

## U.S. PRODUCERS' QUESTIONNAIRE

### CERTAIN HYDROFLUOROCARBON BLENDS AND COMPONENTS FROM CHINA

This questionnaire must be received by the Commission by **THURSDAY, JULY 9, 2015**

*See last page for filing instructions.*

The information called for in this questionnaire is for use by the United States International Trade Commission in connection with its antidumping investigations concerning hydrofluorocarbon blends and components ("HFC blends and components") from China (inv. No. 731-TA-1279 (Preliminary)). The information requested in the questionnaire is requested under the authority of the Tariff Act of 1930, title VII. This report is mandatory and failure to reply as directed can result in a subpoena or other order to compel the submission of records or information in your firm's possession (19 U.S.C. § 1333(a)).

|  |
|--|
| <b>Name of firm</b> _____  |
| <b>Address</b> _____   |
| <b>City</b> _____ <b>State</b> _____ <b>Zip Code</b> _____   |
| <b>Website</b> _____   |
| Has your firm produced HFC blends or HFC components (as defined on next page) at any time since January 1, 2012?   |
| <input type="checkbox"/> <b>NO</b> (Sign the certification below and promptly return <b>only</b> this page of the questionnaire to the Commission)   |
| <input type="checkbox"/> <b>YES</b> (Complete all parts of the questionnaire, and return the entire questionnaire to the Commission)   |
| <b>Return questionnaire via the U.S. International Trade Commission Drop Box by clicking on the following link: <a href="https://dropbox.usitc.gov/oinv/">https://dropbox.usitc.gov/oinv/</a>. (PIN: 1279)</b> |

#### CERTIFICATION

*I certify that the information herein supplied in response to this questionnaire is complete and correct to the best of my knowledge and belief and understand that the information submitted is subject to audit and verification by the Commission.*

*By means of this certification I also grant consent for the Commission, and its employees and contract personnel, to use the information provided in this questionnaire and throughout this proceeding in any other import-injury proceedings conducted by the Commission on the same or similar merchandise.*

*I acknowledge that information submitted in this questionnaire response and throughout this proceeding may be used by the Commission, its employees, and contract personnel who are acting in the capacity of Commission employees, for developing or maintaining the records of this proceeding or related proceedings for which this information is submitted, or in internal audits and proceedings relating to the programs and operations of the Commission pursuant to 5 U.S.C. Appendix 3. I understand that all contract personnel will sign non-disclosure agreements.*

\_\_\_\_\_  
**Name of Authorized Official**

\_\_\_\_\_  
**Title of Authorized Official**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Phone:**

\_\_\_\_\_  
**Email address**

\_\_\_\_\_  
**Fax:**

**PART I.—GENERAL INFORMATION**

**Background.** This proceeding was instituted in response to a petition filed on June 25, 2015, by The American HFC Coalition and its members (Amtrol, Inc., West Warwick, Rhode Island; Arkema, Inc., King of Prussia, Pennsylvania; The Chemours Company FC LLC, Wilmington, Delaware; Honeywell International Inc., Morristown, New Jersey; Hudson Technologies, Pearl River, New York; Mexichem Fluor Inc., St. Gabriel, Louisiana; Worthington Industries, Inc., Columbus, Ohio) and District Lodge 154 of the International Association of Machinists and Aerospace Workers (“IAMAW”). Antidumping duties may be assessed on the subject imports as a result of these proceedings if the Commission makes an affirmative determination of injury, threat, or material retardation, and if the U.S. Department of Commerce makes an affirmative determination of dumping. Questionnaires and other information pertinent to this proceeding are available at [http://wwwadmin.usitc.gov/investigations/title\\_7/2015/hydrofluorocarbon\\_blends\\_and\\_components\\_china/preliminary.htm](http://wwwadmin.usitc.gov/investigations/title_7/2015/hydrofluorocarbon_blends_and_components_china/preliminary.htm).

**Certain hydrofluorocarbon blends and components (“HFC blends and components”):** The products covered by these investigations are: blended hydrofluorocarbons (“HFCs”) and single HFC components of those blends thereof, whether or not imported for blending, including the following:

**HFC blends covered by the scope of these investigations:**

**(1) R-404A:** a zeotropic mixture consisting of 52 percent 1,1,1-Trifluoroethane, 44 percent by weight Pentafluoroethane, and 4 percent 1,1,1,2-Tetrafluoroethane.

R-404A is sold under various trade names, including Forane<sup>®</sup> 404A, Genetron<sup>®</sup> 404A, Solkane<sup>®</sup> 404A, Klea<sup>®</sup> 404A, and Suva<sup>®</sup>404A.

**(2) R-407A:** a zeotropic mixture of 20 percent Difluoromethane, 40 percent Pentafluoroethane, and 40 percent eight 1,1,1,2-Tetrafluoroethane.

R-407A is sold under various trade names, including Forane<sup>®</sup> 407A, Solkane<sup>®</sup> 407A, Klea<sup>®</sup>407A, and Suva<sup>®</sup>407A.

**(3) R-407C:** a zeotropic mixture of 23 percent Difluoromethane, 25 percent Pentafluoroethane, and 52 percent 1,1,1,2-Tetrafluoroethane.

R-407C is sold under various trade names, including Forane<sup>®</sup> 407C, Genetron<sup>®</sup> 407C, Solkane<sup>®</sup> 407C, Klea<sup>®</sup> 407C and Suva<sup>®</sup> 407C.

**(4) R-410A:** a zeotropic mixture of 50 percent Difluoromethane and 50 percent Pentafluoroethane.

R-410A is sold under various trade names, including EcoFluor R410, Forane<sup>®</sup> 410A, Genetron<sup>®</sup> R410A and AZ-20, Solkane<sup>®</sup> 410A, Klea<sup>®</sup> 410A, Suva<sup>®</sup> 410A, and Puron<sup>®</sup>.

**(5) R-507A:** an azeotropic mixture of 50 percent Pentafluoroethane and 50 percent 1,1,1-Trifluoroethane also known as R-507.

R-507A is sold under various trade names, including Forane<sup>®</sup> 507, Solkane<sup>®</sup> 507, Klea<sup>®</sup>507, Genetron<sup>®</sup>AZ-50, and Suva<sup>®</sup>507.

The foregoing percentages are nominal percentages by weight. Actual percentages of single component refrigerants by weight may vary by plus or minus two percent points from the nominal percentage identified above.

**HFC components covered by the scope of these investigations**

The subject merchandise also includes the following single component hydrofluorocarbons used to produce the foregoing blends:

**(6) R-32** or Difluoromethane has the chemical formula  $\text{CH}_2\text{F}_2$ , and is registered as CAS No. 75-10-5. It may also be known HFC-32, FC-32, Freon-32, Methylene difluoride, Methylene fluoride, Carbon fluoride hydride, halocarbon R32, fluorocarbon R32, and UN 3252.

R-32 is sold under various trade names, including Solkane<sup>®</sup>32, Forane<sup>®</sup>32, and Klea<sup>®</sup>32.

**(7) R-125** or 1,1,1,2,2-Pentafluoroethane has the chemical formula  $\text{CF}_3\text{CHF}_2$  and is registered as CAS No. 354-33-6. R-125 may also be known as R-125, HFC-125, Pentafluoroethane, Freon 125, and Fc-125, R-125.

R-125 is sold under various trade names, including Solkane<sup>®</sup>125, Klea<sup>®</sup>125, Genetron<sup>®</sup>125, and Forane<sup>®</sup>125.

**(8) R-143a** or 1,1,1-Trifluoroethane has the chemical formula  $\text{CF}_3\text{CH}_3$  and is registered as CAS No. 420-46-2. R-143a may also be known as R-143a, HFC-143a, Methylfluoroform, 1,1,1-Trifluoroform, and UN2035.

R-143a is sold under various trade names, including Solkane<sup>®</sup>143a, Genetron<sup>®</sup>143a, and Forane<sup>®</sup>125.

**Products excluded from the scope of these investigations**

Excluded from this investigation are:

(1) Blends of refrigerant chemicals that include products other than HFCs, such as blends including chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs).

(2) Patented HFC blends, such as ISCEON<sup>®</sup> blends, including include MO99<sup>™</sup> (RR-438A), MO79 (R-422A), MO59 (R-417A), MO49Plus<sup>™</sup> (R-437A) and MO29<sup>™</sup> (R-422D), and Genetron<sup>®</sup> Performax<sup>™</sup> LT (R-407F).

(3) HFC component R-134a.

HFC blends covered by the scope of this investigation are currently classified in the Harmonized Tariff Schedule of the United States ("HTS") at subheading 3824.78.0000. Component single HFCs are currently classified at subheading 2903.39.2030, HTSUS. Although the HTSUS subheading and CAS registry number are provided for convenience and customs purposes, the written description of the scope is dispositive.

**Repackers.**--This questionnaire DOES NOT apply to firms that only repackage HFC blends or HFC components, whether from domestic or foreign sources. If your firm has both blending and repacking operations, you must remove all information regarding your repacking operations and complete this questionnaire for your blending operations only.

**Reporting of information.**-- If information is not readily available from your records, provide carefully prepared estimates. If your firm is completing more than one questionnaire (i.e., a producer, importer, and/or purchaser questionnaire), you need not respond to duplicated questions.

**Confidentiality.**--The commercial and financial data furnished in response to this questionnaire that reveal the individual operations of your firm will be treated as confidential by the Commission to the extent that such data are not otherwise available to the public and will not be disclosed except as may be required by law (see 19 U.S.C. § 1677f). Such confidential information will not be published in a manner that will reveal the individual operations of your firm; however, general characterizations of numerical business proprietary information (such as discussion of trends) will be treated as confidential business information only at the request of the submitter for good cause shown.

**Verification.**--The information submitted in this questionnaire is subject to audit and verification by the Commission. To facilitate possible verification of data, please keep all files, worksheets, and supporting documents used in the preparation of the questionnaire response. Please also retain a copy of the final document that you submit.

**Release of information.**--The information provided by your firm in response to this questionnaire, as well as any other business proprietary information submitted by your firm to the Commission in connection with this proceeding, may become subject to, and released under, the administrative protective order provisions of the Tariff Act of 1930 (19 U.S.C. § 1677f) and section 207.7 of the Commission's Rules of Practice and Procedure (19 CFR § 207.7). This means that certain lawyers and other authorized individuals may temporarily be given access to the information for use in connection with this proceeding or other import-injury proceedings conducted by the Commission on the same or similar merchandise; those individuals would be subject to severe penalties if the information were divulged to unauthorized individuals. In addition, if your firm is a U.S. producer, the information you provide on your production and imports of HFC blends and components and your responses to the questions in Part I of the producer questionnaire will be provided to the U.S. Department of Commerce, upon its request, for use in connection with (and only in connection with) its requirement pursuant to section 702(c)(4)/732(c)(4) of the Act (19 U.S.C. § 1671a(c)(4)/1673a(c)(4)) to make a determination concerning the extent of industry support for the petition requesting this proceeding. Any information provided to Commerce will be transmitted under the confidentiality and release guidelines set forth above. Your response to these questions constitutes your consent that such information be provided to Commerce under the conditions described above.

I-1a. **OMB statistics.**--Please report below the actual number of hours required and the cost to your firm of completing this questionnaire.

| Hours | Dollars |
|-------|---------|
|       |         |

The questions in this questionnaire have been reviewed with market participants to ensure that issues of concern are adequately addressed and that data requests are sufficient, meaningful, and as limited as possible. Public reporting burden for this questionnaire is estimated to average 50 hours per response, including the time for reviewing instructions, gathering data, and completing and reviewing the questionnaire.

We welcome comments regarding the accuracy of this burden estimate, suggestions for reducing the burden, and any suggestions for improving this questionnaire. Please attach such comments to your response or send to the Office of Investigations, USITC, 500 E St. SW, Washington, DC 20436.

I-1b. **TAA information release.**--In the event that the U.S. International Trade Commission (USITC) makes an affirmative final determination in this proceeding, do you consent to the USITC's release of your contact information (company name, address, contact person, telephone number, email address) appearing on the front page of this questionnaire to the Departments of Commerce, Labor, and Agriculture, as applicable, so that your firm and its workers can be made eligible for benefits under the Trade Adjustment Assistance program?

Yes       No

I-2. **Establishments covered.**--Provide the city, state, zip code, and brief description of each establishment covered by this questionnaire. If your firm is publicly traded, please specify the stock exchange and trading symbol in the footnote to the table. **Firms operating more than one establishment should combine the data for all establishments into a single report.**

**"Establishment"**--Each facility of a firm involved in the production of HFC components or blends, including auxiliary facilities operated in conjunction with (whether or not physically separate from) such facilities.

| Establishments covered <sup>1</sup> | City, State | Zip (5 digit) | Description |
|-------------------------------------|-------------|---------------|-------------|
| 1                                   |             |               |             |
| 2                                   |             |               |             |
| 3                                   |             |               |             |
| 4                                   |             |               |             |
| 5                                   |             |               |             |
| 6                                   |             |               |             |

<sup>1</sup> Additional discussion on establishments consolidated in this questionnaire: \_\_\_\_\_.

I-3. **Petition support.**--Does your firm support or oppose the petition?

| China | Support                  | Oppose                   | Take no position         |
|-------|--------------------------|--------------------------|--------------------------|
| China | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

I-4. **Ownership.**--Is your firm owned, in whole or in part, by any other firm?

No       Yes--List the following information.

| Firm name | Address | Extent of ownership<br>(percent) |
|-----------|---------|----------------------------------|
|           |         |                                  |
|           |         |                                  |
|           |         |                                  |

I-5. **Related importers/exporters.**--Does your firm have any related firms, either domestic or foreign, that are engaged in importing HFC blends or components from China into the United States or that are engaged in exporting HFC blends or components from China to the United States?

No       Yes--List the following information.

| Firm name | Address | Affiliation |
|-----------|---------|-------------|
|           |         |             |
|           |         |             |
|           |         |             |

I-6. **Related producers.**--Does your firm have any related firms, either domestic or foreign, that are engaged in the production of HFC blends or components?

No       Yes--List the following information.

| Firm name | Address | Affiliation |
|-----------|---------|-------------|
|           |         |             |
|           |         |             |
|           |         |             |

**PART II.--TRADE AND RELATED INFORMATION**

Further information on this part of the questionnaire can be obtained from Joanna Lo (202-205-1888, [joanna.lo@usitc.gov](mailto:joanna.lo@usitc.gov)). **Supply all data requested on a calendar-year basis.**

II-1. **Contact information.**--Please identify the responsible individual and the manner by which Commission staff may contact that individual regarding the confidential information submitted in part II.

|           |  |
|-----------|--|
| Name      |  |
| Title     |  |
| Email     |  |
| Telephone |  |
| Fax       |  |

II-2. **Changes in operations.**--Please indicate whether your firm has experienced any of the following changes in relation to the production of HFC blends or components since January 1, 2012.

| <i>(check as many as appropriate)</i> |  | <i>(please describe)</i> |
|---------------------------------------|--|--------------------------|
| <input type="checkbox"/>              | plant openings                                 |                          |
| <input type="checkbox"/>              | plant closings                                 |                          |
| <input type="checkbox"/>              | relocations                                    |                          |
| <input type="checkbox"/>              | expansions                                     |                          |
| <input type="checkbox"/>              | acquisitions                                   |                          |
| <input type="checkbox"/>              | consolidations                                 |                          |
| <input type="checkbox"/>              | prolonged shutdowns or production curtailments |                          |
| <input type="checkbox"/>              | revised labor agreements                       |                          |
| <input type="checkbox"/>              | other ( <i>e.g.</i> , technology)              |                          |

II-3a. **Production using same machinery.**--Please report your firm's production of products made on the same equipment and machinery used to produce HFC components and HFC blends, and the combined production capacity on this shared equipment and machinery in the periods indicated.

**"Overall production capacity" or "capacity"** – The level of production that your establishment(s) could reasonably have expected to attain during the specified periods. Assume normal operating conditions (i.e., using equipment and machinery in place and ready to operate; normal operating levels (hours per week/weeks per year) and time for downtime, maintenance, repair, and cleanup).

**"Production"** – All production in your U.S. establishment(s), including production consumed internally within your firm and production for another firm under a toll agreement.

| Quantity (in short tons)  |                |      |      |               |      |
|---|----------------|------|------|---------------|------|
| Item  | Calendar years |      |      | January-March |      |
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>Machinery and equipment used to produce <u>HFC components</u>:</b>   |                |      |      |               |      |
| <b>Overall production capacity</b>  |                |      |      |               |      |
| <b>Production of:</b>   |                |      |      |               |      |
| HFC components <sup>1</sup>   | 0              | 0    | 0    | 0             | 0    |
| Other products <sup>2</sup>   |                |      |      |               |      |
| Total   | 0              | 0    | 0    | 0             | 0    |
| <b>Machinery and equipment used to produce <u>HFC blends</u>:</b>   |                |      |      |               |      |
| <b>Overall production capacity</b>  |                |      |      |               |      |
| <b>Production of:</b>   |                |      |      |               |      |
| HFC blends <sup>3</sup>   | 0              | 0    | 0    | 0             | 0    |
| Other products <sup>4</sup>   |                |      |      |               |      |
| Total   | 0              | 0    | 0    | 0             | 0    |
| <sup>1</sup> Data entered for production of HFC components will populate here once reported in question II-7.<br><sup>2</sup> Please identify the products produced on the same machinery and equipment as the HTC components: _____.<br><sup>3</sup> Data entered for production of HFC blends will populate here once reported in question II-9.<br><sup>4</sup> Please identify the products produced on the same machinery and equipment as the HTC blends: _____.<br>_____ |                |      |      |               |      |



II-3b. **Operating parameters.**--The production capacity reported in II-3a is based on operating \_\_\_\_\_ hours per week, \_\_\_\_\_ weeks per year.

II-3c. **Capacity allocation.**--If your firm produces products other than HFC components or HFC blends on the same equipment (as reported above), please describe the methodology used to allocate overall machinery and equipment capacity reported in question II-3a (above) to the HFC component-specific capacity in reported question II-7 or the HFC blend-specific capacity reported in question II-9.

II-3d. **Production constraints.**--Please describe the constraint(s) that set the limit(s) on your firm's production capacity.

II-3e. **HFC component product shifting.**—

(i) Since January 1, 2012, did your firm produce one or more of the following HFC components: R-32, R-125, R-134a, and R-143a in the United States?

No       Yes

(ii) Since January 1, 2012, which of the following HFC components does your firm produce in the United States (check all that apply)?

R-32       R-125       R-134a       R-143a

(iii) Is your firm able to switch production from one HFC component to another HFC component?

No/NA       Yes-- (i.e., have produced different HFC components on using the same equipment and/or labor).

(iv) Please describe the factors that affect your firm's ability to shift production capacity between HFC components (e.g., time, cost, relative price change, etc.), and the degree to which these factors enhance or constrain such shifts.

II-3g. **Swap Agreements of HFC Components.--**

**“Swap Agreement”**--Agreement between two firms whereby firm A produces one HFC component X and trades a portion of that HFC component X with firm B’s production and/or imports of HFC component Y.

- (i) Since January 1, 2012, has your firm been involved in a swap agreement for HFC components in order to produce HFC blends?

No                       Yes--Please describe the nature of the swap arrangement(s), including the parties, description of the merchandise swapped, and the quantities involved.

- (ii) Since January 1, 2012, has your firm used imported HFC components to satisfy any portion of your swap agreement?

No/NA                       Yes--Please describe the source of the imported HFC components and quantities supplied.

II-3h. **Product shifting HFC components and other products.—**

- (i) Is your firm able to switch production (capacity) between HFC components and other products using the same equipment and/or labor?

No/NA                       Yes-- (i.e., have produced other products or are able to produce other products). Please identify other actual or potential products:

Actual or potential other products (not including other HFC components)

- (ii) Please describe the factors that affect your firm’s ability to shift production capacity between from any HFC component(s) to the "other" products described above (e.g., time, cost, relative price change, etc.), and the degree to which these factors enhance or constrain such shifts.

II-3i. **Type of operation of HFC blends.**—

(i) Since January 1, 2012, did your firm produce one or more of the following HFC blends: R-404A, R-407A, R-407C, R-410A, and R-507A in the United States?

No  Yes—continue to part (b) and provide data on these operations in question II-8

(ii) Since January 1, 2012, which of the following HFC blends does your firm produce in the United States (check all that apply)?

R-404A  R-407A  R-407C  R-410A  R-507A

(iii) Is your firm able to switch production from one HFC blend to another HFC blend?

No  Yes-- (i.e., have produced different HFC blend on using the same equipment and/or labor).

(iv) Please describe the factors that affect your firm's ability to shift production capacity between HFC blends (e.g., time, cost, relative price change, etc.), and the degree to which these factors enhance or constrain such shifts.

II-3j. **Product shifting HFC blends and other products.**—

(i) Is your firm able to switch production (capacity) between HFC blends and other products using the same equipment and/or labor?

No  Yes-- (i.e., have produced other products or are able to produce other products). Please identify other actual or potential products:

Actual or potential other products (not including other HFC blends)

(ii) Please describe the factors that affect your firm's ability to shift production capacity between products (e.g., time, cost, relative price change, etc.), and the degree to which these factors enhance or constrain such shifts.

II-3k. **Capital investments.**—

- (i) Please describe and quantify the amount of capital investments needed to produce one or more of the HFC components (excluding the costs of any blends operations) in the United States.

- (ii) Please describe and quantify the amount of capital investments needed to produce one or more of the HFC blends (excluding the costs of the individual HFC components) in the United States.

II-4. **Tolling.**--Since January 1, 2012, has your firm been involved in a toll agreement regarding the production of HFC blends and/or HFC components?

**“Toll agreement”**--Agreement between two firms whereby the first firm furnishes the raw materials and the second firm uses the raw materials to produce a HFC blends and/or HFC components that it then returns to the first firm with a charge for processing costs, overhead, etc.

- No       Yes--Please describe the toll arrangement(s) and name the firm(s) involved and check all that apply.

(Check all the apply)

- Our firm is a toller for HFC components (actually produces) using raw materials provided by another firm
- Our firm is a tollee for HFC components (another firm actually produces) using raw materials provided by our firm
- Our firm is a toller for HFC blends (actually produces) using raw materials provided by another firm
- Our firm is a tollee for HFC blends (another firm actually produces) using raw materials provided by our firm

II-5. **Foreign trade zones.**--

- (a) **Firm's FTZ operations.**--Does your firm produce HFC blends or components in and/or admit HFC blends or components into a foreign trade zone (FTZ)?

**"Foreign trade zone"** is a designated location in the United States where firms utilize special procedures that allow delayed or reduced customs duty payments on foreign merchandise. A foreign trade zone must be designed as such pursuant to the rules and procedures set forth in the Foreign-Trade Zones Act.

- No                       Yes--Describe the nature of your firms operations in FTZs and identify the specific FTZ site(s).

- (b) **Other firms' FTZ operations.**--To your knowledge, do any firms in the United States import HFC blends or components into a foreign trade zone (FTZ) for use in distribution of HFC blends or components and/or the production of downstream articles?

- No/Don't know                       Yes--Identify the firms and the FTZs.

II-6. **Importer.**--Since January 1, 2012, has your firm imported HFC blends or components?

**"Importer"** – The person or firm primarily liable for the payment of any duties on the merchandise, or an authorized agent acting on his behalf. The importer may be the consignee, or the importer of record.

- No                       Yes--**COMPLETE AND RETURN A U.S. IMPORTERS' QUESTIONNAIRE**

**Trade Data Definitions**

**“Average production capacity” or “capacity”** – The level of production that your establishment(s) could reasonably have expected to attain during the specified periods. Assume normal operating conditions (i.e., using equipment and machinery in place and ready to operate; normal operating levels (hours per week/weeks per year) and time for downtime, maintenance, repair, and cleanup; and a typical or representative product mix).

**“Production”** – All production in your U.S. establishment(s), including production consumed internally within your firm and production for another firm under a toll agreement.

**“U.S. commercial shipments”** –Shipments made within the United States as a result of an arm’s length commercial transaction in the ordinary course of business. Report net values (i.e., gross sales values less all discounts, allowances, rebates, prepaid freight, and the value of returned goods) in U.S. dollars, f.o.b. your point of shipment.

**“Internal consumption”** – Product consumed internally by your firm.

**“Transfers to related firms”** –Shipments made to related domestic firms. Such transactions are valued at fair market value.

**“Related firm”** –A firm that your firm solely or jointly owns, manages, or otherwise controls. Such transactions are valued at fair market value.

**“Export shipments”** –Shipments to destinations outside the United States, including shipments to related firms.

**“Inventories”** – Finished goods inventory, not raw materials or work-in-progress.

*Note: As requested in Part I of this questionnaire, please keep all supporting documents/records used in the preparation of the trade data, as Commission staff may contact your firm regarding questions on the trade data. The Commission may also request that your company submit copies of the supporting documents/records (such as production and sales schedules, inventory records, etc.) used to compile these data.*

II-7. **Production, shipment and inventory data for HFC components.**--Report your firm's production capacity, production, shipments, and inventories related to the production of HFC components in its U.S. establishment(s) during the specified periods.

| <b>Quantity (in short tons) and value (in \$1,000)</b>  |                       |             |             |                      |             |
|---|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>   | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|   | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>Average production capacity</b> <sup>1</sup> (quantity) (A)  |                       |             |             |                      |             |
| <b>Beginning-of-period inventories</b> (quantity) (B)   |                       |             |             |                      |             |
| <b>Production</b> (quantity):   |                       |             |             |                      |             |
| R-32 (C)  |                       |             |             |                      |             |
| R-125 (D)   |                       |             |             |                      |             |
| R-134a (E)  |                       |             |             |                      |             |
| R-143a (F)  |                       |             |             |                      |             |
| Total production of components (G)  | 0                     | 0           | 0           | 0                    | 0           |
| <b>Swap transactions of components:</b> <sup>2</sup>  |                       |             |             |                      |             |
| Quantity given, net (H)   |                       |             |             |                      |             |
| Quantity received, net (I)  |                       |             |             |                      |             |
| Net monetary exchange <sup>3</sup> (J)  |                       |             |             |                      |             |
| <b>Total available for shipment (K)</b> <sup>4</sup>  | 0                     | 0           | 0           | 0                    | 0           |
| <p><sup>1</sup> The production capacity (see definitions in instruction booklet) reported is based on operating _____ hours per week, _____ weeks per year. Please describe the methodology used to allocate overall production capacity reported in question II-3a to the subject merchandise reported here. _____.</p> <p><sup>2</sup> Please describe the swap transactions including (i) the goods involved, (ii) how your firm's accounts for the nonmonetary exchange, (iii) the counterparties to the exchange(s), and (iv) the economic rationale for this business model. _____.</p> <p><sup>3</sup> Was there any monetary consideration exchanged, also known as a boot in accounting slang, involved in the swap transactions? <input type="checkbox"/> No      <input type="checkbox"/> Yes--Report the net amount exchanged (report negative values if your firm paid, positive values if your firm received consideration) in line J and describe how the amount exchanged was determined _____.</p> <p><sup>4</sup> Total available for shipment in a given year is the net after swap quantity available for shipment (e.g., BOP inventories, plus production, net of swap exchanges).</p> |                       |             |             |                      |             |

II-7. **Production, shipment and inventory data for HFC components.**—Continued

| Quantity (in short tons) and value (in \$1,000)  |                |      |      |               |      |
|--|----------------|------|------|---------------|------|
| Item   | Calendar years |      |      | January-March |      |
|  | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>U.S. shipments of HFC components:<sup>5</sup></b>   |                |      |      |               |      |
| <b>Commercial shipments:</b>   |                |      |      |               |      |
| Quantity (L)   |                |      |      |               |      |
| Value (M)  |                |      |      |               |      |
| <b>Internal consumption:</b>   |                |      |      |               |      |
| Quantity (N)   |                |      |      |               |      |
| Value <sup>6</sup> (O)   |                |      |      |               |      |
| <b>Transfers to related firms:</b>   |                |      |      |               |      |
| Quantity (P)   |                |      |      |               |      |
| Value <sup>6</sup> (Q)   |                |      |      |               |      |
| <b>Export shipments:<sup>7</sup></b>   |                |      |      |               |      |
| Quantity (R)   |                |      |      |               |      |
| Value (S)  |                |      |      |               |      |
| <b>End-of-period inventories (quantity) (T)</b>  |                |      |      |               |      |
| <p><sup>5</sup> Report all uses of HFC components. If the component was used by your firm for the production of an HFC blend, report the shipment as internal consumption. Even though r-134a is excluded from the scope of these investigations when sold unblended, please include r-134a data in this grid as the next question will break-out commercial U.S. shipments by specific HFC component.</p> <p><sup>6</sup> Internal consumption and transfers to related firms must be valued at fair market value. In the event that your firm uses a different basis for valuing these transactions, please specify that basis (e.g., cost, cost plus, etc.) and provide value data using that basis for each of the periods noted above: _____.</p> <p><sup>7</sup> Identify your firm's principal export markets: _____.</p> |                |      |      |               |      |

**RECONCILIATION OF SHIPMENTS, PRODUCTION, AND INVENTORY.**--Generally, the data reported for the end-of-period inventories (i.e., line T) should be equal total product available for shipment (i.e., line K), less total shipments (i.e., lines L, N, P, and R). Please ensure that any differences are not due to data entry errors in completing this form, but rather actually reflect your firm's records; and also provide any likely explanations for any differences (e.g., theft, loss, damage, record systems issues, etc.) if they exist.

| Reconciliation  | Calendar years |      |      | January-March |      |
|---|----------------|------|------|---------------|------|
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| K – L – N – P – R – T = should equal zero ("0") or provide an explanation. <sup>1</sup>   | 0              | 0    | 0    | 0             | 0    |
| <sup>1</sup> Explanation if the calculated fields above are returning values other than zero (i.e., "0") but are nonetheless accurate: _____. |                |      |      |               |      |



II-8. **Commercial shipments of components by channel and by product type.**--Report your firm's commercial U.S. shipments by channel and product type.

| <b>Quantity (in short tons) and value (in \$1,000)</b> |                       |             |             |                      |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>  | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>Commercial U.S. shipments:</b>                      |                       |             |             |                      |             |
| <b>R-32:</b>   |                       |             |             |                      |             |
| Sold to <u>distributors and service companies:</u>     |                       |             |             |                      |             |
| <u>Quantity (U)</u>                                    |                       |             |             |                      |             |
| <u>Value (V)</u>                                       |                       |             |             |                      |             |
| Sold to <u>blenders/repackagers</u>                    |                       |             |             |                      |             |
| <u>Quantity (W)</u>                                    |                       |             |             |                      |             |
| <u>Value (X)</u>                                       |                       |             |             |                      |             |
| Sold to <u>original equipment manufacturers</u>        |                       |             |             |                      |             |
| <u>Quantity (Y)</u>                                    |                       |             |             |                      |             |
| <u>Value (Z)</u>                                       |                       |             |             |                      |             |
| <b>R-125:</b>  |                       |             |             |                      |             |
| Sold to <u>distributors and service companies:</u>     |                       |             |             |                      |             |
| <u>Quantity (AA)</u>                                   |                       |             |             |                      |             |
| <u>Value (AB)</u>                                      |                       |             |             |                      |             |
| Sold to <u>blenders/repackagers</u>                    |                       |             |             |                      |             |
| <u>Quantity (AC)</u>                                   |                       |             |             |                      |             |
| <u>Value (AD)</u>                                      |                       |             |             |                      |             |
| Sold to <u>original equipment manufacturers</u>        |                       |             |             |                      |             |
| <u>Quantity (AE)</u>                                   |                       |             |             |                      |             |
| <u>Value (AF)</u>                                      |                       |             |             |                      |             |

*Question continued next page*

II-8. **Commercial shipments of components by channel and by product type.**--Continued

| Quantity (in short tons) and value (in \$1,000)                                       |                |      |      |               |      |
|---|----------------|------|------|---------------|------|
| Item  | Calendar years |      |      | January-March |      |
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>R-134a:</b><br>Sold to <u>distributors and service companies:</u><br>Quantity (AG) |                |      |      |               |      |
| Value (AH)  |                |      |      |               |      |
| Sold to <u>blenders/repackagers</u><br>Quantity (AI)                                  |                |      |      |               |      |
| Value (AJ)  |                |      |      |               |      |
| Sold to <u>original equipment manufacturers</u><br>Quantity (AK)                      |                |      |      |               |      |
| Value (AL)  |                |      |      |               |      |
| <b>R-143a:</b><br>Sold to <u>distributors and service companies:</u><br>Quantity (AM) |                |      |      |               |      |
| Value (AN)  |                |      |      |               |      |
| Sold to <u>blenders/repackagers</u><br>Quantity (AO)                                  |                |      |      |               |      |
| Value (AP)  |                |      |      |               |      |
| Sold to <u>original equipment manufacturers</u><br>Quantity (AQ)                      |                |      |      |               |      |
| Value (AR)  |                |      |      |               |      |

*RECONCILIATION OF COMMERCIAL SHIPMENTS.*--Quantity data broken out by channel and product should sum to equal the quantity and value reported in question II-7 (lines L and M)

| Reconciliation  | Calendar years |      |      | January-March |      |
|---|----------------|------|------|---------------|------|
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>Quantity.</b> --Sum of Quantities in II-8 less quantity reported in II-7 (line L), should equal to zero "0", if not revise | 0              | 0    | 0    | 0             | 0    |
| <b>Value.</b> --Sum of Values in II-8 less quantity reported in II-7 (line M), should equal to zero "0", if not revise        | 0              | 0    | 0    | 0             | 0    |

II-9. **Production, shipment and inventory data for HFC blends.**--Report your firm's production capacity, production, shipments, and inventories related to the production of HFC components in its U.S. establishment(s) during the specified periods.

| <b>Quantity (in short tons) and value (in \$1,000)</b>   |                       |             |             |                      |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>  | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>Average production capacity</b> <sup>1</sup> (quantity) (AS)  |                       |             |             |                      |             |
| <b>Beginning-of-period inventories</b> (quantity) (AT)   |                       |             |             |                      |             |
| <b>Production</b> (quantity):  |                       |             |             |                      |             |
| R-404A (AU)  |                       |             |             |                      |             |
| R-407A(AV)   |                       |             |             |                      |             |
| R-407C (AW)  |                       |             |             |                      |             |
| R-410A (AX)  |                       |             |             |                      |             |
| R-507A (AY)  |                       |             |             |                      |             |
| Total production of blends (AZ)  | 0                     | 0           | 0           | 0                    | 0           |
| <b>U.S. shipments:</b>   |                       |             |             |                      |             |
| <b>Commercial shipments:</b>   |                       |             |             |                      |             |
| Quantity (BA)  |                       |             |             |                      |             |
| Value (BB)   |                       |             |             |                      |             |
| <b>Internal consumption:</b>   |                       |             |             |                      |             |
| Quantity (BC)  |                       |             |             |                      |             |
| Value <sup>2</sup> (BD)  |                       |             |             |                      |             |
| <b>Transfers to related firms:</b>   |                       |             |             |                      |             |
| Quantity (BE)  |                       |             |             |                      |             |
| Value <sup>2</sup> (BF)  |                       |             |             |                      |             |
| <b>Export shipments:</b> <sup>3</sup>  |                       |             |             |                      |             |
| Quantity (BG)  |                       |             |             |                      |             |
| Value (BH)   |                       |             |             |                      |             |
| <b>End-of-period inventories</b> (quantity) (BI)   |                       |             |             |                      |             |
| <p><sup>1</sup> The production capacity (see definitions in instruction booklet) reported is based on operating _____ hours per week, _____ weeks per year. Please describe the methodology used to calculate production capacity, and explain any changes in reported capacity (use additional pages as necessary)._____.</p> <p><sup>2</sup> Internal consumption, transfers to related firms, and swap transactions must be valued at fair market value. In the event that your firm uses a different basis for valuing these transactions, please specify that basis (e.g., cost, cost plus, etc.) and provide value data using that basis for each of the periods noted above: _____.</p> <p><sup>3</sup> Identify your firm's principal export markets: _____.</p> |                       |             |             |                      |             |

**RECONCILIATION OF SHIPMENTS, PRODUCTION, AND INVENTORY.** --Generally, the data reported for the end-of-period inventories (i.e., line BI) should be equal to beginning of period inventories (i.e., line AT) plus production (i.e., line AZ), less total shipments (i.e., lines BA, BC, BE, and BI). Please ensure that any differences are not due to data entry errors in completing this form, but rather actually reflect your firm's records; and also provide any likely explanations for any differences (e.g., theft, loss, damage, record systems issues, etc.) if they exist.

| Reconciliation  | Calendar years |      |      | January-March |      |
|---|----------------|------|------|---------------|------|
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| AT + AZ – BA – BC BE – BG – BI = should equal zero ("0") or provide an explanation. <sup>1</sup>  | 0              | 0    | 0    | 0             | 0    |
| <sup>1</sup> Explanation if the calculated fields above are returning values other than zero (i.e., "0") but are nonetheless accurate: _____. |                |      |      |               |      |

II-10. **Sources of HFC components used in the production of HFC blends.**—Report your firm's production of HFC blends, by source of HFC components (R-32, R-124, 134a, and 143a), for the specified periods.

| <b>Quantity (in short tons)</b>  |                       |             |             |                      |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>  | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>Production of HFC blends using HFC components--</b>   |                       |             |             |                      |             |
| Produced in the United States (including swapped) <sup>1</sup> by your firm (BJ)   |                       |             |             |                      |             |
| Purchased by your firm and produced in the United States by another firm (BK)  |                       |             |             |                      |             |
| Total production using <b>domestic</b> components (BL)   | 0                     | 0           | 0           | 0                    | 0           |
| Imported from China (direct imports or purchases of imports) (BM) <sup>1</sup>   |                       |             |             |                      |             |
| Imported from sources other than China (direct imports or purchases of imports) (BN) <sup>1</sup>  |                       |             |             |                      |             |
| Total production using <b>imported</b> sources (BO)  | 0                     | 0           | 0           | 0                    | 0           |
| Total production of blends (BP)  | 0                     | 0           | 0           | 0                    | 0           |
| <sup>1</sup> Count as domestic any inputs used by your firm with swapped merchandise if your firm gave its own domestic product for a component of foreign origin (knownly or unknownly). Count as foreign any inputs used by your firm (even if the actual component used was produced in the United States) if your firm procured the domestic component pursuant to swap arrangement in which you gave imported components. |                       |             |             |                      |             |

**RECONCILIATION OF PRODUCTION.**—Total production of blends reported in II-10 by source of inputs should equal total production of blends reported in II-9 by type of blend.

| <b>Reconciliation</b>                            | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| BP – AZ = should equal zero ("0"), if not revise | 0                     | 0           | 0           | 0                    | 0           |

II-11. **Commercial shipments of blends by channel and by product type.**--Report your firm's commercial U.S. shipments by channel and product type.

| <b>Quantity (in short tons) and value (in \$1,000)</b> |                       |             |             |                      |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>  | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>Commercial U.S. shipments:</b>                      |                       |             |             |                      |             |
| <b>R-404A:</b>   |                       |             |             |                      |             |
| Sold to <u>distributors and service companies:</u>     |                       |             |             |                      |             |
| <i>Quantity</i> (BQ)                                   |                       |             |             |                      |             |
| <i>Value</i> (BR)                                      |                       |             |             |                      |             |
| Sold to <u>blenders/repackagers</u>                    |                       |             |             |                      |             |
| <i>Quantity</i> (BS)                                   |                       |             |             |                      |             |
| <i>Value</i> (BT)                                      |                       |             |             |                      |             |
| Sold to <u>original equipment manufacturers</u>        |                       |             |             |                      |             |
| <i>Quantity</i> (BU)                                   |                       |             |             |                      |             |
| <i>Value</i> (BV)                                      |                       |             |             |                      |             |
| <b>R-407A:</b>   |                       |             |             |                      |             |
| Sold to <u>distributors and service companies:</u>     |                       |             |             |                      |             |
| <i>Quantity</i> (BW)                                   |                       |             |             |                      |             |
| <i>Value</i> (BX)                                      |                       |             |             |                      |             |
| Sold to <u>blenders/repackagers</u>                    |                       |             |             |                      |             |
| <i>Quantity</i> (BY)                                   |                       |             |             |                      |             |
| <i>Value</i> (BZ)                                      |                       |             |             |                      |             |
| Sold to <u>original equipment manufacturers</u>        |                       |             |             |                      |             |
| <i>Quantity</i> (CA)                                   |                       |             |             |                      |             |
| <i>Value</i> (CB)                                      |                       |             |             |                      |             |
| <b>Commercial U.S. shipments:</b>                      |                       |             |             |                      |             |
| <b>R-407C:</b>   |                       |             |             |                      |             |
| Sold to <u>distributors and service companies:</u>     |                       |             |             |                      |             |
| <i>Quantity</i> (CC)                                   |                       |             |             |                      |             |
| <i>Value</i> (CD)                                      |                       |             |             |                      |             |
| Sold to <u>blenders/repackagers</u>                    |                       |             |             |                      |             |
| <i>Quantity</i> (CE)                                   |                       |             |             |                      |             |
| <i>Value</i> (CF)                                      |                       |             |             |                      |             |
| Sold to <u>original equipment manufacturers</u>        |                       |             |             |                      |             |
| <i>Quantity</i> (CG)                                   |                       |             |             |                      |             |
| <i>Value</i> (CH)                                      |                       |             |             |                      |             |

*Question continued next page*

II-11. **Commercial shipments of components by channel and by product type.**--Continued

| Quantity (in short tons) and value (in \$1,000)    |                |      |      |               |      |
|--|----------------|------|------|---------------|------|
| Item   | Calendar years |      |      | January-March |      |
|  | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>Commercial U.S. shipments:</b>                  |                |      |      |               |      |
| <b>R-410A:</b>                                     |                |      |      |               |      |
| Sold to <u>distributors and service companies:</u> |                |      |      |               |      |
| <u>Quantity (CI)</u>                               |                |      |      |               |      |
| <u>Value (CJ)</u>                                  |                |      |      |               |      |
| Sold to <u>blenders/repackagers</u>                |                |      |      |               |      |
| <u>Quantity (CK)</u>                               |                |      |      |               |      |
| <u>Value (CL)</u>                                  |                |      |      |               |      |
| Sold to <u>original equipment manufacturers</u>    |                |      |      |               |      |
| <u>Quantity (CM)</u>                               |                |      |      |               |      |
| <u>Value (CN)</u>                                  |                |      |      |               |      |
| <b>R-507A:</b>                                     |                |      |      |               |      |
| Sold to <u>distributors and service companies:</u> |                |      |      |               |      |
| <u>Quantity (CO)</u>                               |                |      |      |               |      |
| <u>Value (CP)</u>                                  |                |      |      |               |      |
| Sold to <u>blenders/repackagers</u>                |                |      |      |               |      |
| <u>Quantity (CQ)</u>                               |                |      |      |               |      |
| <u>Value (CR)</u>                                  |                |      |      |               |      |
| Sold to <u>original equipment manufacturers</u>    |                |      |      |               |      |
| <u>Quantity (CS)</u>                               |                |      |      |               |      |
| <u>Value (CT)</u>                                  |                |      |      |               |      |

*RECONCILIATION OF COMMERCIAL SHIPMENTS.--Quantity data broken out by channel and product should sum to equal the quantity and value reported in question II-9 (lines BA and BB)*

| Reconciliation  | Calendar years |      |      | January-March |      |
|---|----------------|------|------|---------------|------|
|   | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>Quantity.</b> --Sum of Quantities in II-11 less quantity reported in II-9 (line BA), should equal to zero "0", if not revise | 0              | 0    | 0    | 0             | 0    |
| <b>Value.</b> --Sum of Values in II-11 less quantity reported in II-9 (line BB), should equal to zero "0", if not revise        | 0              | 0    | 0    | 0             | 0    |

II-12. **Employment data.**--Report your firm's employment-related data related to the production of HFC blends and HFC components and provide any explanation for any trends in these data.

**"Production Related Workers" (PRWs)** includes working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspecting, receiving, storage, handling, packing, warehousing, shipping, trucking, hauling, maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with the above production operations.

Average number employed may be computed by adding the number of employees, both full time and part time, for the 12 pay periods ending closest to the 15th of the month and divide that total by 12. For the January to March periods, calculate similarly and divide by 3.

**"Hours worked"** includes time paid for sick leave, holidays, and vacation time. Include overtime hours actually worked; do not convert overtime pay to its equivalent in straight time hours.

**"Wages paid"**—Total wages paid before deductions of any kind (e.g., withholding taxes, old-age and unemployment insurance, group insurance, union dues, bonds, etc.). Include wages paid directly by your firm for overtime, holidays, vacations, and sick leave.

| Item   | Calendar years |      |      | January-March |      |
|--|----------------|------|------|---------------|------|
|  | 2012           | 2013 | 2014 | 2014          | 2015 |
| <b>HFC components</b>                          |                |      |      |               |      |
| Average number of PRWs ( <i>number</i> )       |                |      |      |               |      |
| Hours worked by PRWs<br>( <i>1,000 hours</i> ) |                |      |      |               |      |
| Wages paid to PRWs ( <i>\$1,000</i> )          |                |      |      |               |      |
| <b>HFC blends</b>                              |                |      |      |               |      |
| Average number of PRWs ( <i>number</i> )       |                |      |      |               |      |
| Hours worked by PRWs<br>( <i>1,000 hours</i> ) |                |      |      |               |      |
| Wages paid to PRWs ( <i>\$1,000</i> )          |                |      |      |               |      |

Explanation of trends:



II-13. **Related firms.**--If your firm reported transfers to related firms in question II-8, please indicate the nature of the relationship between your firm and the related firms (*e.g.*, joint venture, wholly owned subsidiary), whether the transfers were priced at market value or by a non-market formula, whether your firm retained marketing rights to all transfers, and whether the related firms also processed inputs from sources other than your firm.

II-14. **Purchases of HFC components.**--Other than direct imports, has your firm otherwise purchased HFC components since January 1, 2012?

**“Purchase”** – A transaction to buy HFC blends and/or HFC components from a U.S. corporate entity such as another U.S. producer, a U.S. distributor, or a U.S. firm that has directly imported the HFC blends and/or HFC components.

**“Direct import”** –A transaction to buy from a foreign producer where your firm is the importer of record or consignee. (Per question II-6, if your firm directly imports HFC components or blends it should be submitting a separate U.S. importers' questionnaire response).

Note.—Re-sales of purchases (including repackaged components) should not be include in questions II-7 through II-13. If purchased goods were blended, then the data on the production of HFC blends should be provided in questions II-9 through II-13.

No       Yes--Report such purchases below and explain the reasons for your firms' purchases:

| <b>(Quantity in short tons)</b>   |                       |             |             |                      |             |
|---|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>   | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|   | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>HFC components (for blending, repackaging, or resale)</b><br>Purchases from U.S. importers <sup>1</sup> of HFC components from—<br>China   |                       |             |             |                      |             |
| All other sources   |                       |             |             |                      |             |
| Purchases from domestic producers <sup>2</sup>  |                       |             |             |                      |             |
| Purchases from other sources <sup>2</sup>   |                       |             |             |                      |             |
| <sup>1</sup> Please list the name of the importer(s) from which your firm purchased this product. If your firm's import suppliers differ by source, please identify the source for each listed supplier: _____. |                       |             |             |                      |             |

<sup>2</sup> Please list the name of the producer(s) or U.S. distributor(s) from which your firm purchased this product:  
\_\_\_\_\_.

II-15. **Purchases of HFC blends.**--Other than direct imports, has your firm otherwise purchased HFC blends since January 1, 2012?

**“Purchase”** – A transaction to buy HFC blends and/or HFC components from a U.S. corporate entity such as another U.S. producer, a U.S. distributor, or a U.S. firm that has directly imported the HFC blends and/or HFC components.

**“Direct import”** –A transaction to buy from a foreign producer where your firm is the importer of record or consignee. (Per question II-6, if your firm directly imports HFC components or blends it should be submitting a separate U.S. importers' questionnaire response).

Note.—Re-sales of purchases (including repackaged blends) should not be include in questions II-9 through II-13.

No             Yes--Report such purchases below and explain the reasons for your firms' purchases:

| <b>(Quantity in short tons)</b>  |                       |             |             |                      |             |
|--|-----------------------|-------------|-------------|----------------------|-------------|
| <b>Item</b>  | <b>Calendar years</b> |             |             | <b>January-March</b> |             |
|  | <b>2012</b>           | <b>2013</b> | <b>2014</b> | <b>2014</b>          | <b>2015</b> |
| <b>HFC blends (for repackaging or resale)</b>  |                       |             |             |                      |             |
| Purchases from U.S. importers <sup>1</sup> of HFC blends from—   |                       |             |             |                      |             |
| China  |                       |             |             |                      |             |
| All other sources  |                       |             |             |                      |             |
| Purchases from domestic producers <sup>2</sup>   |                       |             |             |                      |             |
| Purchases from other sources <sup>2</sup>  |                       |             |             |                      |             |
| <sup>1</sup> Please list the name of the importer(s) from which your firm purchased this product. If your firm’s import suppliers differ by source, please identify the source for each listed supplier: _____.<br><sup>2</sup> Please list the name of the producer(s) or U.S. distributor(s) from which your firm purchased this product: _____. |                       |             |             |                      |             |

II-16. **Other explanations:**--If your firm would like to further explain a response to a question in Part II that did not provide a narrative box, please note the question number and the explanation in the space provided below. Please also use this space to highlight any issues your firm had in providing the data in this section, including but not limited to technical issues with the MS Word questionnaire.

**PART III.--FINANCIAL INFORMATION**

Address questions on this part of the questionnaire to David Boyland (202-708-4725, [david.boyland@usitc.gov](mailto:david.boyland@usitc.gov)).

III-1. **Contact information.**-- Please identify the responsible individual and the manner by which Commission staff may contact that individual regarding the confidential information submitted in part III.

|           |  |
|-----------|--|
| Name      |  |
| Title     |  |
| Email     |  |
| Telephone |  |
| Fax       |  |

III-2. **Accounting system.**--Briefly describe your firm's financial accounting system.

A. When does your firm's fiscal year end (month and day)? \_\_\_\_\_  
If your firm's fiscal year changed during the data-collection period, explain below:

B.1. Describe the lowest level of operations (e.g., plant, division, company-wide) for which financial statements are prepared that include HFC blends and components:

2. Does your firm prepare profit/loss statements for HFC blends and components:  
 Yes       No

3. How often did your firm (or parent company) prepare financial statements (including annual reports, 10Ks)? Please check relevant items below.  
 Audited,    unaudited,    annual reports,    10Ks,    10 Qs,  
 Monthly,    quarterly,    semi-annually,    annually

4. Accounting basis:  GAAP,    cash,    tax, or    other comprehensive basis of accounting (specify) \_\_\_\_\_

*Note: As requested in Part I of this questionnaire, please keep all supporting documents/records used in the preparation of the financial data, as Commission staff may contact your firm regarding questions on the financial data. The Commission may also request that your company submit copies of the supporting documents/records (financial statements, including internal profit-and-loss statements for the division or group that includes HFC blends and components, as well as specific statements and worksheets) used to compile these data.*

III-3. **Cost accounting system.**--Briefly describe your firm's cost accounting system (e.g., standard cost, job order cost, etc.).

III-4. **Allocation basis.**--Briefly describe your firm's allocation basis, if any, for COGS, SG&A, and interest expense and other income and expenses.

|  |
|--|
|  |
|--|

III-5. **Other products.**--Please list the products your firm produced in the facilities in which your firm produced HFC blends and/or HFC components, and provide the share of net sales accounted for by these other products in your firm's most recent fiscal year.

| Products                  | Share of sales |
|---------------------------|----------------|
| HFC blends and components | %              |
|                           | %              |
|                           | %              |
|                           | %              |
|                           | %              |

III-6. Does your firm purchase **inputs** (raw materials, labor, energy, or any services) used in the production of HFC blends and/or HFC components from any related suppliers (e.g., inclusive of transactions between related firms, divisions and/or other components within the same company)?

Yes--Continue to question III-7.     
  No--Continue to question III-9a.

III-7. **Inputs from related suppliers.**--Please identify the inputs used in the production of HFC blends and/or HFC components that your firm purchases from related suppliers and that are reflected in table III-9b. For "Share of total COGS" please report this information by relevant input on the basis of your most recently completed fiscal year. For "Input valuation" please describe the basis, as recorded in your company's own accounting system, of the purchase cost from the related supplier; e.g., the related supplier's actual cost, cost plus, negotiated transfer price to approximate fair market value.

| Input   | Related supplier | Share of total COGS |
|---|------------------|---------------------|
|   |                  |                     |
|   |                  |                     |
|   |                  |                     |
| <b>Input valuation as recorded in the firm's accounting books and records</b> |                  |                     |
|   |                  |                     |

III-8. **Inputs purchased from related suppliers.**--Please confirm that the inputs purchased from related suppliers, as identified in III-7, were reported in tables III-9a and III-9b (financial results on HFC blends and components) in a manner consistent with your firm's accounting books and records.

Yes

No--In the space below, please report the valuation basis of inputs purchased from related suppliers as reported in table III-9a and III-9b.

III-9a. **Internally-produced HFC component costs recognized in COGS.**--Report the requested cost information specific to HFC components produced in your firm's U.S. establishment(s) and recognized in financial results on HFC blends and components (as reported in table III-9b). The total amount reported in this table should reconcile to the total line item (*Cost of internally-produced components recognized in COGS*) reported in table III-9b. Input purchases from related suppliers should be consistent with and based on information in the firm's accounting books and records. Provide data for your firm's three most recently completed fiscal years, and for the specified interim periods.

| Value (in \$1,000)   |                      |      |      |               |      |
|--|----------------------|------|------|---------------|------|
| Item   | Fiscal years ended-- |      |      | January-March |      |
|  | 2012                 | 2013 | 2014 | 2014          | 2015 |
| <b>Cost of internally-produced components recognized in COGS (table III-9b):<sup>1</sup></b>   |                      |      |      |               |      |
| Raw materials (internally-produced components)   | 0                    | 0    | 0    | 0             | 0    |
| Direct labor (internally-produced components)  | 0                    | 0    | 0    | 0             | 0    |
| Other factory costs (internally-produced components)   | 0                    | 0    | 0    | 0             | 0    |
| Total cost of internally-produced components   | 0                    | 0    | 0    | 0             | 0    |
| <sup>1</sup> Total cost of internally-produced components should reconcile to the relevant line item in table III-9b ( <i>Cost of internally-produced components recognized in COGS</i> ). |                      |      |      |               |      |

III-9b. Operations on HFC blends and/or HFC components.--Report the revenue and related cost information requested below on the HFC blends and/or HFC components operations of your firm's U.S. establishment(s).<sup>1</sup> Do not report resales of products. Note that internal consumption and transfers to related firms must be valued at fair market value. Input purchases from related suppliers should be consistent with and based on information in the firm's accounting books and records. Provide data for your firm's three most recently completed fiscal years, and for the specified interim periods. If your firm was involved in tolling operations (either as the toller or as the tollee), please contact David Boyland at (202) 708-4725 before completing this section of the questionnaire.

| Quantity (in short tons) and value (in \$1,000)                                      |                      |      |      |               |      |
|--|----------------------|------|------|---------------|------|
| Item   | Fiscal years ended-- |      |      | January-March |      |
|  | 2012                 | 2013 | 2014 | 2014          | 2015 |
| <b>Net sales quantities:</b> <sup>2</sup>  |                      |      |      |               |      |
| Commercial sales ("CS")  | 0                    | 0    | 0    | 0             | 0    |
| Internal consumption ("IC")  | 0                    | 0    | 0    | 0             | 0    |
| Transfers to related firms ("Transfers")   | 0                    | 0    | 0    | 0             | 0    |
| Total net sales quantities   | 0                    | 0    | 0    | 0             | 0    |
| <b>Net sales values:</b> <sup>2</sup>  |                      |      |      |               |      |
| Commercial sales   | 0                    | 0    | 0    | 0             | 0    |
| Internal consumption   | 0                    | 0    | 0    | 0             | 0    |
| Transfers to related firms   | 0                    | 0    | 0    | 0             | 0    |
| Total net sales values   | 0                    | 0    | 0    | 0             | 0    |
| <b>Cost of goods sold (COGS):</b> <sup>3</sup>                                       |                      |      |      |               |      |
| Cost of internally-produced components recognized in COGS <sup>4</sup> (from III-9a) | 0                    | 0    | 0    | 0             | 0    |
| Purchased or swapped components recognized in COGS (U.S. origin) <sup>5</sup>        | 0                    | 0    | 0    | 0             | 0    |
| Purchased components recognized in COGS (imported) <sup>5</sup>                      | 0                    | 0    | 0    | 0             | 0    |
| All other raw materials (blending operations only)                                   | 0                    | 0    | 0    | 0             | 0    |
| Direct labor (blending operations only)  | 0                    | 0    | 0    | 0             | 0    |
| Other factory costs (blending operations only)                                       | 0                    | 0    | 0    | 0             | 0    |
| Total COGS   | 0                    | 0    | 0    | 0             | 0    |
| <b>Gross profit or (loss)</b>  | 0                    | 0    | 0    | 0             | 0    |
| <b>Selling, general, and administrative (SG&amp;A) expenses:</b>                     |                      |      |      |               |      |
| Selling expenses   | 0                    | 0    | 0    | 0             | 0    |
| General and administrative expenses  | 0                    | 0    | 0    | 0             | 0    |
| Total SG&A expenses  | 0                    | 0    | 0    | 0             | 0    |
| <b>Operating income (loss)</b>   | 0                    | 0    | 0    | 0             | 0    |
| <b>Other expenses and income:</b>  |                      |      |      |               |      |
| Interest expense   | 0                    | 0    | 0    | 0             | 0    |
| All other expense items  | 0                    | 0    | 0    | 0             | 0    |
| All other income items   | 0                    | 0    | 0    | 0             | 0    |
| <b>Net income or (loss) before income taxes</b>                                      | 0                    | 0    | 0    | 0             | 0    |
| <b>Depreciation/amortization included above</b>                                      | 0                    | 0    | 0    | 0             | 0    |

<sup>1</sup> Include only sales (whether domestic or export) and costs related to your U.S. manufacturing operations.  
<sup>2</sup> Less discounts, returns, allowances, and prepaid freight. The quantities and values should approximate the corresponding shipment quantities and values reported in Part II of this questionnaire.  
<sup>3</sup> COGS (whether for domestic or export sales) should include costs associated with CS, IC, and Transfers.  
<sup>4</sup> Total cost of internally-produced components recognized in COGS are reported in question III-9a and will populate in this grid.  
<sup>5</sup> Relevant SWAP-related costs should be consistent with the company's responses to question II-7.

*Note -- The table above contains calculations that will appear when you have entered data in the MS Word form fields.*

III-9c. **Financial data reconciliation.**--The calculable line items from question III-9b (*i.e.*, total net sales quantities and values, total COGS, gross profit (or loss), total SG&A, and net income (or loss)) have been calculated from the data submitted in the other line items. Do the calculated fields return the correct data according to your firm's financial records ignoring non-material differences that may arise due to rounding?

Yes     No--If the calculated fields do not show the correct data, please double check the feeder data for data entry errors and revise.

Also, check signs accorded to the post operating income line items; the two expense line items should report positive numbers (*i.e.*, expenses are positive and incomes or reversals are negative--instances of the latter should be rare in those lines) while the income line item also in most instances should have its value be a positive number (*i.e.*, income is positive, expenses or reversals are negative).

If after reviewing and potentially revising the feeder data your firm has provided, the differences between your records and the calculated fields persist please identify and discuss the differences in the space below.



**III-10. Nonrecurring items (charges and gains) included in HFC blends and/or HFC components**

**financial results**--For each annual and interim period for which financial results are reported in question III-9b, please specify all material (significant) nonrecurring items (charges and gains) in the schedule below, the specific table III-9b line item where the nonrecurring items are included, a brief description of the relevant nonrecurring items, and the associated values (*in \$1,000*), as reflected in table III-9b; i.e., if an aggregate nonrecurring item has been allocated to table III-9b, only the allocated value amount included in table III-9b should be reported in the schedule below. Note: The Commission's objective here is to gather information only on material (significant) nonrecurring items which impacted the reported financial results in table III-9b.

|  | Fiscal years ended--  |      |      | January-March |      |
|--|---|------|------|---------------|------|
|  | 2012  | 2013 | 2014 | 2014          | 2015 |
| <b>Nonrecurring item:</b> In this column please provide a brief description of each nonrecurring item and indicate the specific line item in table III-9b where the nonrecurring item is classified. | <b>Nonrecurring item:</b> In these columns please report the amount of the relevant nonrecurring item reported in table III-9b.<br><br><b>Value (\$1,000)</b> |      |      |               |      |
| 1. , classified as   |   |      |      |               |      |
| 2. , classified as   |   |      |      |               |      |
| 3. , classified as   |   |      |      |               |      |
| 4. , classified as   |   |      |      |               |      |
| 5. , classified as   |   |      |      |               |      |
| 6. , classified as   |   |      |      |               |      |
| 7. , classified as   |   |      |      |               |      |

**III-11. Classification of identified nonrecurring items (charges and gains) in the accounting books and records of the company**

--If non-recurring items were reported in table III-10 above, please identify where your company recorded these items in your accounting books and records in the normal course of business; i.e., III-10 information designates where these items are reported in table III-9b.

III-12. **Property, plant, and equipment and total assets.**--Report the property, plant, and equipment (PP&E) and total assets (i.e., both current and long-term assets) associated with the production, warehousing, and sale of HFC blends and/or HFC components. If your firm does not maintain some or all of the specific information necessary to report this information (specific to HFC blends and/or HFC components) in the normal course of business, please estimate this information based upon a method (such as production, sales, or costs) that is consistent with your firm's cost allocations in the table III-9b. Provide data as of the end of your firm's three most recently completed fiscal years.

**Note:** PP&E and total assets should reflect net assets after any accumulated depreciation and allowances deducted.

PP&E and total assets should be allocated to the subject products if they are also related to other products. Please provide a brief explanation if there are any substantial changes in PP&E and/or total assets during the period; e.g., due to asset write-offs, revaluation, and major purchases.

| Item  | Value (in \$1,000)   |      |      |               |      |
|---|----------------------|------|------|---------------|------|
|   | Fiscal years ended-- |      |      | January-March |      |
|   | 2012                 | 2013 | 2014 | 2014          | 2015 |
| Property, plant, and equipment (net) <sup>1</sup>   |                      |      |      |               |      |
| Total assets (net) <sup>1</sup>   |                      |      |      |               |      |
| <sup>1</sup> Describe nature of substantial changes in PP&E and total asset balance _____ |                      |      |      |               |      |

III-13a. **Capital expenditures and research and development expenses.**--Report your firm's capital expenditures and research and development expenses on HFC blends and/or HFC components. Provide data for your firm's three most recently completed fiscal years, and for the specified interim periods.

| Item                              | Value (in \$1,000)   |      |      |               |      |
|-----------------------------------|----------------------|------|------|---------------|------|
|                                   | Fiscal years ended-- |      |      | January-March |      |
|                                   | 2012                 | 2013 | 2014 | 2014          | 2015 |
| Capital expenditures              |                      |      |      |               |      |
| Research and development expenses |                      |      |      |               |      |

III-13b. **Capital expenditures.**--Please indicate the nature, focus, and significance of your firm's capital expenditures on HFC blends and/or HFC components.

III-14. **Data consistency and reconciliation.**--Please indicate whether your firm's financial data for questions III-9b, 12, and 13a are based on a calendar year or on your firm's fiscal year:

| Calendar year            | Fiscal year              | Specify fiscal year |
|--------------------------|--------------------------|---------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |                     |

Please note the quantities and values reported in question III-9b should reconcile with the relevant data reported in questions II-7 and II-9 (including export shipments) as long as they are reported on the same calendar year basis.

Do these data in question III-9b reconcile with relevant data in questions II-7 and II-9?

| Yes                      | No                       | If no, please explain. |
|--------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |                        |

III-15. **Effects of imports.**--Since January 1, 2012, has your firm experienced any actual negative effects on its return on investment or its growth, investment, ability to raise capital, existing development and production efforts (including efforts to develop a derivative or more advanced version of the HFC blends and/or HFC components), or the scale of capital investments as a result of imports of HFC blends and/or HFC components from China?

No                       Yes--My firm has experienced actual negative effects as follows:

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Cancellation, postponement, or rejection of expansion projects |
| <input type="checkbox"/> | Denial or rejection of investment proposal                     |
| <input type="checkbox"/> | Reduction in the size of capital investments                   |
| <input type="checkbox"/> | Rejection of bank loans  |
| <input type="checkbox"/> | Lowering of credit rating                                      |
| <input type="checkbox"/> | Problem related to the issue of stocks or bonds                |
| <input type="checkbox"/> | Other (specify):   |

III-16. **Anticipated effects of imports.**--Does your firm anticipate any negative effects due to imports of HFC blends and/or HFC components from China?

| No                       | Yes                      | If yes, my firm anticipates negative effects as follows: |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |

III-17. **Other explanations:**--If your firm would like to further explain a response to a question in Part III that did not provide a narrative box, please note the question number and the explanation in the space provided below. Please also use this space to highlight any issues your firm had in providing the data in this section, including but not limited to technical issues with the MS Word questionnaire.

|  |
|--|
|  |
|--|

**PART IV.-- PRICING AND MARKET FACTORS**

Further information on this part of the questionnaire can be obtained from Michele Breaux (202-205-2781, [michele.breaux@usitc.gov](mailto:michele.breaux@usitc.gov)).

IV-1. **Contact information.**--Please identify the individual that Commission staff may contact regarding the confidential information submitted in part IV.

|           |  |
|-----------|--|
| Name      |  |
| Title     |  |
| Email     |  |
| Telephone |  |
| Fax       |  |

**PRICE DATA**

IV-2. This question requests quarterly quantity and value data for your firm's commercial shipments to unrelated U.S. customers since January 1, 2012 of the following products produced by your firm.

**Product 1.**-- R-410A in bulk containers (1,000 lbs. or greater);

**Product 2.**-- R-410A in 25-lb. disposable tanks or cylinders;

**Product 3.**-- R-404A in 24-lb. disposable tanks or cylinders;

**Product 4.**-- R-407C in 25-lb. disposable tanks or cylinders;

**Product 5.**-- R-32 in bulk containers (1,000 lbs. or greater);

**Product 6.**-- R-125 in in bulk containers (over 1,000 lbs. or greater).

**Please note that values should be f.o.b., U.S. point of shipment and should not include U.S.-inland transportation costs. Values should reflect the *final net* amount paid to your firm (i.e., should be net of all deductions for discounts or rebates).**

During January 2012-March 2015, did your firm produce and sell to unrelated U.S. customers any of the above listed products (or any products that were competitive with these products)?

|                          |   |
|--------------------------|---|
| <input type="checkbox"/> | <b>Yes.</b> --Please complete the following pricing data table(s) as appropriate. |
| <input type="checkbox"/> | <b>No.</b> --Skip to question IV-3.   |

*Note: As requested in Part I of this questionnaire, please keep all supporting documents/records used in the preparation of the price data, as Commission staff may contact your firm regarding questions on the price data. The Commission may also request that your company submit copies of the supporting documents/records (such as sales journal, invoices, etc.) used to compile these data.*

IV-2a. **Price data.**--Report below the quarterly price data<sup>1</sup> for pricing products<sup>2</sup> produced and sold by your firm.

**Report data in actual pounds and actual dollars (not 1,000s).**

| <b>(Quantity in pounds , value in dollars)</b> |                  |              |                  |              |                  |              |
|--|------------------|--------------|------------------|--------------|------------------|--------------|
| <b>Period of shipment</b>                      | <b>Product 1</b> |              | <b>Product 2</b> |              | <b>Product 3</b> |              |
|  | <b>Quantity</b>  | <b>Value</b> | <b>Quantity</b>  | <b>Value</b> | <b>Quantity</b>  | <b>Value</b> |
| <b>2012:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2013:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2014:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2015:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |

<sup>1</sup> Net values (*i.e.*, gross sales values less all discounts, allowances, rebates, prepaid freight, and the value of returned goods), f.o.b. your firm's U.S. point of shipment.

<sup>2</sup> Pricing product definitions are provided on the first page of Part IV.

**Note.**--If your firm's product does not exactly meet the product specifications but is competitive with the specified product, provide a description of your firm's product. Also, please explain any anomalies in your firm's reported pricing data.

Product 1:

Product 2:

Product 3:

IV-2a. **Price data(continued).**--Report below the quarterly price data<sup>1</sup> for pricing products<sup>2</sup> produced and sold by your firm.

**Report data in actual pounds and actual dollars (not 1,000s).**

| <b>(Quantity in pounds , value in dollars)</b> |                  |              |                  |              |                  |              |
|--|------------------|--------------|------------------|--------------|------------------|--------------|
| <b>Period of shipment</b>                      | <b>Product 4</b> |              | <b>Product 5</b> |              | <b>Product 6</b> |              |
|  | <b>Quantity</b>  | <b>Value</b> | <b>Quantity</b>  | <b>Value</b> | <b>Quantity</b>  | <b>Value</b> |
| <b>2012:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2013:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2014:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |
| April-June                                     |                  |              |                  |              |                  |              |
| July-September                                 |                  |              |                  |              |                  |              |
| October-December                               |                  |              |                  |              |                  |              |
| <b>2015:</b>                                   |                  |              |                  |              |                  |              |
| January-March                                  |                  |              |                  |              |                  |              |

<sup>1</sup> Net values (*i.e.*, gross sales values less all discounts, allowances, rebates, prepaid freight, and the value of returned goods), f.o.b. your firm's U.S. point of shipment.

<sup>2</sup> Pricing product definitions are provided on the first page of Part IV.

**Note.**--If your firm's product does not exactly meet the product specifications but is competitive with the specified product, provide a description of your firm's product. Also, please explain any anomalies in your firm's reported pricing data.

Product 4:

Product 5:

Product 6:

IV-2b. **Pricing data methodology.**—Please describe the method and the kinds of documents/records that were used to compile your price data.

IV-2c. **Price data component country-of-origin.**--Report below the average share of total quantity of each individual HFC blend pricing products (e.g., products 1 through 4)'s input components by source.

| Product  | Percent total quantity over period<br>(January 2012-March 2015) |  |  | Total (should sum to 100.0%) |
|--|---|--|--|------------------------------|
|  | Domestic components <sup>1</sup><br>(percent)                   | Components imported from China <sup>1</sup><br>(percent) | Components imported from all other sources <sup>1</sup><br>(percent) |                              |
| <b>Product 1-</b> R-410A in bulk containers (1,000 lbs. or greater)  |   |  |  | <b>0.0</b>                   |
| <b>Product 2-</b> R-410A in 25-lb. disposable tanks or cylinders   |   |  |  | <b>0.0</b>                   |
| <b>Product 3-</b> R-404A in 24-lb. disposable tanks or cylinders   |   |  |  | <b>0.0</b>                   |
| <b>Product 4-</b> R-407C in 25-lb. disposable tanks or cylinders   |   |  |  | <b>0.0</b>                   |
| <sup>1</sup> Count as domestic any inputs used by your firm with swapped merchandise if your firm gave its own domestic product for a component of foreign origin (knowingly or unknowingly). Count as foreign any inputs used by your firm (even if the actual component used was produced in the United States) if your firm procured the domestic component pursuant to swap arrangement in which you gave imported components. |   |  |  |                              |

IV-3. **Price setting.**--How does your firm determine the prices that it charges for sales of HFC blends and/or HFC components (*check all that apply*)? If your firm issues price lists, please submit sample pages of a recent list.

| Transaction by transaction | Contracts                | Set price lists          | Other                    | If other, describe |
|----------------------------|--------------------------|--------------------------|--------------------------|--------------------|
| <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                    |

IV-4. **Discount policy.**--Please indicate and describe your firm's discount policies (*check all that apply*).

| Quantity discounts       | Annual total volume discounts | No discount policy       | Other                    | Describe |
|--------------------------|-------------------------------|--------------------------|--------------------------|----------|
| <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> | <input type="checkbox"/> |          |



IV-5. **Pricing terms.**--

(a) What are your firm's typical sales terms for its U.S.-produced HFC blends and/or HFC components?

| Net 30 days              | Net 60 days              | 2/10 net 30 days         | Other                    | Other (specify) |
|--------------------------|--------------------------|--------------------------|--------------------------|-----------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                 |

(b) On what basis are your firm's prices of domestic HFC blends and/or HFC components usually quoted (*check one*)?

| Delivered                | F.o.b.                   | If f.o.b., specify point |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |                          |

IV-6. **Contract versus spot.**--Approximately what share of your firm's sales of its U.S.-produced HFC blends and/or HFC components in 2014 was on a (1) long-term contract basis, (2) annual contract basis, (3) short-term contract basis, and (4) spot sales basis?

|                            | Type of sale   |   |   |                                       | Total<br>(should sum to 100.0%) |
|----------------------------|--|---|---|---------------------------------------|---------------------------------|
|                            | Long-term contracts<br>(multiple deliveries for more than 12 months) | Annual contracts<br>(multiple deliveries for 12 months) | Short-term contracts<br>(multiple deliveries for less than 12 months) | Spot sales<br>(for a single delivery) |                                 |
| <b>Share of 2014 sales</b> | %  | %   | %   | %                                     | <b>0.0</b> %                    |

IV-7. **Contract provisions.**--Please fill out the table regarding your firm's typical sales contracts for U.S.-produced HFC blends and/or HFC components (or check "not applicable" if your firm does not sell on a long-term, short-term and/or annual contract basis).

| <b>Typical sales contract provisions</b>     | <b>Item</b>      | <b>Short-term contracts</b><br>(multiple deliveries for less than 12 months) | <b>Annual contracts</b><br>(multiple deliveries for 12 months) | <b>Long-term contracts</b><br>(multiple deliveries for more than 12 months) |
|--|------------------|--|--|---|
| Average contract duration                    | <i># of days</i> |  | 365  |   |
| Price renegotiation (during contract period) | <i>Yes</i>       | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
|  | <i>No</i>        | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
| Fixed quantity and/or price                  | <i>Quantity</i>  | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
|  | <i>Price</i>     | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
|  | <i>Both</i>      | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
| Meet or release provision                    | <i>Yes</i>       | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
|  | <i>No</i>        | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |
| Not applicable                               |                  | <input type="checkbox"/>   | <input type="checkbox"/>                                       | <input type="checkbox"/>  |

IV-8. **Lead times.**--What is your firm's share of sales from inventory and produced to order and what is the typical lead time between a customer's order and the date of delivery for your firm's sales of its U.S.-produced HFC blends and/or HFC components?

| <b>Source</b>                       | <b>Share of 2014 sales</b> | <b>Lead time (days)</b> |
|-------------------------------------|----------------------------|-------------------------|
| From inventory                      | %                          |                         |
| Produced to order                   | %                          |                         |
| <b>Total</b> (should sum to 100.0%) | <b>0.0</b> %               |                         |

**IV-9. Shipping information.--**

- (a) What is the approximate percentage of the total delivered cost of U.S.-produced HFC blends and/or HFC components that is accounted for by U.S. inland transportation costs? \_\_\_\_\_ percent
  
- (b) Who generally arranges the transportation to your firm's customers' locations?  
 Your firm     Purchaser (*check one*)
  
- (c) Indicate the approximate percentage of your firm's sales of HFC blends and/or HFC components that are delivered the following distances from its production facility.

| <b>Distance from production facility</b> | <b>Share</b> |
|--|--------------|
| Within 100 miles                         | %            |
| 101 to 1,000 miles                       | %            |
| Over 1,000 miles                         | %            |
| <b>Total</b> (should sum to 100.0%)      | <b>0.0 %</b> |

- IV-10. **Geographical shipments.**-- In which U.S. geographic market area(s) has your firm sold its U.S.-produced HFC blends and/or HFC components since January 1, 2012 (check all that apply)?

| <b>Geographic area</b>   | <b>√ if applicable</b>   |
|--|--------------------------|
| <b>Northeast.</b> —CT, ME, MA, NH, NJ, NY, PA, RI, and VT.   | <input type="checkbox"/> |
| <b>Midwest.</b> —IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, and WI.   | <input type="checkbox"/> |
| <b>Southeast.</b> —AL, DE, DC, FL, GA, KY, MD, MS, NC, SC, TN, VA, and WV.   | <input type="checkbox"/> |
| <b>Central Southwest.</b> —AR, LA, OK, and TX.   | <input type="checkbox"/> |
| <b>Mountains.</b> —AZ, CO, ID, MT, NV, NM, UT, and WY.   | <input type="checkbox"/> |
| <b>Pacific Coast.</b> —CA, OR, and WA.   | <input type="checkbox"/> |
| <b>Other.</b> —All other markets in the United States not previously listed, including AK, HI, PR, and VI, among others. | <input type="checkbox"/> |

IV-11. **End uses.**—For 2014, report the quantity of U.S. commercial shipments of your firm's U.S. produced blends by end use.

| End-use application                             | 2014                  |        |        |        |        |                                 |
|---|-----------------------|--------|--------|--------|--------|---------------------------------|
|   | R-404A                | R-407A | R-407C | R-410A | R-507A | Total commercial U.S. shipments |
|   | Quantity (short tons) |        |        |        |        |                                 |
| Residential a/c and heat pumps                  |                       |        |        |        |        | 0                               |
| Commercial a/c                                  |                       |        |        |        |        | 0                               |
| Commercial refrigeration                        |                       |        |        |        |        | 0                               |
| Transport refrigeration                         |                       |        |        |        |        | 0                               |
| Process refrigeration                           |                       |        |        |        |        | 0                               |
| Other <sup>1</sup>                              |                       |        |        |        |        | 0                               |
| Total commercial U.S. shipments                 | 0                     | 0      | 0      | 0      | 0      | 0                               |
| <sup>1</sup> Explain the other end uses: _____. |                       |        |        |        |        |                                 |

**RECONCILIATION OF SHIPMENTS, PRODUCTION, AND INVENTORY.**-- Data in question II-11 should reconcile with data reported in this question, (i.e., the reconciliations below should return zero, "0"). If the reconciliations are not returning zero, please revise the inconsistency in the data prior to submission of the completed questionnaire to the Commission.

| Reconciliation   | R-404A | R-407A | R-407C | R-410A | R-507A | Total |
|--|--------|--------|--------|--------|--------|-------|
| Should equal zero ("0"), if not revise here (or question II-11). | 0      | 0      | 0      | 0      | 0      | 0     |

IV-12. **Substitutes.**-- Can other products be substituted for HFC blends and/or HFC components?

No                       Yes--Please fill out the table.

| Substitute | End use in which this substitute is used | Have changes in the prices of this substitute affected the price for HFC blends and/or HFC components? |                          |             |
|------------|--|--|--------------------------|-------------|
|            |  | No   | Yes                      | Explanation |
| 1.         |  | <input type="checkbox"/>   | <input type="checkbox"/> |             |
| 2.         |  | <input type="checkbox"/>   | <input type="checkbox"/> |             |
| 3.         |  | <input type="checkbox"/>   | <input type="checkbox"/> |             |

IV-13. **Demand trends.**-- Indicate how demand within the United States and outside of the United States (if known) for HFC blends and/or HFC components has changed since January 1, 2012. Explain any trends and describe the principal factors that have affected these changes in demand.

| Market                    | Overall increase         | No change                | Overall decrease         | Fluctuate with no clear trend | Explanation and factors |
|---------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|-------------------------|
| Within the United States  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |                         |
| Outside the United States | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |                         |

IV-14. **Product changes.**--Have there been any significant changes in the product range, product mix, or marketing of HFC blends and/or HFC components since January 1, 2012?

| No                       | Yes                      | If yes, please describe and quantify if possible. |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> |   |

IV-15. **Conditions of competition.**--

(a) Is the HFC blends and/or HFC components market subject to business cycles (other than general economy-wide conditions) and/or other conditions of competition distinctive to HFC blends and/or HFC components? If yes, describe.

| Check all that apply.   | Please describe.        |
|---|-------------------------|
| <input type="checkbox"/> <b>No</b>  | Skip to question IV-16. |
| <input type="checkbox"/> <b>Yes-Business cycles (e.g. seasonal business)</b>    |                         |
| <input type="checkbox"/> <b>Yes-Other distinctive conditions of competition</b> |                         |

(b) If yes, have there been any changes in the business cycles or conditions of competition for HFC blends and/or HFC components since January 1, 2012?

| No                       | Yes                      | If yes, describe. |
|--------------------------|--------------------------|-------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |                   |

IV-16. **Supply constraints.**--Has your firm refused, declined, or been unable to supply HFC blends and/or HFC components since January 1, 2012 (examples include placing customers on allocation or "controlled order entry," declining to accept new customers or renew existing customers, delivering less than the quantity promised, been unable to meet timely shipment commitments, etc.)?

| No                       | Yes                      | If yes, please describe. |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |                          |

IV-17. **Raw materials.**--How have HFC blends and component raw materials prices changed since January 1, 2012?

| Overall increase         | No change                | Overall decrease         | Fluctuate with no clear trend | Explain, noting how raw material price changes have affected your firm's selling prices for HFC blends and constituents. |
|--------------------------|--------------------------|--------------------------|-------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      |  |

IV-18. **Interchangeability.**--Are HFC blends and/or HFC components produced in the United States and in other countries interchangeable (*i.e.*, can they physically be used in the same applications)?

Please indicate A, F, S, N, or O in the table below:

A = the products from a specified country-pair are *always* interchangeable

F = the products are *frequently* interchangeable

S = the products are *sometimes* interchangeable

N = the products are *never* interchangeable

O = *no familiarity* with products from a specified country-pair

| Country-pair |               | Components |                 | Blends |                 |
|--------------|---------------|------------|-----------------|--------|-----------------|
|              |               | China      | Other Countries | China  | Other Countries |
| Components   | United States |            |                 |        |                 |
|              | China         |            |                 |        |                 |
| Blends       | United States |            |                 |        |                 |
|              | China         |            |                 |        |                 |

For any country-pair producing HFC blends and/or HFC components that is *sometimes* or *never* interchangeable, identify the country-pair and explain the factors that limit or preclude interchangeable use:

IV-19. **Factors other than price.**--Are differences other than price (*e.g.*, quality, availability, transportation network, product range, technical support, *etc.*) between HFC blends and/or HFC components produced in the United States and in other countries a significant factor in your firm's sales of the products?

Please indicate A, F, S, N, or O in the table below:

A = such differences are *always* significant

F = such differences are *frequently* significant

S = such differences are *sometimes* significant

N = such differences are *never* significant

O = *no familiarity* with products from a specified country-pair

| Country-pair   |               | Components |                 | Blends |                 |
|--|---------------|------------|-----------------|--------|-----------------|
|  |               | China      | Other Countries | China  | Other Countries |
| Components   | United States |            |                 | X      | X               |
|  | China         | X          |                 | X      | X               |
| Blends   | United States | X          | X               |        |                 |
|  | China         | X          | X               | X      |                 |
| For any country-pair for which factors other than price <i>always</i> or <i>frequently</i> are a significant factor in your firm's sales of HFC blends and/or HFC components, identify the country-pair and report the advantages or disadvantages imparted by such factors: |               |            |                 |        |                 |

IV-20. **Customer identification**--List the names and contact information for your firm's 10 largest U.S. customers for HFC blends and/or HFC components since January 1, 2012. Indicate the share of the quantity of your firm's total shipments of HFC blends and components that each of these customers accounted for in 2014.

|    | Customer's name | Contact person | Email | Telephone | City | State | Share of 2014 sales (%) |
|----|-----------------|----------------|-------|-----------|------|-------|-------------------------|
| 1  |                 |                |       |           |      |       |                         |
| 2  |                 |                |       |           |      |       |                         |
| 3  |                 |                |       |           |      |       |                         |
| 4  |                 |                |       |           |      |       |                         |
| 5  |                 |                |       |           |      |       |                         |
| 6  |                 |                |       |           |      |       |                         |
| 7  |                 |                |       |           |      |       |                         |
| 8  |                 |                |       |           |      |       |                         |
| 9  |                 |                |       |           |      |       |                         |
| 10 |                 |                |       |           |      |       |                         |



**IV-21. Competition from imports**

- (a) **Lost revenue.**--Since January 1, 2012: To avoid losing sales to competitors selling HFC blends and/or HFC components from China, did your firm:

|  | <b>No</b>                | <b>Yes</b>               |
|--|--------------------------|--------------------------|
| <b>Reduce prices</b>                       | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Roll back announced price increases</b> | <input type="checkbox"/> | <input type="checkbox"/> |

- (b) **Lost sales.**--Since January 1, 2012: Did your firm lose sales of HFC blends and components to imports of this HFC blends and/or HFC components from China?

| <b>No</b>                | <b>Yes</b>               |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |

- (c) **The submission of lost sales/lost revenue allegations is to be completed only by NON-PETITIONERS. (Note: petitioners may provide allegations involving quotes made AFTER the filing of the petition.) Please do not resubmit allegations provided previously.**

If your firm indicated “yes” to any of the above, your firm can provide the Commission with additional information by downloading and completing the lost sales/lost revenues worksheet at [http://usitc.gov/trade\\_remedy/question.htm](http://usitc.gov/trade_remedy/question.htm). Note that the Commission may contact the firms named to verify the allegations reported.

Is your firm submitting the lost sales/lost revenues worksheet?

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | No—Please explain.   |
| <input type="checkbox"/> | Yes—Please complete the worksheet and submit via the Commission dropbox. <a href="https://dropbox.usitc.gov/oinv/">https://dropbox.usitc.gov/oinv/</a> . (PIN: 1279) |

- IV-22. **Other explanations**--If your firm would like to further explain a response to a question in Part IV that did not provide a narrative response box, please note the question number and the explanation in the space provided below. Please also use this space to highlight any issues your firm had in providing the data in this section, including but not limited to technical issues with the MS Word questionnaire.

**PART V.--PRODUCT COMPARISONS**

V-1. **Interchangeability of individual HFC blends with each other.**--Are individual HFC blends interchangeable with each other for use in the same end use applications (*i.e.*, can they physically be used in the same applications)?

Please indicate A, F, S, N, or O in the table below:

- A = the blends are *always* interchangeable
- F = the blends are *frequently* interchangeable
- S = the blends are *sometimes* interchangeable
- N = the blends are *never* interchangeable
- O = *no familiarity* with blend being compared

| Product-pair        |        | Within scope blends |        |        |        |
|---------------------|--------|---------------------|--------|--------|--------|
|                     |        | R-404A              | R-407A | R-407C | R-410A |
| Within scope blends | R-407A |                     |        |        |        |
|                     | R-407C | X                   |        |        |        |
|                     | R-410A | X                   | X      |        |        |
|                     | R-507A | X                   | X      | X      |        |

For any individual HFC blend comparison components that is sometimes or never interchangeable, identify the factors that limit or preclude interchangeable use:

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V-2. **Semi-finished HFC components vs HFC blends.**--For each of the following individual HFC components. If you do not have the knowledge to be able to respond this question, please leave it blank.

- (a) **Uses other than in HFC blend production.**—Indicate whether each individual HFC component has a use other than in the production of downstream HFC blends. If there are uses for individual HFC component other than for use in the production of HFC blends, please indicate what uses those uses are.

| HFC component | No.--<br>Dedicated       | Yes.--Other<br>uses      | Explanation (if yes).—Describe the other uses |
|---------------|--------------------------|--------------------------|---|
| R-32          | <input type="checkbox"/> | <input type="checkbox"/> | _____   |
| R-125         | <input type="checkbox"/> | <input type="checkbox"/> | _____   |
| R-134a        | <input type="checkbox"/> | <input type="checkbox"/> | _____   |
| R-143a        | <input type="checkbox"/> | <input type="checkbox"/> | _____   |

- (b) **Differences in markets.**—Are the markets, to the degree that the individual HFC blends are sold commercially, separate and/or distinct from the market(s) for the downstream HFC blends? If there are differences in the markets, please describe them in the space provided. (If there are no markets for the HFC components, check no or leave blank).

| HFC component | No.—Similar<br>market(s) | Yes.—<br>Separate/<br>distinct<br>market(s) | Explanation (if yes).—Describe the differences |
|---------------|--------------------------|---|--|
| R-32          | <input type="checkbox"/> | <input type="checkbox"/>                    | _____  |
| R-125         | <input type="checkbox"/> | <input type="checkbox"/>                    | _____  |
| R-134a        | <input type="checkbox"/> | <input type="checkbox"/>                    | _____  |
| R-143a        | <input type="checkbox"/> | <input type="checkbox"/>                    | _____  |

V-2. **Semi-finished HFC components vs HFC blends.**—Continued

(c) **Similar physical characteristics and functions.**—Are there distinct physical characteristics and functions of HFC components from HFC blends? .

| HFC component | No.—<br>Similar          | Yes.—<br>Distinct        | Explanation (if yes).—Describe the distinct physical characteristics and functions |
|---------------|--------------------------|--------------------------|--|
| R-32          | <input type="checkbox"/> | <input type="checkbox"/> | _____  |
| R-125         | <input type="checkbox"/> | <input type="checkbox"/> | _____  |
| R-134a        | <input type="checkbox"/> | <input type="checkbox"/> | _____  |
| R-143a        | <input type="checkbox"/> | <input type="checkbox"/> | _____  |

(d) **Differences in price or value.**—Are there large differences in the price for or value of the individual HFC components from the downstream HFC blends?

| HFC component | No.—<br>Similar price/value | Yes.—<br>Divergent price/value | Explanation (if yes).—Describe the differences in and drivers of price/value |
|---------------|-----------------------------|--------------------------------|--|
| R-32          | <input type="checkbox"/>    | <input type="checkbox"/>       | _____  |
| R-125         | <input type="checkbox"/>    | <input type="checkbox"/>       | _____  |
| R-134a        | <input type="checkbox"/>    | <input type="checkbox"/>       | _____  |
| R-143a        | <input type="checkbox"/>    | <input type="checkbox"/>       | _____  |

V-2. **Semi-finished HFC components vs HFC blends.**—*Continued*

(e) **Extensive process to convert to HFC blend.**—Is the process to create an HFC blend from the individual HFC component extensive and/or complicated?

| HFC component | No.— Simple              | Yes.— Extensive/ complicated | Explanation (if yes).—Describe the complexities of creating an HFC blend |
|---------------|--------------------------|------------------------------|--|
| R-32          | <input type="checkbox"/> | <input type="checkbox"/>     | <hr/> <hr/>  |
| R-125         | <input type="checkbox"/> | <input type="checkbox"/>     | <hr/> <hr/>  |
| R-134a        | <input type="checkbox"/> | <input type="checkbox"/>     | <hr/> <hr/>  |
| R-143a        | <input type="checkbox"/> | <input type="checkbox"/>     | <hr/> <hr/>  |

V-3. **Comparability of HFC blends vs HCFC/CFC blends.**--For each of the following indicate whether refined HFC blends and HCFC/CFC blends are: fully comparable or the same, *i.e.*, have no differentiation between them; mostly comparable or similar; somewhat comparable or similar; never or not-at-all comparable or similar; or no familiarity with products. If there are differences for individual HFC blends vs individual HCFC/CFC blends please provide that information in the narrative fields.

**Definitions of like products (+Link to previous defined products)**

**“CFC blends.”**--Chlorofluorocarbons (CFCs) are organic compounds that contain only carbon, chlorine, and fluorine. They are commonly known by the DuPont brand name Freon. The most common representative is dichlorodifluoromethane (R-12 or Freon-12). A CFC blend is one that includes chlorofluorocarbons and other components.

**“HCFC blends.”**--Hydrochlorofluorocarbons (HCFCs) are organic compounds that contain only carbon, hydrogen, chlorine, and fluorine. The most common HCFC is R-22 (also known as chlorodifluoromethane or difluoromonochloromethane). An HCFC blend is one that includes hydrochlorofluorocarbons and other components.

(a) **Characteristics and Uses.**-- The differences and similarities in the physical characteristics and end uses between HFC blends and HCFC/CFC blends.

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their characteristics and uses:

---



---

(b) **Interchangeability.**--The ability to substitute refined HFC blends and HCFC/CFC blends in the same application.

| Fully interchangeable    | Mostly interchangeable   | Somewhat interchangeable | Not at all interchangeable | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their interchangeability:

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---

V-3. **Comparability of HFC blends vs HCFC/CFC blends.--Continued**

(c) **Manufacturing facilities, production processes, and production employees.--** Whether refined HFC blends and HCFC/CFC blends are manufactured in the same facilities, from the same inputs, on the same machinery and equipment, and using the same employees.

| Fully the same           | Mostly the same          | Somewhat the same        | Not at all the same      | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their manufacturing processes:

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---

(d) **Channels of distribution.--** Channels of distribution/market situation through which HFC blends and HCFC/CFC blends are sold (i.e., sold direct to end users, through distributors, etc.).

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their channels of distribution:

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V-3. **Comparability of HFC blends vs HCFC/CFC blends.--Continued**

(e) **Customer and producer perceptions.**--Perceptions as to the differences and/or similarities in HFC blends and HCFC/CFC blends in the market (e.g., sales/marketing practices).

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their customer and producer perceptions:

---

---

(f) **Price.**--Whether prices are comparable or differ between HFC blends and HCFC/CFC blends.

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their prices:

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- V4. **Comparability of HFC blends vs HFO blends.**--For each of the following indicate whether refined HFC blends and HFO blends are: fully comparable or the same, *i.e.*, have no differentiation between them; mostly comparable or similar; somewhat comparable or similar; never or not-at-all comparable or similar; or no familiarity with products. If there are differences for individual HFC blends vs individual HFO blends please provide that information in the narrative fields.

**Definitions of like products ([+Link to previous defined products](#))**

**"HFO blends."**--Hydrofluoroolefins (HFOs) are organic compounds that contain only hydrogen, fluorine, and carbon. They are distinguished from hydrofluorocarbons (HFCs) by being derivatives of alkenes (olefins) rather than alkanes. HFOs are being developed as "fourth generation" refrigerants with lower global-warming potential than HFCs. HFOs currently in use include 2,3,3,3-tetrafluoropropene (HFO-1234yf) and 1,3,3,3-tetrafluoropropene (HFO-1234ze). 1-Chloro-3,3,3-trifluoropropene (HFO-1233zd) is also under development. An HFO blend is one that includes hydrofluoroolefins and other components.

- (a) **Characteristics and Uses.**--The differences and similarities in the physical characteristics and end uses between HFC blends and HFO blends.

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their characteristics and uses:

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---

- (b) **Interchangeability.**--The ability to substitute refined HFC blends and HFO blends in the same application.

| Fully interchangeable    | Mostly interchangeable   | Somewhat interchangeable | Not at all interchangeable | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their interchangeability:

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V-4. **Comparability of HFC blends vs HFO blends.--Continued**

- (c) **Manufacturing facilities, production processes, and production employees.**-- Whether refined HFC blends and HFO blends are manufactured in the same facilities, from the same inputs, on the same machinery and equipment, and using the same employees.

| Fully the same           | Mostly the same          | Somewhat the same        | Not at all the same      | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their manufacturing processes:

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- (d) **Channels of distribution.**-- Channels of distribution/market situation through which HFC blends and HFO blends are sold (i.e., sold direct to end users, through distributors, etc.).

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their channels of distribution:

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V-4. **Comparability of HFC blends vs HFO blends.--Continued**

(e) **Customer and producer perceptions.**--Perceptions as to the differences and/or similarities in HFC blends and HFO blends in the market (*e.g.*, sales/marketing practices).

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their customer and producer perceptions:

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(f) **Price.**--Whether prices are comparable or differ between HFC blends and HFO blends.

| Fully comparable         | Mostly comparable        | Somewhat comparable      | Not at all comparable    | NA/no familiarity        |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please provide a narrative discussion for the comparability ratings you provided in terms of their prices:

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## HOW TO FILE YOUR QUESTIONNAIRE RESPONSE

This questionnaire is available as a “fillable” form in MS Word format on the Commission’s website at:

[http://wwwadmin.usitc.gov/investigations/title\\_7/2015/hydrofluorocarbon\\_blends\\_and\\_components\\_china/preliminary.htm](http://wwwadmin.usitc.gov/investigations/title_7/2015/hydrofluorocarbon_blends_and_components_china/preliminary.htm)

***Please do not attempt to modify the format or permissions of the questionnaire document.*** Please submit the completed questionnaire using one of the methods noted below. If your firm is unable to complete the MS Word questionnaire or cannot use one of the electronic methods of submission, please contact the Commission for further instructions.

- **Upload via Secure Drop Box.**—Upload the MS Word questionnaire along with a scanned copy of the signed certification page (page 1) through the Commission’s secure upload facility:

**Web address:** <https://dropbox.usitc.gov/oinv/>      **Pin:** 1279

- **E-mail.**—E-mail the MS Word questionnaire to [joanna.lo@usitc.gov](mailto:joanna.lo@usitc.gov); include a scanned copy of the signed certification page (page 1). *Please note that submitting your questionnaire by e-mail may subject your firm’s business proprietary information to transmission over an unsecure environment and to possible disclosure. If you choose this option, the Commission warns you that any risk involving possible disclosure of such information is assumed by the submitter and not by the Commission.*

**If your firm does not produce HFC blends and/or HFC components in the United States,** please fill out page 1, print, sign, and submit a scanned copy to the Commission.

***Parties to this proceeding.***—If your firm is a party to this proceeding, it is required to serve a copy of the completed questionnaire on parties to the proceeding that are subject to administrative protective order (see 19 CFR § 207.7). A list of such parties may be obtained from the Commission’s Secretary (202-205-1803). A certificate of service must accompany the completed questionnaire you submit (see 19 CFR § 207.7). Service of the questionnaire must be made in paper form.