

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.

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. →

of sites

Mark (X) this box if you attach a continuation sheet.

b. Type --
Mark (X)

Manufacturing

Processing

Use

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

| | Maximum kg/batch (100 % new chemical substance) | Hours/batch | Batches/year |
|---------------|---|-------------|--------------|
| 1. Batch | | | |
| 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, and 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.

Mark (X) this box if you attach a continuation sheet.

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

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

- 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 (e.g. 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 entry in column (5) is 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 (e.g. bag dumping, filling drums) | CBI | Protective Equipment/ Engineering Controls | Binding Option Mark (x) | Physical form(s) (e.g. solid: powder) and % new substance | Binding Option Mark (x) | CBI | # of Workers Exposed | CBI | Maximum duration | CBI | |
|--|-----|---|-------------------------------|--|-------------------------------|-----|----------------------------|-----|---------------------|-----------------|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) Hrs/day | (11) Days/yr | (12) |
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Mark (X) this box if you attach a continuation sheet.

- 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 of release i.e. stack air, fugitive air (optional-see Instruction Manual), surface water, on-site or off-site land or incineration, POTW, or other (please 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 dischargers 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 (1) | Amount of new substance released | | CBI | Media of release e.g. stack air (4) | Control technology and efficiency (you may wish to optionally attach efficiency data) | | | CBI | |
|--------------------------|-------------------------------------|------|-----|--|---|---------------------|------|-----|-----|
| | (2a) | (2b) | | | (5a) | Binding Mark (x) | (5b) | | (6) |
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(7) Mark (X) the destination(s) of releases to water. POTW provide name(s) below: Navigable waterway Other - Specify provide NPDES # CBI

Mark (X) this box if you attach a continuation sheet.

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

Section B -- INDUSTRIAL SITES CONTROLLED BY OTHERS

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. Operation Description** - To claim information in this section as confidential, circle or bracket 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, 55gallon drums, rail cars, tank trucks, etc). On the diagram, identify by letter and briefly describe each worker activity. (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 feedstocks (including reactants, solvents and 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. (4) Please enter the # of sites (remember to identify the locations of these sites on a continuation sheet) :

of sites _____

Mark (X) this box if you attach a continuation sheet.

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 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 (1) | # of Workers Exposed (2) | CBI (3) | Duration of Exposure | | CBI (5) | Protective Equip. / Engineering Controls / Physical Form and % new substance (6) | % in Formulation (7) | CBI (8) | Release Number (9) | Amount of New Substance Released | | CBI (11) | Media of Release & Control Technology (12) | CBI (13) |
|---------------------------|-----------------------------|------------|----------------------|------|------------|---|-------------------------|------------|-----------------------|----------------------------------|-------|-------------|---|-------------|
| | | | (4a) | (4b) | | | | | | (10a) | (10b) | | | |
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(14) - Byproducts: _____ (15)

Mark (X) this box if you attach a continuation sheet.

OPTIONAL POLLUTION PREVENTION INFORMATION

To claim information in this section as confidential circle or bracket 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, raw materials substitution, and/or inventory control. 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. Descriptions of pollution prevention, source reduction and recycling should emphasize potential risk reduction subsequent to compliance with existing regulatory requirements and can be either quantitative or qualitative. The EPA is interested in this information to assess overall net reductions in toxicity or environmental releases and exposures, not the shifting of risks to other environmental media or non-environmental areas (e.g., occupational or consumer exposure). In addition, information on the relative cost or performance characteristics of the PMN substance to potential alternatives may be provided. **All information provided in this section will be taken into consideration during the review of this substance. See the revised Instructions Manual that includes a Pollution Prevention manual for guidance and examples.**

Describe the expected net benefits, such as (1) an overall reduction in risk to human health or the environment; (2) a reduction in the volume manufactured; (3) a reduction in the generation of waste materials through recycling, source reduction or other means; (4) a reduction in potential toxicity or human exposure and/or environmental release; (5) an increase in product performance, a decrease in the cost of production and/or improved operation efficiency of the new chemical substance in comparison to existing chemical substances used in similar applications; or (6) 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.

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Mark (X) this box if you attach a continuation sheet.

Part III -- LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form and 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 the attachments. In the column below, enter the inclusive page numbers of each attachment.

Mark (X) the "Confidential" box next to any attachment name 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 page number(s) | Confidential |
|--|------------------------------|--------------|
| Material Safety Data Sheet (MSDS) | | |
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Mark (X) this box if you attach a continuation sheet. Enter the attachment name and number.

PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

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 page of the notice on which the property appears, 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. 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 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) | Mark (X) if provided | Page number (b) | Value (c) | Measured or Estimate (M or E) | Confidential Mark (X) (d) |
|---|-------------------------|-----------------------|-------------------------------|--|---------------------------------|
| Physical state of neat substance | | | _____ (s) _____ (l) _____ (g) | | |
| Vapor pressure _____ °C @ Temperature _____ | | | | Torr | |
| Density/relative density | | | | g/cm ³ | |
| Solubility _____ °C @ Temperature _____ Solvent _____ | | | | g/L | |
| Solubility in water @ Temperature _____ °C | | | | °C | |
| Melting temperature | | | | °C | |
| Boiling/sublimation temperature @ _____ torr pressure | | | | | |
| Spectra | | | | | |
| Dissociation constant | | | | | |
| Particle size distribution | | | | | |
| Octanol/water partition coefficient | | | | | |
| Henry's Law constant | | | | | |
| Volatilization from water | | | | | |
| Volatilization from soil | | | | | |
| pH @ concentration _____ | | | | | |
| Flammability | | | | | |
| Explosibility | | | | | |
| Adsorption/coefficient | | | | | |
| Other - Specify | | | | | |
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