



PMN2009P1

U.S. ENVIRONMENTAL PROTECTION AGENCY
AGENCY USE ONLY
PREMANUFACTURE NOTICE
FOR NEW CHEMICAL SUBSTANCES
Submission Report Number
GENERAL INSTRUCTIONS
Part I - GENERAL INFORMATION
Part II - HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE
Part III - LIST OF ATTACHMENTS
OPTIONAL INFORMATION
CONFIDENTIALITY CLAIMS
TEST DATA AND OTHER DATA
TYPE OF NOTICE (Check Only One)



PMN2009P2

PMN Page 2

NON-CBI SUBMISSION

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**CERTIFICATION --** A printed copy of this signature page, with original signature, must be submitted with CD or paper submission.

I certify that to the best of my knowledge and belief:

1. The company named in Part I, section A, subsection 1a of this notice form intends to manufacture, import or process for a commercial purpose, other than in small quantities solely for research and development, the substance identified in Part I, Section B.
2. All information provided in this notice is complete and truthful as of the date of submission.
3. I am submitting with this notice all test data in my possession or control and a description of all other data known to or reasonably ascertainable by me as required by §720.50 of the Premanufacture Notification Rule.

**Additional Certification Statements:**

If you are submitting a PMN, Intermediate PMN, Consolidated PMN, or SNUN, check the following **user fee** certification statement that applies:

- The Company named in Part I, Section A has remitted the fee of \$2500 specified in 40 CFR 700.45(b), or
- The Company named in Part I, Section A has remitted the fee of \$1000 for an Intermediate PMN (defined @ 40 CFR 700.43) in accordance with 40 CFR 700.45(b), or
- The Company named in Part I Section A is a small business concern under 40 CFR 700.43 and has remitted a fee of \$100 in accordance with 40 CFR 700.45(b).

If you are submitting a **Low Volume Exemption (LVE)** application in accordance with 40 CFR 723.50(c)(1) or a **Low Release and Low Exposure Exemption (LoRex)** application in accordance with 40 CFR 723.50(c)(2), check the following certification statements:

- The manufacturer submitting this notice intends to manufacture or import the new chemical substance for commercial purposes, other than in small quantities solely for research and development, under the terms of 40 CFR 723.50.
- The manufacturer is familiar with the terms of this section and will comply with those terms; and
- The new chemical substance for which the notice is submitted meets all applicable exemption conditions.
- If this application is for an LVE in accordance with 40 CFR 723.50(c)(1), the manufacturer intends to commence manufacture of the exempted substance for commercial purposes within 1 year of the date of the expiration of the 30 day review period.

The accuracy of the statements you make in this notice should reflect your best prediction of the anticipated facts regarding the chemical substance described herein. Any knowing and willful misrepresentation is subject to criminal penalty pursuant to 18 USC 1001.

Confidential

|  |  |      |                          |
|--|--|------|--------------------------|
| Signature and title of Authorized Official (Original Signature Required) |  | Date | <input type="checkbox"/> |
|--|--|------|--------------------------|



PMN2009P3

PMN Page 3

NON-CBI SUBMISSION

Part I -- GENERAL INFORMATION

Section A -- SUBMITTER IDENTIFICATION

Mark (X) the "Confidential" box next to any subsection you claim as confidential

|   |   |                          |   |
|---|---|--------------------------|---|
| <b>1a. Person Submitting Notice (in U.S.)</b>                             |   | Confidential             |   |
| Name of Authorized Official   |   | (first)                  | (last)                                  |
| Position  |   |                          |   |
| Company   |   |                          |   |
| Mailing Address (number & street)   |   |                          |   |
| City  | State   | Postal Code              |   |
| email   |   |                          |   |
| <b>b. Agent (if Applicable)</b>   |   | Confidential             |   |
| Name of Authorized Official   |   | (first)                  | (last)                                  |
| Position  |   |                          |   |
| Company   |   |                          |   |
| Mailing Address (number & street)   |   |                          |   |
| City  | State   | Postal Code              |   |
| e-mail  | Telephone (include area code)   |                          |   |
| <b>c. Joint Submitter (if applicable)</b>                                 |   | Confidential             |   |
| If you are submitting this notice as part of a joint submission, mark (X) |   | <input type="checkbox"/> |   |
| Name of Authorized Official   |   | (first)                  | (last)                                  |
| Position  |   |                          |   |
| Company   |   |                          |   |
| Mailing Address (number & street)   |   |                          |   |
| City  | State   | Postal Code              |   |
| e-mail  | Telephone (include area code)   |                          |   |
| <b>2. Technical Contact (in U.S.)</b>                                     |   | Confidential             |   |
| Name of Authorized Official   |   | (first)                  | (last)                                  |
| Position  |   |                          |   |
| Company   |   |                          |   |
| Mailing Address (number & street)   |   |                          |   |
| City  | State   | Postal Code              |   |
| e-mail  | Telephone (include area code)   |                          |   |
| <b>3.</b>   | If you have had a prenotice communication (PC) concerning this notice and EPA assigned a PC Number to the notice, enter the number.   | Mark (X) if none         |   |
|   |   | <input type="checkbox"/> | Confidential                            |
| <b>4.</b>   | If you previously submitted an exemption application for the chemical substance covered by this notice, enter the exemption number assigned by EPA. If you previously submitted a PMN for this substance enter the PMN number assigned by EPA (i.e. withdrawn or incomplete). | Mark (X) if none         |   |
|   |   | <input type="checkbox"/> | Confidential                            |
| <b>5.</b>   | If you have submitted a notice of Bona fide intent to manufacture or import for the chemical substance covered by this notice, enter the notice number assigned by EPA.   | Mark (X) if none         |   |
|   |   | <input type="checkbox"/> | Confidential                            |
| <b>6. Type of Notice - Mark (X)</b>                                       |   |                          |   |
| 1.  | Manufacture Only <input type="checkbox"/>   | 2.                       | Import Only <input type="checkbox"/>    |
|   | Binding Option <input type="checkbox"/>   |                          | Binding Option <input type="checkbox"/> |
|   |   | 3.                       | Both <input type="checkbox"/>           |



PMN2009P4

## PMN Page 4

NON-CBI SUBMISSION

| Part I – GENERAL INFORMATION -- Continued   |                          |  |   |
|---|--------------------------|--|---|
| <b>Section B – CHEMICAL IDENTITY INFORMATION:</b>   |                          | You must provide a currently correct Chemical Abstracts (CA) name of the substance based on current CA index nomenclature rules and conventions. |   |
| Mark (X) the "Confidential" box next to any item you claim as confidential  |                          |  |   |
| Complete either item 1 (Class 1 or 2 substances) or 2 (Polymers) as appropriate. Complete all other items.  |                          |  |   |
| If another person will submit chemical identity information for you (for either Item 1 or 2), mark (X) the box at the right. Identify the name, company, and address of that person in a continuation sheet.  |                          |  | <input type="checkbox"/>                                |
| 1. Class 1 or 2 chemical substances (for definitions of class 1 and class 2 substances, see the Instructions Manual)  | Class 1                  | Class 2  | CBI   |
| a. Class of substance - Mark (X)  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                                |
| b. Chemical name (Currently correct Chemical Abstracts (CA) Name that is consistent with TSCA Inventory listings for similar substances. For Class 1 substances a CA Index Name must be provided. For Class 2 substances either a CA Index Name or CA Preferred Name must be provided, which ever is appropriate based on current CA index nomenclature rules and conventions). |                          |  | <input type="checkbox"/>                                |
| CAS Registry Number (if a number already exists for the substance)  |                          |  |   |
| c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice: (check one).   |                          |  |   |
| <b>Method 1</b> (CAS Inventory Expert Service - a copy of the Identification report obtained from the CAS Inventory Expert Services must be submitted as an attachment to this notice)  | <input type="checkbox"/> | IES Order Number   | <b>Method 2</b> (Other Source) <input type="checkbox"/> |
| Enter Attachment filename for Part I, Section B, 1. c.  |                          |  | <input type="checkbox"/>                                |
| d. Molecular formula  | <input type="checkbox"/> |  |   |
| e. For a class 1 substance, provide a complete and correct chemical structure diagram. For a class 2 substance, provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained.  |                          |  | <input type="checkbox"/>                                |
| Enter Attachment filename for Part I, Section B, 1. e.  |                          |  | <input type="checkbox"/>                                |



PMN2009P4A

### PMN Page 4a

NON-CBI SUBMISSION

For a class 2 substance - (1) List the immediate precursor substances with their respective CAS Registry Numbers. (2) Describe the nature of the reaction or process. (3) Indicate the range of composition and the typical composition (where appropriate).

Confidential

e. (1) List the immediate precursor substance names with their respective CAS Registry Numbers.

Enter Attachment filename for Part I, Section B, 1. e. (1)

e. (2) Describe the nature of the reaction or process.

Enter Attachment filename for Part I, Section B, 1. e. (2)

e. (3) Indicate the range of composition and the typical composition (where appropriate).

Enter Attachment filename for Part I, Section B, 1. e. (3)



PMN2009P5

Part I -- GENERAL INFORMATION -- Continued

Section B -- CHEMICAL IDENTITY INFORMATION -- Continued

2. Polymers (For a definition of polymer, see the Instructions Manual.) Confidential

a. Indicate the number-average weight of the lowest molecular weight composition of the polymer you intend to manufacture. Indicate maximum weight percent of low molecular weight species (not including residual monomers, reactants, or solvents) below 500 and below 1,000 absolute molecular weight of that composition.

Confidential checkbox

Describe the methods of measurement or the basis for your estimates:

GPC [ ] Other (Specify Below) [ ]

Specify Other:

(i) lowest number average molecular weight: (ii) maximum weight % below 500 molecular weight: (iii) maximum weight % below 1000 molecular weight:

Enter Attachment filename for Part I, Section B, 2. a.

Attachment checkbox

b. You must make separate confidentiality claims for monomer or other reactant identity, composition information, and residual information. Mark (X) the "Confidential" box next to any item you claim as confidential

- (1) - Provide the specific chemical name and CAS Registry Number (if a number exists) of each monomer or other reactant used in the manufacture of the polymer.
(2) - Mark (X) this column if entry in column (1) is confidential.
(3) - Indicate the typical weight percent of each monomer or other reactant in the polymer.
(4) - Choose "yes" from drop down menu if you want a monomer or other reactant used at two weight percent or less to be listed as part of the polymer description on the TSCA Chemical Substance Inventory.
(5) - Mark (X) this column if entries in columns (3) and (4) are confidential.
(6) - Indicate the maximum weight percent of each monomer or other reactant that may be present as a residual in the polymer as manufactured for commercial purposes.
(7) - Mark (X) this column if entry in column (6) is confidential.

Table with 7 columns: Monomer or other reactant specific chemical name (1), CBI (2), Typical composition (3), Include in identity (4), CBI (5), Max residual (6), CBI (7). Includes rows for CAS Registry Number (1).

Mark (X) this box if the data continues on the next page.

Continuation checkbox



PMN2009P5A

### PMN Page 5a

NON-CBI SUBMISSION

|  |                  |   |                          |
|--|------------------|---|--------------------------|
| c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice (check one).   |                  |   | <b>CBI</b>               |
| <b>Method 1</b> (CAS Inventory Expert Service - a copy of the identification report obtained from CAS Inventory Expert Service must be submitted as an attachment to this notice) <input type="checkbox"/> | IES Order Number | <b>Method 2</b> (other source) <input type="checkbox"/> |                          |
| Enter Attachment filename for Part I, Section B. 2. c.   |                  |   | <input type="checkbox"/> |
| d. The currently correct Chemical Abstracts (CA) name for the polymer that is consistent with TSCA Inventory listings for similar polymers.  |                  |   | <input type="checkbox"/> |
|  |                  |   |                          |
| CAS Registry Number (if a number already exists for the substance)   |                  |   |                          |
| e. Provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained.  |                  |   | <input type="checkbox"/> |
|  |                  |   |                          |
| Enter Attachment filename for Part I, Section B. 2. e.   |                  |   | <input type="checkbox"/> |



PMN2009P6

PMN Page 6

NON-CBI SUBMISSION

Part I -- GENERAL INFORMATION -- Continued

Section B -- CHEMICAL IDENTITY INFORMATION -- Continued

3. Impurities

- (a) - Identify each impurity that may be reasonably anticipated to be present in the chemical substance as manufactured for commercial purpose. Provide the CAS Registry Number if available. If there are unidentified impurities, enter "unidentified."
- (b) - Estimate the maximum weight % of each impurity. If there are unidentified impurities, estimate their total weight %.

| Impurity (a) | CAS Registry Number (a) | Maximum Percent % (b) | Confidential |
|--------------|-------------------------|-----------------------|--------------|
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |
|              |                         |                       |              |

Mark (X) this box if the data continues on the next page.

|   |  |                          |
|---|--|--------------------------|
| Enter Attachment filename for Part I, Section B, 3. |  | <input type="checkbox"/> |
|---|--|--------------------------|

4. Synonyms - Enter any chemical synonyms for the new chemical identified in subsection 1 or 2.

|  |                          |
|--|--------------------------|
|  | <input type="checkbox"/> |
|--|--------------------------|

|   |  |                          |
|---|--|--------------------------|
| Enter Attachment filename for Part I, Section B, 4. |  | <input type="checkbox"/> |
|---|--|--------------------------|

5. Trade identification - List trade names for the new chemical substance identified in subsection 1 or 2.

|  |                          |
|--|--------------------------|
|  | <input type="checkbox"/> |
|--|--------------------------|

|   |  |                          |
|---|--|--------------------------|
| Enter Attachment filename for Part I, Section B, 5. |  | <input type="checkbox"/> |
|---|--|--------------------------|

6. Generic chemical name - If you claim chemical identify as confidential, you must provide a generic name for your substance that reveals the specific chemical identity of the new chemical substance to the maximum extent possible. Refer to the TSCA Chemical Substance Inventory, 1985 Edition, Appendix B for guidance on developing generic names.

|  |  |
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|--|--|

|   |  |  |
|---|--|--|
| Enter Attachment filename for Part I, Section B, 6. |  |  |
|---|--|--|

7. Byproducts - Describe any byproducts resulting from the manufacture, processing, use, or disposal of the new chemical substance. Provide the CAS Registry Number if available.

| Byproduct (1) | CAS Registry Number (2) | Confidential |
|---------------|-------------------------|--------------|
|               |                         |              |
|               |                         |              |
|               |                         |              |
|               |                         |              |

Mark (X) this box if the data continues on the next page.





PMN2009P7

PMN Page 7

NON-CBI SUBMISSION

Part I -- GENERAL INFORMATION -- Continued

Section C -- PRODUCTION, IMPORT, AND USE INFORMATION:

The information on this page refers to consolidated chemical number(s): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6

Mark (X) the "Confidential" box next to any item you claim as confidential.

1. Production volume -- Estimate the maximum production volume during the first 12 months of production. Also estimate the maximum production volume for any consecutive 12-month period during the first three years of production. Estimates should be on 100% new chemical substance basis. For a Low Volume Exemption application, if you choose to have your notice reviewed at a lower production volume than 10,000 kg/yr, specify the volume and mark (x) in the binding box. If granted, you are bound to this volume.

Table with 4 columns: Maximum first 12-month production (kg/yr) (100% new chemical substance basis), Maximum 12-month production (kg/yr) (100% new chemical substance basis), Confidential, Binding Option Mark (X). Includes a row for attachment filename and CBI checkbox.

2. Use Information -- You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the new substance, and other use information. Mark (X) the "Confidential" Box next to any item you claim as confidential.

- a. (1) --Describe each intended category of use of the new chemical substance by function and application. (2) --Mark (X) this column if entry column (1) is confidential business information (CBI). (3) --Indicate your willingness to have the information provided in column (1) binding. (4) --Estimate the percent of total production for the first three years devoted to each category of use. (5) --Mark (X) this column if entry in column (4) is confidential business information (CBI). (6) --Estimate the percent of the new substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use. (7) --Mark (X) this column if entry in column (6) is confidential business information (CBI). (8) --Indicate % of product volume expected for the listed "use" sectors. Mark more than one box if appropriate. Mark (X) to indicate your willingness to have the use type provided in (8) binding. (9) --Mark (X) this column if entry(ies) in column (8) is (are) confidential business information (CBI).

Table with 11 columns: Category of use (1), CBI (2), Binding Option Mark (X) (3), Production % (4), CBI (5), % in Formulation (6), CBI (7), % of substance expected per use (8) with sub-columns Site-limited, Consumer, Industrial, Commercial, Binding Option, and CBI (9).

\* If you have identified a "consumer" use, please provide on a continuation sheet a detailed description of the use(s) of this chemical substance in consumer products. In addition include estimates of the concentration of the new chemical substance as expected in consumer products and describe the chemical reactions by which this substance loses its identity in the consumer product.

Mark (X) this box if the data continues on the next page. [ ]

- b. Generic use description If you claim any category of use description in subsection 2a as confidential, enter a generic description of that category. Read the Instruction Manual for examples of generic use descriptions.

Table with 2 columns: Enter Attachment filename for Part I, Section C, 2. b. and CBI checkbox.

3. Hazard Information -- Include in the notice a copy of reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person who is reasonably likely to be exposed to this substance regarding protective equipment or practices for the safe handling, transport, use, or disposal of the new substance. List in part III hazard information you include.

Mark (X) this box if you attach hazard information. [ ]



PMN2009P8

PMN Page 8

NON-CBI SUBMISSION

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

Section A -- INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER

Mark (X) the "Confidential" box next to any item you claim as confidential

The information on pages 8 and 8a refer to consolidated chemical number(s): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6

Complete section A for each type of manufacture, processing, or use operation involving the new chemical substance at industrial sites you control. Importers do not have to complete this section for operations outside the U.S.; however, you may still have reporting requirements if there are further industrial processing or use operations after import. You must describe these operations. See instructions manual

1. Operation description
a. Identity -- Enter the identity of the site at which the operation will occur. Confidential

Name
Site address (number and street)
City County
State ZIP code

If the same operation will occur at more than one site, enter the number of sites. Identify the additional sites on a continuation sheet, and if any of the sites have significantly different production rates or operations, include all the information requested in this section for those sites as attachments. ->

Mark (X) this box if the data continues on the next page.

b. Type -- Manufacturing [ ] Processing [ ] Use [ ]

c. Amount and Duration -- Complete 1 or 2 as appropriate Confidential

Table with 4 columns: 1. Batch, Maximum kg/batch (100% new chemical substance), Hours/batch, Batches/year
2. Continuous, Maximum kg/day (100% new chemical substance), Hours/day, Days/year

d. Process description Mark (X) to indicate your willingness to have your process description binding. [ ]

- (1) Diagram the major unit operation steps and chemical conversions. Include interim storage and transport containers (specify- e.g. 5 gallon pails, 55 gallon drum, rail car, tank truck, etc.).
(2) Provide the identity, the approximate weight (by kg/day or kg/batch on a 100% new chemical substance basis), and entry point of all starting materials and feedstocks (including reactants, solvents, catalysts, etc.), and of all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch.).
(3) Identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance. If releasing to two media at the same step, assign a second release number for the second medium.

[ ]



PMN2009P8A

### PMN Page 8a

NON-CBI SUBMISSION

Diagram of the major unit operation steps.

Confidential



|  |   |
|--|---|
| <p>Diagram of the major unit operation steps.</p> <p><i>(The diagram area contains very faint, illegible text and a grid structure, likely representing a process flow or unit operation steps.)</i></p> | <p>Confidential</p> <p><input type="checkbox"/></p> |
|--|---|

Enter Attachment filename for Part II, Section A, 1. d.





PMN2009P9

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE -- Continued

Section A -- INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER -- Continued

The information on pages 9 and 9a refer to consolidated chemical number(s):  1  2  3  4  5  6

- 2. Occupational Exposure** -- You must make separate confidentiality claims for the description of worker activity, physical form of the new chemical substance, number of workers exposed, and duration of activity. Mark (X) the "Confidential" box next to any item you claim as confidential.
- (1) -- Describe the activities (i.e. bag dumping, tote filling, unloading drums, sampling, cleaning, etc.) in which workers may be exposed to the substance.
  - (2) -- Mark (X) this column if entry in column (1) is confidential business information (CBI).
  - (3) -- Describe any protective equipment and engineering controls used to protect workers.
  - (4) and (6) -- Indicate your willingness to have the information provided in column (3) or (5) binding.
  - (5) -- Indicate the physical form(s) of the new chemical substance (e.g., solid: crystal, granule, powder, or dust) and % new chemical substance (if part of a mixture) at the time of exposure.
  - (7) -- Mark (X) this column if entries in columns (3) and (5) are confidential business information (CBI).
  - (8) -- Estimate the maximum number of workers involved in each activity for all sites combined.
  - (9) -- Mark (X) this column if entry in column (8) is confidential business information (CBI).
  - (10) and (11) -- Estimate the maximum duration of the activity for any worker in hours per day and days per year.
  - (12) -- Mark (X) this column if entries in columns (10) and (11) are confidential business information (CBI).

| Worker activity<br>(i.e., bag dumping, filling<br>drums)<br>(1) | CBI<br>(2) | Protective Equipment/<br>Engineering Controls<br>(3) | Binding<br>Option<br>Mark (X)<br>(4) | Physical<br>form(s)<br>& % new<br>substance<br>(5) | Binding<br>Option<br>Mark (X)<br>(6) | CBI<br>(7) | # of<br>Workers<br>Exposed<br>(8) | CBI<br>(9) | Maximum Duration |                 | CBI<br>(12) |
|---|------------|--|--------------------------------------|--|--------------------------------------|------------|-----------------------------------|------------|------------------|-----------------|-------------|
|   |            |  |                                      |  |                                      |            |                                   |            | Hrs/Day<br>(10)  | Days/Yr<br>(11) |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |
|   |            |  |                                      |  |                                      |            |                                   |            |                  |                 |             |

Mark (X) this box if the data continues on the next page.

Enter Attachment filename for Part II, Section A on the bottom of page 9a.



PMN2009P9A

PMN Page 9a

NON-CBI SUBMISSION

**3. Environmental Release and Disposal** -- You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.

- (1) -- Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).
- (2) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology (in kg/day or kg/batch).
- (3) -- Mark (X) this column if entries in columns (1) and (2) are confidential business information (CBI).
- (4) -- Identify the media (stack air, fugitive air (optional-see Instruction Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify)) to which the new substance will be released from that release point.
- (5) -- a. Describe control technology, if any, and control efficiency that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method and state whether it is approved for disposal of RCRA hazardous waste. On a continuation sheet, for each site describe any additional disposal methods that will be used and whether the waste is subject to secondary or tertiary on-site treatment. b. Estimate the amount released to the environment after control technology (in kg/day).
- (6) -- Mark (X) this column if entries in columns (4) and (5) are confidential business information (CBI).
- (7) -- Identify the destination(s) of releases to water. Please supply NPDES (National Pollutant Discharge Elimination System) numbers for direct discharges or NPDES numbers of the POTW (Publicly Owned Treatment Works). Mark (X) if the POTW name or NPDES # is confidential business information (CBI).

| Release Number<br>(1) | Amount of New Substance Released |      | CBI<br>(3) | Medium of release<br>e.g. Stack air<br>(4) | Control technology and efficiency (you may wish to optionally attach efficiency data) |                  |      | CBI<br>(6) |
|-----------------------|----------------------------------|------|------------|--|---|------------------|------|------------|
|                       | (2a)                             | (2b) |            |  | (5a)  | Binding Mark (X) | (5b) |            |
|                       |                                  |      |            |  |   |                  |      |            |
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Mark (X) this box if the data continues on the next page.

| (7) Mark (X) the destination(s) of releases to water. |                                     | NPDES# | CBI                      |
|---|-------------------------------------|--------|--------------------------|
| <input type="checkbox"/>                              | POTW--provide name(s)               |        | <input type="checkbox"/> |
| <input type="checkbox"/>                              | Navigable waterway- provide name(s) |        | <input type="checkbox"/> |
| <input type="checkbox"/>                              | Other--Specify                      |        | <input type="checkbox"/> |

Enter Attachment filename for Part II, Section A.



PMN2009P10

### PMN Page 10

NON-CBI SUBMISSION

## Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE – Continued

### Section B -- INDUSTRIAL SITES CONTROLLED BY OTHERS

The information on pages 10 and 10a refer to consolidated chemical number(s):  1  2  3  4  5  6

Complete section B for typical processing or use operations involving the new chemical substance at sites you do not control. Importers do not have to complete this section for operations outside the U.S.; however, you must report any processing or use activities after import. See the Instructions Manual. Complete a separate section B for each type of processing, or use operation involving the new chemical substance. If the same operation is performed at more than one site describe the typical operation common to these sites. Identify additional sites on a continuation sheet.

**1(a). Operation Description** – To claim information in this section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

- (1) – Diagram the major unit operation steps and chemical conversions, including interim storage and transport containers (specify - e.g. 5 gallon pails, 55 gallon drums, rail cars, tank trucks, etc). On the diagram, identify by letter and briefly describe each worker activity.
- (2) – Either in the diagram or in the text field 1(b) below, provide the identity, the approximate weight (by kg/day or kg/batch, on an 100% new chemical substance basis), and entry point of all feedstocks (including reactants, solvents and catalysts, etc) and all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch).
- (3) – Either in the diagram or in the text field 1(b) below, identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance.
- (4) – Please enter the # of sites (remember to identify the locations of these sites on a continuation sheet):

Number of Sites

Confidential

**1(b).** (Optional) This space is for a text description to clarify the diagram above.

Confidential

Enter Attachment filename for Part II, Section B on the bottom of page 10a.



PMN2009P10A

### PMN Page 10a

NON-CBI SUBMISSION

#### 2. Worker Exposure/Environmental Release

- (1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
  - (2) -- Estimate the number of workers exposed for all sites combined.
  - (4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
  - (6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
  - (7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
  - (9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
  - (10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
  - (12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
  - (14) -- Identify byproducts which may result from the operation.
- (3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

| Letter of Activity | # of Workers Exposed | CBI | Duration of Exposure |      | CBI | Protective Equip./Engineering Controls/Physical Form | % new substance | % in Formulation | CBI |
|--------------------|----------------------|-----|----------------------|------|-----|--|-----------------|------------------|-----|
|                    |                      |     | (4a)                 | (4b) |     |  |                 |                  |     |
| (1)                | (2)                  | (3) | (4a)                 | (4b) | (5) | (6)  | (6)             | (7)              | (8) |
|                    |                      |     |                      |      |     |  |                 |                  |     |
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| Release Number | Amount of New Substance Released |       | CBI  | Media of Release & Control Technology | CBI  |
|----------------|----------------------------------|-------|------|---------------------------------------|------|
|                | (10a)                            | (10b) |      |                                       |      |
| (9)            | (10a)                            | (10b) | (11) | (12)                                  | (13) |
|                |                                  |       |      |                                       |      |
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Mark (X) this box if the data continues on the next page.

(14) Byproducts:

(15) CBI

Enter Attachment filename for Part II, Section B.



PMN2009P11

**OPTIONAL POLLUTION PREVENTION INFORMATION**

To claim information in the following section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

In this section you may provide information not reported elsewhere in this form regarding your efforts to reduce or minimize potential risks associated with activities surrounding manufacturing, processing, use and disposal of the PMN substance. Please include new information pertinent to pollution prevention, including source reduction, recycling activities and safer processes or products available due to the new chemical substance. Source reduction includes the reduction in the amount or toxicity of chemical wastes by technological modification, process and procedure modification, product reformulation, and/or raw materials substitution. Recycling refers to the reclamation of useful chemical components from wastes that would otherwise be treated or released as air emissions or water discharges, or land disposal. Quantitative or qualitative descriptions of pollution prevention, source reduction and recycling should emphasize potential risk reduction in addition to compliance with existing regulatory requirements. The EPA is interested in the information to assess overall net reductions in toxicity or environmental releases and exposures, not the shifting of risks to other media (e.g., air to water) or nonenvironmental areas (e.g., occupational or consumer exposure). To the extent known, information about the technology being replaced will assist EPA in its relative risk determination. In addition, information on the relative cost or performance characteristics of the PMN substance to potential alternatives may be provided.

Describe the expected net benefits, such as

- (1) an overall reduction in risk to human health or the environment;
- (2) a reduction in the generation of waste materials through recycling, source reduction or other means;
- (3) a reduction in the use of hazardous starting materials, reagents, or feedstocks;
- (4) a reduction in potential toxicity, human exposure and/or environmental release; or
- (5) the extent to which the new chemical substance may be a substitute for an existing substance that poses a greater overall risk to human health or the environment.

Information provided in this section will be taken into consideration during the review of this substance. See PMN Instructions Manual and Pollution Prevention Guidance manual for guidance and examples.

[Empty area for providing pollution prevention information]

Enter Attachment filename for Pollution Prevention Page 11.







PMN2009P12

PMN Page 12

NON-CBI SUBMISSION

Part III -- LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form, test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of any paper attachments. In the Number of Pages column below, enter the inclusive page numbers of each attachment for paper submissions or enter the total number of pages for each attachment for electronic submissions. Electronic attachments can be identified by filename.

Mark (X) the "Confidential" box next to any attachment name or filename you claim as confidential. Read the Instructions Manual for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the notice form a sanitized version of any attachment in which you claim information as confidential.

| #   | Attachment Name | Attachment Filename | Number of Pages | Associated PMN Section Number | CBI |
|-----|-----------------|---------------------|-----------------|-------------------------------|-----|
| 001 | PMN attachment  | blank page.doc      | 30              |                               |     |
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Mark (X) this box if the data continues on the next page.



## PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

The information on this page refers to chemical number(s):  1  2  3  4  5  6

To assist EPA's review of physical and chemical properties data, please complete the following worksheet for data you provide and include it in the notice. Identify the property measured, the value of the property, the units in which the property is measured (as necessary), and whether or not the property is claimed as confidential. Give the attachment number (found on page 12) in column (b). The physical state of the neat substance should be provided. These measured properties should be for the neat (100% pure) chemical substance. Properties that are measured for mixtures or formulations should be so noted (% PMN substance in \_\_\_). You are not required to submit this worksheet; however, EPA strongly recommends that you do so, as it will simplify the review and ensure that confidential information is properly protected. You should submit this worksheet as a supplement to your submission of test data. This worksheet is not a substitute for submission of test data.

| Property (a)                          | Unit | Mark X if Provided       | Attachment Number (b) | Value (c)                |                          |                          | Measured or Estimate (M or E) | CBI Mark (X) (d) |
|---------------------------------------|------|--------------------------|-----------------------|--------------------------|--------------------------|--------------------------|-------------------------------|------------------|
|                                       |      |                          |                       | (solid)                  | (liquid)                 | (gas)                    |                               |                  |
| Physical state of neat substance      |      | <input type="checkbox"/> |                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                               |                  |
| Vapor Pressure @ Temperature          | °C   | <input type="checkbox"/> |                       |                          |                          | Torr                     |                               |                  |
| Density/relative density              |      | <input type="checkbox"/> |                       |                          |                          | g/cm3                    |                               |                  |
| Solubility                            |      |                          |                       |                          |                          |                          |                               |                  |
| @ Temperature                         | °C   | <input type="checkbox"/> |                       |                          |                          | g/L                      |                               |                  |
| Solvent                               |      |                          |                       |                          |                          |                          |                               |                  |
| Solubility in Water @ Temperature     | °C   | <input type="checkbox"/> |                       |                          |                          | g/L                      |                               |                  |
| Melting Temperature                   |      | <input type="checkbox"/> |                       |                          |                          | °C                       |                               |                  |
| Boiling / Sublimation temperature @   | Torr | <input type="checkbox"/> |                       |                          |                          | °C                       |                               |                  |
| Spectra                               |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Dissociation constant                 |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Octanol / water partition coefficient |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Henry's Law constant                  |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Volatilization from water             |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Volatilization from soil              |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| pH@ concentration                     |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Flammability                          |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Explosibility                         |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Adsorption / Coefficient              |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Other – Specify                       |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |
| Other – Specify                       |      | <input type="checkbox"/> |                       |                          |                          |                          |                               |                  |



### ATTACHMENT HEADER SHEET

The information on this page refers to chemical numbers:

To avoid EPA review of physical and chemical properties data, please include the following worksheet for data you provide and indicate 2 in the "Physical and Chemical Properties" column. The values of the properties are not required to be provided, but the physical and chemical properties are required to be provided. The physical state of the test substance should be provided. These measured properties should be for the most stable form of the test substance. EPA strongly recommends that you do not use a "worst case" approach to estimate the physical and chemical properties of a test substance. EPA strongly recommends that you do not use a "worst case" approach to estimate the physical and chemical properties of a test substance. EPA strongly recommends that you do not use a "worst case" approach to estimate the physical and chemical properties of a test substance.

Attachment Number 001

Attachment Name

PMN attachment

Associated PMN Section Number

N/A

Does not contain CBI

Report Number

| Physical and Chemical Properties | Yes                      | No                       |
|----------------------------------|--------------------------|--------------------------|
| Vapor Pressure (kPa)             | <input type="checkbox"/> | <input type="checkbox"/> |
| Boiling Point (°C)               | <input type="checkbox"/> | <input type="checkbox"/> |
| Melting Point (°C)               | <input type="checkbox"/> | <input type="checkbox"/> |
| Density (g/cm³)                  | <input type="checkbox"/> | <input type="checkbox"/> |
| Specific Gravity                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Flash Point (°C)                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Autoignition Temperature (°C)    | <input type="checkbox"/> | <input type="checkbox"/> |
| Explosion Limit (Lower %)        | <input type="checkbox"/> | <input type="checkbox"/> |
| Explosion Limit (Upper %)        | <input type="checkbox"/> | <input type="checkbox"/> |
| Stability                        | <input type="checkbox"/> | <input type="checkbox"/> |
| Reactivity                       | <input type="checkbox"/> | <input type="checkbox"/> |
| Acid-Base Character              | <input type="checkbox"/> | <input type="checkbox"/> |
| Volatility (Non-air)             | <input type="checkbox"/> | <input type="checkbox"/> |
| Volatility (Air)                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Other - Specify                  | <input type="checkbox"/> | <input type="checkbox"/> |