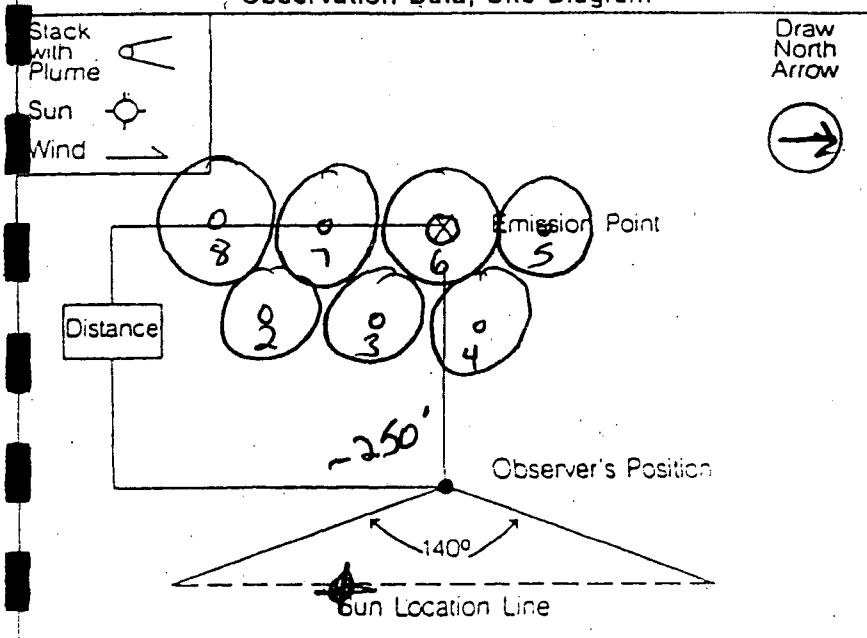
## Emissions Description

DESCRIBE EMISSIONS
START: None
END: None
PLUME COLOR: No Plume
PLUME TYPE:
WATER DROPLETS PRESENT? YES ☐ NO ☐
IF YES, IS PLUME: ATTACHED ☐ DETACHED ☐

## Meteorological Information

BACKGROUND: Sky
BACKGROUND COLOR: Blue / White
SKY CONDITIONS: Broken
AMBIENT TEMP: ~84 °F
WIND SPEED: ~0-3 mph
WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06
START TIME: 1245
STOP TIME: 1315

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS: MIN 0 MAX 0
AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%
SHORT TERM AVERAGE DATA
AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____ %

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

James Young

## Certification Data, Signatures

OBSERVER'S NAME: Pamela LeBoss
OBSERVER'S SIGNATURE: Pamela LeBoss
DATE: 9/20/06
CERTIFIED BY: ETA
DATE: 8/06

APIS NUMBER: 119 0030 002/EP 06

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAX 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe + Foundry Company Plastics Division

SOURCE NAME: Silo No. 8 — PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young — PHONE NO: 352/748-8100

PROCESS/PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse — OPERATING MODE: Continuous

FUEL TYPE/RATE: None — PRODUCTION RATE: ~12.5 TPH — PERMITTED RATE: 12.5 TPH

DESCRIBE EMISSION POINT: SSW most of six identical white silos located at SW corner of property

HEIGHT ABOVE GROUND LEVEL: ~61 ft — HEIGHT RELATIVE TO OBSERVER: ~61 ft

## Emissions Description

DESCRIBE EMISSIONS — START: None — END: None

PLUME COLOR: No Plume — PLUME TYPE:

WATER DROPLETS PRESENT? YES ☐ NO ☐ — IF YES, IS PLUME ATTACHED ☐ DETACHED ☐

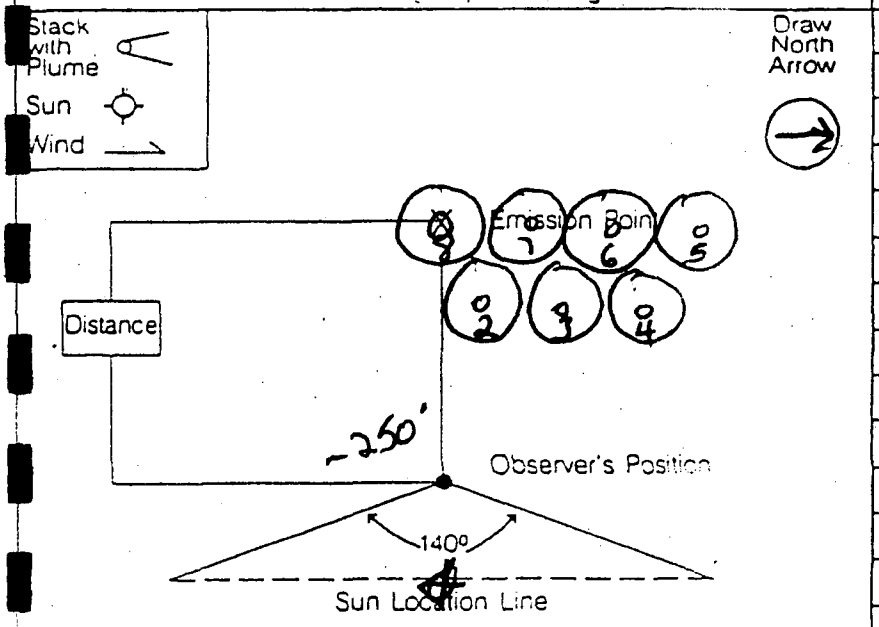
## Meteorological Information

BACKGROUND: Sky — BACKGROUND COLOR: Blue / White

SKY CONDITIONS: CLOUD COVER: Broken — AMBIENT TEMP: ~80°F

WIND SPEED: ~0-3 mph — WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06 — START TIME: 1015 — STOP TIME: 1045

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS — MIN: 0 — MAX: 0

AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%

SHORT TERM AVERAGE DATA — AVERAGING PERIOD _____ MINUTES — ACTUAL AVERAGE _____ %

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

James Young

## Certification Data, Signatures

OBSERVERS NAME: Pamela LeBoss

OBSERVERS SIGNATURE: Pamela LeBoss — DATE: 9/20/06

CERTIFIED BY: ETA — DATE: 8/06

APIS NUMBER: 119 0030 007 EP 24

# Air Observations, Inc.

TAMPA, FLORIDA (813) 988-5100

FAXED 9/21/06

## Source/Process Information

FACILITY NAME: Charlotte Pipe + Foundry Company Plastics Division

SOURCE NAME: Silo No. 7

PERMIT NO: 1190030007 A0

LOCATION ADDRESS: CR 124A; Wildwood FL

CONTACT: Jim Young

PHONE NO: 352/748-8100

PROCESS/PRODUCTION RATE: N/A

CONTROL EQUIPMENT: Baghouse

OPERATING MODE: Continuous

FUEL TYPE/RATE: None

PRODUCTION RATE: 12.5 TPH

PERMITTED RATE: 12.5 TPH

DESCRIBE EMISSION POINT: SW most of six identical white silos located at SW corner of property

HEIGHT ABOVE GROUND LEVEL: ~61 ft

HEIGHT RELATIVE TO OBSERVER: ~61 ft

## Emissions Description

DESCRIBE EMISSIONS

START: None

END: None

PLUME COLOR: No Plume

PLUME TYPE:

WATER DROPLETS PRESENT? YES ☐ NO ☐

IF YES, IS PLUME ATTACHED ☐ DETACHED ☐

## Meteorological Information

BACKGROUND: Sky

BACKGROUND COLOR: Blue / White

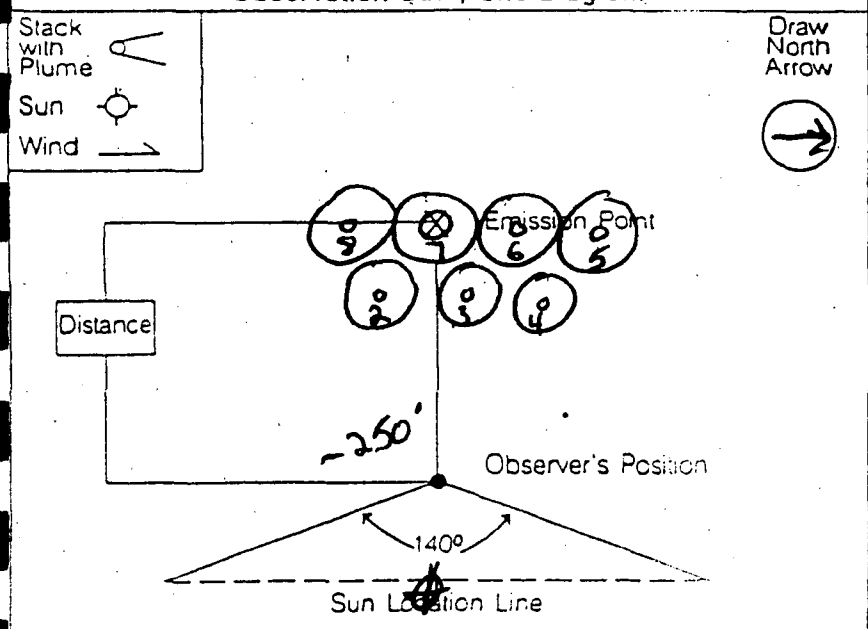
SKY CONDITIONS: CLOUD COVER: Broken

AMBIENT TEMP: ~80°F

WIND SPEED: ~0-3mph

WIND DIRECTION: WNW

## Observation Data, Site Diagram




## Opacity Readings

OBSERVATION: 9/20/06

START TIME: 1015

STOP TIME: 1045

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | 0 | 0 | 0 | 0 | 38 | | | | |
| 9 | 0 | 0 | 0 | 0 | 39 | | | | |
| 10 | 0 | 0 | 0 | 0 | 40 | | | | |
| 11 | 0 | 0 | 0 | 0 | 41 | | | | |
| 12 | 0 | 0 | 0 | 0 | 42 | | | | |
| 13 | 0 | 0 | 0 | 0 | 43 | | | | |
| 14 | 0 | 0 | 0 | 0 | 44 | | | | |
| 15 | 0 | 0 | 0 | 0 | 45 | | | | |
| 16 | 0 | 0 | 0 | 0 | 46 | | | | |
| 17 | 0 | 0 | 0 | 0 | 47 | | | | |
| 18 | 0 | 0 | 0 | 0 | 48 | | | | |
| 19 | 0 | 0 | 0 | 0 | 49 | | | | |
| 20 | 0 | 0 | 0 | 0 | 50 | | | | |
| 21 | 0 | 0 | 0 | 0 | 51 | | | | |
| 22 | 0 | 0 | 0 | 0 | 52 | | | | |
| 23 | 0 | 0 | 0 | 0 | 53 | | | | |
| 24 | 0 | 0 | 0 | 0 | 54 | | | | |
| 25 | 0 | 0 | 0 | 0 | 55 | | | | |
| 26 | 0 | 0 | 0 | 0 | 56 | | | | |
| 27 | 0 | 0 | 0 | 0 | 57 | | | | |
| 28 | 0 | 0 | 0 | 0 | 58 | | | | |
| 29 | 0 | 0 | 0 | 0 | 59 | | | | |
| 30 | 0 | 0 | 0 | 0 | 60 | | | | |

## Compliance Information

RANGE OF OPACITY READINGS: MIN 0 MAX 0

AVERAGE OF HIGHEST 24 CONSECUTIVE READINGS: 0%

SHORT TERM AVERAGE DATA

AVERAGING PERIOD _____ MINUTES ACTUAL AVERAGE _____

## Process Rate Data

I CERTIFY THE ABOVE PROCESS RATE DATA IS TRUE TO THE BEST OF MY KNOWLEDGE.

James Young

## Certification Data, Signatures

OBSERVER'S NAME: Pamela LeBoss

OBSERVER'S SIGNATURE: Pamela LeBoss DATE: 9/20/06

CERTIFIED BY: ETA DATE: 8/06

APIS NUMBER: 119 0030 002/EP07

# ATTACHMENT D
# OPERATION RECORDS

**NONCONFIDENTIAL**
**QUARTERLY REPORT ON OPERATIONS**
**"QUARTER YEAR"**

**FACILITY:** CHARLOTTE PIPE & FOUNDRY COMPANY - PLASTICS DIVISION FLORIDA
**DATE:** 12/01/06
**Month Reported:** Sept.,Oct.,Nov.
**AIR PERMIT NO.** 1190030-009-AO/1190030-010-AC

## A. QUARTERLY 12 MONTH ROLLING TOTALS

| 12 MONTH PERIOD | | | PVC PRODUCTION DATA | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Total PVC | | | Total CPVC | | |
| | | | Pipe Extrusion (lb/12 month) | Resin * Usage (lb/12 month) | Vinyl Chloride Emissions (lbs/yr) | Pipe Extrusion (lb/12 month) | Resin * Usage (lb/12 month) | Vinyl Chloride Emissions (lbs/yr) |
| Oct-05 | Thru | Sep-06 | Confidential | Confidential | 43 | Confidential | Confidential | 3 |
| Nov-05 | Thru | Oct-06 | Confidential | Confidential | 43 | Confidential | Confidential | 3 |
| Dec-05 | Thru | Nov-06 | Confidential | Confidential | 42 | Confidential | Confidential | 3 |
| Permit Limitation | | | | | | | | |

THERE ARE 2 CONFIDENTIAL MATERIAL USAGE SHEETS IN THE CONFIDENTIAL FILE

12-28-06
Jim McDonald

## B. MONTHLY PRODUCTION SUMMARY

| MONTH | PVC PRODUCTION DATA | | | | | |
|---|---|---|---|---|---|---|
| | Plant 2 | | | Plant 10 | | |
| | Pipe Extrusion (lb/month) | Resin Usage Usage (lb/month) | Vinyl Chloride Emissions (lbs/mo) | Pipe Extrusion (lb/month) | Resin Usage Usage (lb/month) | Vinyl Chloride Emissions (lbs/mo) |
| Oct-05 | Confidential | Confidential | 3.3 | Confidential | Confidential | 0.0 |
| Nov-05 | Confidential | Confidential | 3.8 | Confidential | Confidential | 0.0 |
| Dec-05 | Confidential | Confidential | 2.5 | Confidential | Confidential | 0.0 |
| Jan-06 | Confidential | Confidential | 3.5 | Confidential | Confidential | 0.0 |
| Feb-06 | Confidential | Confidential | 3.3 | Confidential | Confidential | 0.0 |
| Mar-06 | Confidential | Confidential | 3.5 | Confidential | Confidential | 0.0 |
| Apr-06 | Confidential | Confidential | 3.8 | Confidential | Confidential | 0.0 |
| May-06 | Confidential | Confidential | 3.7 | Confidential | Confidential | 0.0 |
| Jun-06 | Confidential | Confidential | 3.8 | Confidential | Confidential | 0.0 |
| Jul-06 | Confidential | Confidential | 3.7 | Confidential | Confidential | 0.0 |
| Aug-06 | Confidential | Confidential | 4.0 | Confidential | Confidential | 0.0 |
| Sep-06 | Confidential | Confidential | 3.8 | Confidential | Confidential | 0.0 |
| Oct-06 | Confidential | Confidential | 3.8 | Confidential | Confidential | 0.0 |
| Nov-06 | Confidential | Confidential | 2.3 | Confidential | Confidential | 0.0 |

**NOTE:**
*: PVC pipe production x 0.9242 = PVC resin usage in pipe extrusion production, and CPVC production x 1.0 = CPVC resin used in CPVC pipe production.

CONFIDENTIAL → EMISSION DATA IS NOT CONFIDENTIAL
Jim McDonald
12-28-06

# QUARTERLY REPORT ON VOC AND HAP EMISSIONS
## THIRD QUARTER 2005

**FACILITY:** Charlotte Pipe and Foundry Company - Plastic Division Florida
**DATE:** 9/1/2006
**AIR PERMIT NO.** 1190030-009-AO/1190030-010-AC

### A. QUARTERLY 12 MONTHS ROLLING TOTALS

| 12 MONTH PERIOD | VOC Emissions Data Total Plant Wide | | | | |
|---|---|---|---|---|---|
| | MEK - NON HAP (Tons) | Methanol - HAP (Tons) | Isophorone - HAP (Tons) | VOC's (Tons) | HAP's (Tons) |
| Jul-05 To Jun-06 | 3.86 | 0.03 | 0.18 | 4.38 | 0.21 |
| Aug-05 To Jul-06 | 3.88 | 0.02 | 0.19 | 4.38 | 0.21 |
| Sep-05 To Aug-06 | 3.66 | 0.01 | 0.14 | 4.08 | 0.15 |
| | | | | | |
| Permit Limitation | | 9.9 | 9.9 | 15 | 15 |

### B. MONTHLY VOC EMISSIONS SUMMARY

| Month | VOC Emissions Data Total Plant Wide | | | | |
|---|---|---|---|---|---|
| | MEK - NON HAP (lbs) | Methanol - HAP (lbs) | Isophorone - HAP (lbs) | VOC's (lbs) | HAP's (lbs) |
| Jul-05 | 649.78 | 17.51 | 31.68 | 750.86 | 49.19 |
| Aug-05 | 943.08 | 16.28 | 95.05 | 1137.45 | 111.33 |
| Sep-05 | 923.86 | 1.38 | 47.52 | 1100.70 | 48.90 |
| Oct-05 | 619.41 | 0.00 | 31.68 | 706.08 | 31.68 |
| Nov-05 | 96.13 | 0.19 | 31.68 | 145.15 | 31.87 |
| Dec-05 | 375.77 | 18.07 | 0.00 | 393.84 | 18.07 |
| Jan-06 | 854.25 | 1.07 | 47.52 | 969.65 | 48.59 |
| Feb-06 | 372.53 | 0.00 | 0.00 | 389.79 | 0.00 |
| Mar-06 | 326.08 | 0.38 | 47.52 | 407.08 | 47.91 |
| Apr-06 | 950.19 | 0.76 | 0.00 | 1007.60 | 0.76 |
| May-06 | 837.83 | 0.99 | 0.00 | 881.39 | 0.99 |
| Jun-06 | 773.44 | 0.84 | 23.76 | 862.74 | 24.60 |
| Jul-06 | 680.43 | 0.46 | 47.52 | 763.71 | 47.98 |
| Aug-06 | 503.28 | 0.69 | 7.92 | 533.74 | 8.61 |

# CHARLOTTE
PIPE AND FOUNDRY COMPANY
# PLASTICS
DIVISION

Dept. of Environmental Protection
JAN 04 2007
Southwest District

January 02, 2006

Mr. Jim McDonald
Florida Department of Environmental Protection
Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

RE: Federally Enforceable State Operation Permit Modification
Charlotte Pipe and Foundry Company, Wildwood, Florida
Facility ID: 1190030
FDEP Project No.: 1190030-011-AF
AEI Job No.: N188-83

Dear Mr. McDonald:

Per your conversation with Nick Peth, Charlotte Pipe and Foundry Company, Plastics Division (CPFC) is submitting the following list of updated throughput capacities for the silos located at the CPFC Wildwood, Florida facility. Based on equipment capabilities, the facility is currently permitted to have a maximum material production rate of 12.5 tons per hour for PVC or CPVC. At this time the facility is not capable of reaching the permitted maximum material production rate and is requesting that the following throughput limits be established for the facility's silos through a Federally Enforceable State Operation (FESOP) modification:

| Emission Unit ID # | Emission Source ID # | Emission Source Description | Emission Point ID # | Requested Throughput Limit |
|---|---|---|---|---|
| 002 | ES-02 | PVC Storage Silo 2 | EP-02 | 16,000 lbs/hr |
| 002 | ES-03 | PVC Storage Silo 3 | EP-03 | 13,000 lbs/hr |
| 002 | ES-04 | PVC Storage Silo 4 | EP-04 | 15,000 lbs/hr |
| 002 | ES-05 | PVC Storage Silo 5 | EP-05 | 15,000 lbs/hr |
| 002 | ES-06 | PVC Storage Silo 6 | EP-06 | 13,000 lbs/hr |
| 002 | ES-07 | PVC Resin Storage Silo 7 | EP-07 | 15,000 lbs/hr |
| 007 | ES-36 | CPVC Compound Storage Silo 1 | EP-24 | 3,500 lbs/hr |

PO Box 1339 – Monroe, NC 28111-1339
Phone: Monroe – 704-289-2531 Charlotte - 704-372-3650

CPFC greatly appreciates your time reviewing this matter. Should you have any questions or require any additional information, please contact me at (704) 291-3211 or Mr. James Neubauer of Aware Environmental ® Inc. at (704) 815-1686.

Sincerely,

Reese W. Sumrall, Jr.
Technical Manager

cc: File
N. Peth, CPFC
Z. Young, CPFC
J. Neubauer, AEI