

U.S. ENVIRONMENTAL PROTECTION AGENCY
INSTRUCTIONS FOR THE SIGNIFICANT NEW ALTERNATIVES POLICY (SNAP)
PROGRAM TSCA/SNAP ADDENDUM
August, 2014

EPA-1265-14

Office of Atmospheric Programs
Washington, DC 20460

The U.S. Environmental Protection Agency (EPA) has prepared this instruction manual to help you in submitting information on alternatives to the Significant New Alternatives Policy (SNAP) program in conjunction with a Premanufacture Notice (PMN) under the Toxic Substance Control Act (TSCA) (EPA Form 7710-25). This manual provides instructions on submitting the TSCA/SNAP Addendum forms, asserting confidentiality claims, and submitting test data and optional information. However, please note that in the event of any discrepancies between this document and the Code of Federal Regulations (CFR), the CFR requirements are legally binding and take precedence.

Part I – Introduction and CBI

Section A- Instructions

All submitters must complete all of Part I- Introduction and CBI, Part II- Contact Information, Part III- General Information, Part VI- Attachments, and Part VII- Certification. For each sector for which the alternative is being submitted, submitters must also complete the corresponding sector-specific data requirements found in Part IV.

- Refrigeration and Air Conditioning
- Foam Blowing
- Cleaning Solvents
- Fire Suppression
- Aerosols
- Sterilants
- Adhesives, Coatings and Inks
- Tobacco Expansion

Section B- Identification of Alternatives

Please identify the alternative, sector(s), end-use(s), and application(s) (if applicable) for which the form is being submitted in Part I, Section B.

Section C- Confidentiality Claims

If you submit information for which you would like to request Confidential Business Information (CBI) status, you must make a claim of confidentiality at the time of submission and substantiate that claim. EPA will treat all claims of confidentiality consistent with 40 CFR Part 2, Subpart B. To claim information as CBI, bracket the specific information you claim as confidential and mark the confidential box in the

column on the right-side of the page in the corresponding row. If information is claimed as CBI, then a public version must be submitted with the bracketed information redacted/removed.

To ensure that no confidential information is disclosed to the public, you must submit an additional copy of the notice form, including attachments, which does not contain confidential information. This version ("sanitized", "redacted") will be placed in the public file. It must contain all non-confidential information. To assert confidentiality claims for information in attachments to the form, provide a complete copy of the attachment that clearly indicates (e.g., by circling or bracketing) the information you wish to claim as confidential. Bracket only the specific information you claim as confidential.

Provide a Statement of Data Confidentiality Claims in Part I, Section C based on the instructions provided in the form. EPA requires substantiation of all CBI claims under SNAP or a submission will be considered incomplete.

Part II - Contact Information

Section A- Submitter Contact Information

All contacts listed in Part II will be granted access to CBI, unless otherwise noted and substantiated in Part I, Section C.

- 1. Person Submitting Notice** - Enter information for the primary submitter of the notice. The person submitting the notice form must sign the certification in Part VII- Certification.
- 2. Agent** - Complete only if you authorize an agent to assist you in preparing this notice. The agent must also sign the certification in Part VII- Certification.
- 3. Technical Contact** - Identify a person who can provide EPA with additional technical information on the substitute during the review period, if that contact is different than the "Person Submitting Notice". The technical contact identified should be located within the U.S. and be available to be reached by telephone during normal business hours. If the authorized agent is also the technical contact, include that person's information in both locations.
- 4. Joint Submitter** - Identify the joint submitter, if any, who is authorized by the primary submitter to provide some of the information required in the notice. A submission will not be considered complete until EPA receives all information. If information from multiple parties will not be sent together, mark each set clearly with the same alternative identification information.

If you authorize another person (e.g., a foreign manufacturer or supplier) to provide information directly to EPA, indicate which information will be supplied by the other person in Part V Additional Information. Such a letter in support of your notice should be provided by the Joint Submitter on their company letterhead. An example of where this option could apply would be in situations where alternative formulation information is held confidentially by a foreign manufacturer. A notice will be considered incomplete until this information is provided. Whenever possible, use the same name for the alternative (e.g., generic name) to link this information to your submission.

Part III – General Information

Section A – Alternative-Specific Information

EPA must receive a complete and unambiguous identification of the new substitute. If the alternative is not adequately identified, we will consider the submission incomplete. If you are an importer of an alternative and do not know the chemical identity of a substitute because it is confidential, you must contact the manufacturer or supplier and have the specific chemical identity provided directly to EPA. In this way, manufacturers can protect confidential business information. This information may be provided in a letter on company letterhead from the supplier.

- 1. Identify Proposed Substitute - (a-d)** Enter the specific name of the chemical substance, the percent of the composition, the Chemical Abstracts Service (CAS) registry number, and the molecular formula of the alternative. In describing chemical substances, EPA prefers that International Union of Pure and Applied Chemistry (IUPAC) nomenclature be used for identification purposes. If the substitute is a blend of chemicals, you must provide the exact composition and/or the range of percent composition of all components of the blend. In addition to active ingredients, you must also list other chemical substances in blends, such as solvents, inhibitors, etc., that may also be present in the alternative.
- 2. Commercial/Trade name(s) of alternative** – Indicate the name(s) under which the alternative is marketed.
- 3. Generic name** - If the identity of a substitute and the commercial/trade name are claimed as confidential, you must provide a generic name that is only as generic as necessary to protect the confidential identity. The name should reveal the chemical identity or alternative process description to the maximum extent possible. The generic name may be published in the Federal Register notice announcing EPA's acceptability determination of your alternative. If the name seems more generic than necessary, EPA will contact you and assist you in developing an adequate name.

The generic name should provide sufficient information for the public by indicating the classes of chemicals which the alternative contains without revealing specific information about the product's composition. For example, it may be necessary to reveal that a refrigerant blend contains an HCFC in order to allow users or importers to comply with regulations issued under sections 604, 605 or 608 of the CAA.

- 4. Ozone depletion potential (ODP) - (a)** Provide information on the predicted 100-year ODP of the alternative relative to CFC-11. If the substitute is a blend, provide the ODPs of the individual constituents. You should also provide supporting documentation indicating how and by whom this value was calculated.

For purposes of calculating ODP, EPA recommends the methodology used in the Scientific Assessment of Ozone Depletion prepared for the United Nations Environment Programme (UNEP) by the World Meteorological Organization (WMO). The ODP refers to the amount of ozone destroyed by a gas over its entire atmospheric lifetime (e.g. at a steady state) relative to that due to emissions of the same mass of CFC-11. It is defined in modeling calculations as follows:-

$$ODP_x = \frac{\text{Global } \Delta O_3 \text{ caused by } x}{\text{Global } \Delta O_3 \text{ caused by CFC-11}}$$

Calculations should reflect ground level emissions. For aircraft applications, be sure to also consider emissions at the appropriate altitude.

(b) You should also include any other related data available to you, such as information on the substitute's chlorine or bromine loading potential. See the [2010 WMO Scientific Assessment of Ozone Depletion](#) for additional information on calculating ODP and related information.

5. **Global Warming Characteristics - (a-c)** Provide information on the 100-year global warming potentials (GWPs) of the proposed substitute relative to CO₂, as well as atmospheric lifetime (ATL) of the proposed substitute. If the substitute is a blend, provide the GWPs of the individual constituents and an estimate of the blend at its nominal composition.

Provide GWPs as listed in the 2007 [Intergovernmental Panel for Climate Change Fourth Assessment Report](#) (IPCC AR4). Alternate sources may include the [2010 WMO Scientific Assessment of Ozone Depletion](#) or the peer-reviewed literature. IPCC defines GWP of the emissions of a greenhouse gas as the time integrated commitment to climate forcing from the instantaneous release of 1kg of a trace gas expresses relative to that from 1 kg of CO₂.

$$GWP = \frac{\int_0^n a_i c_i dt}{\int_0^n a_{CO_2} c_{CO_2} dt}$$

where-

a_i = the instantaneous radiative forcing due to a unit increase in the concentration of trace gas, i
 c_i = the concentration of trace gas, i , remaining at time, t , after its release, and
 n = the number of years over which the calculation is performed.

Corresponding values for CO₂ are in the denominator.

For GWP values that do not come from IPCC AR4 or WMO 2010, you should also include the data used to calculate these potentials such as atmospheric lifetime, infrared adsorption spectrum, and infrared absorption capacity. Provide all supporting documentation.

(d) If the alternative is captured as a byproduct of another manufacturing or industrial process, indicate the source of the alternative. This information is important in assessing the effects of the new use of the substitute versus those effects occurring strictly because of the release of a byproduct.

Section B: End-Use and Application Information

1. **Specific End-use - (a-c)** Identify the specific end-uses within the sector in which the alternative is to be used. For refrigeration and air conditioning, select the appropriate applications and

indicate if the substitute is intended for new equipment, retrofit equipment or both. Specify the ozone-depleting substance (ODS) and other substances being replaced, and include an estimate of the quantity of alternative (lb) needed to replace the ODS or other substance for each end-use. This is known as the replacement ratio. For example, if 100 lb of a new refrigerant will replace 150 lb of CFC-12, the replacement ratio is 1:1.5.

- 2. End-Use Specific Standards** - List any standard-setting organizations that will evaluate the proposed substitute or will set requirements or guidelines for the substitute from a health and safety perspective in the proposed end-use(s), such as the Underwriters Laboratories (UL), the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), the Society of Automotive Engineers (SAE), the National Fire Protection Association (NFPA), or the International Organization for Standardization (ISO).
- 3. Technology Changes and Cost**- Describe any new equipment technology changes and associated costs that will be necessary in order to use the proposed substitute.
- 4. Production and Market Share** - Provide estimated information on production of the proposed substitute or equipment using the proposed substitute. Indicate when you anticipate the substitute or new equipment using the substitute will enter the marketplace. Include the value for total production anticipated during the first year of production in kg.

Also, provide information on the levels of market penetration that you expect for the substitute or new use of an existing substitute. Include estimates for the number of years you anticipate until the substitute reaches its maximum market penetration for those uses included in submission, and the total production level that you anticipate for the substitute when it reaches the point of market saturation. Finally, if possible, estimate the percentage of the market held by the substance(s) being replaced that will be captured by this substitute.

- 5. Energy Efficiency - (a-b)** For refrigeration, air conditioning and foam blowing, provide the alternative's impact on energy efficiency relative to the substance it is replacing for each end-use. Attach and describe the results of any energy efficiency testing or modeling performed. Laboratory testing of equipment should evaluate the proposed substitute vs. the substance(s) being replaced. Values should be given in kWh/day or a similar measure.

Section C: Flammability (Required for Refrigeration and Air Conditioning, Foam Blowing, Cleaning Solvent, Aerosols, Sterilant, and Adhesives, Coatings, and Inks)

- 1. Flammability-Related Physical and Chemical Properties** - Provide information on the physical and chemical properties relevant to evaluating the flammability of the proposed substitute.
- 2. Flammability Assessments and Test Data** - For flammable substitutes, please include as an attachment the results of ASTM E681 Flammability Limits in Air. The numerical values for the upper and lower flammability limits are requested in Part III. For flammable refrigerants, please provide information on the maximum pressure of combustion, the maximum rate of pressure increase during combustion, and the minimum ignition energy. If you have conducted any analyses on flammability, please provide them.

For refrigeration and air conditioning, if an alternative is flammable (this applies to both blends and pure materials), you must analyze the risk of fire resulting from the use of the substitute in each proposed end-use/application through a risk assessment. For refrigeration and air conditioning, a Fault Tree Analysis (FTA) or Failure Mode and Effects Analysis (FMEA) is also required. An FTA should include, but not be limited to, a description of typical scenarios in which the substitute is used, potential leak scenarios, sources of ignition, and probabilities of ignition. It should also assess the likelihood of injury within each scenario. An FMEA should describe identified failures that could result in a spark, flame, explosion, or other fire risk and mitigation measure for each failure mode. Significant differences exist both in the design and in the ambient conditions for various end-uses. Thus, risk assessments are extremely sensitive to end-use. Low risk in one end-use does not, in general, imply low risk in another end-use.

3. **Flammability Concerns and Mitigation** - If a substitute is flammable under the conditions expected in the proposed end-use/application, describe any abatement techniques being used to minimize the risks associated with use of a flammable substance (e.g., equipment design modifications or alternate labeling).

For flammable foam blowing agents used in spray foam, provide a training program that address flammability concerns specific to the substitute.

Part IV: Sector-Specific Information

Due to the unique uses and exposures of alternatives for each of the SNAP industrial sectors, Part IV includes individual Sections for each sector. You are only required to complete those sections for which you are submitting to SNAP. Below are instructions for questions found in Part IV. If you are submitting the substitute for several end-uses or applications, you must provide the requested information for each.

- **Application of Proposed Substitute** - Provide information requested in each sector-specific section on the specific application of the substitute. These questions are related to both manufacturing and use.
- **Additional End-Use Description** - Provide a written description of the specific uses for which you are submitting.
- **Compressor Oil** - For refrigeration and air conditioning only, provide information on the chemical class of refrigerant oil you anticipate will be used (e.g., polyalkylene glycol, polyolester, mineral oil) and information on the refrigerant/oil solubility.
- **Compatibility** - For cleaning solvents only, provide information on the compatibility of the solvent with metals and plastics with regards to its use as a cleaning solvent (e.g., is the solvent corrosive to some materials).
- **Consumer Use** - Where requested, indicate whether the proposed substitute will be used for consumer use. If consumer use is expected, please describe the anticipated consumer applications.

Part V - Additional Information

Provide any additional information that may assist EPA's review. Submitters are not required to include information in this section.

Part VI - Attachments

Clearly identify all attachments being provided in support of the submission.

Mark (X) in the CBI box next to any attachment that you claim as confidential. The public version of the submission form must include the attachment name/citation at a minimum. All claims of confidentiality must be substantiated in Part I.

Part VII- Certification

The individual identified in Part I of the form as the person submitting the Information Notice must sign the certification in Part XIV of the form. This official is responsible for the truth and accuracy of each statement in the certification. If an agent assists you in preparing the submission, the agent must also sign the certification.

A printed copy of the certification page, with original signature, must be submitted with electronic or paper submissions. If the submission is not signed, EPA will consider the submission incomplete and will not review the substitute.