



Programa de las Naciones Unidas para el Medio Ambiente

Grupo de Trabajo de composición abierta de
las Partes en el Protocolo de Montreal relativo
a las Sustancias que Agotan la Capa de Ozono
39^a reunión

Bangkok, 11 a 14 de julio de 2017

Tema 3 a) y b) del programa provisional*

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Presentación de datos con arreglo al artículo 7 del Protocolo de Montreal y cuestiones conexas derivadas de la Enmienda de Kigali al Protocolo de Montreal para reducir los hidrofluorocarbonos

Nota de la Secretaría

I. Introducción

1. En la presente nota figura un resumen de las cuestiones derivadas de la aprobación de la Enmienda de Kigali relativas a la presentación de datos con arreglo al artículo 7 del Protocolo de Montreal relativo a las Sustancias que Agotan la Capa de Ozono para su examen por las Partes y la posible adopción de medidas apropiadas por la Reunión de las Partes.

II. Cuestiones que ha de examinar la Reunión de las Partes y respecto de las cuales deberá adoptar medidas

A. Presentación de datos sobre los hidrofluorocarbonos (HFC)

1. Presentación de informes por todas las Partes

2. Tras la entrada en vigor de la Enmienda de Kigali, todas las Partes en la Enmienda deberán, en virtud del artículo 7 del Protocolo, notificar a la Secretaría los datos anuales sobre la producción y el consumo de hidrofluorocarbonos (HFC) y las emisiones anuales de HFC-23. Para más información, véase la nota de la Secretaría sobre las cuestiones que examinará el Grupo de Trabajo de composición abierta (UNEP/OzL.Pro.WG.1/39/2).

2. Calendario para la presentación de informes sobre los datos de referencia en relación con los HFC para las Partes que operan al amparo del párrafo 1 del artículo 5

3. Tras la adopción de la Enmienda de Kigali, el párrafo 2 del artículo 7 del Protocolo estipula que toda Parte que opere al amparo del párrafo 1 del artículo 5 (Partes que operan al amparo del artículo 5) proporcionará a la Secretaría datos estadísticos sobre su producción, importaciones y exportaciones de cada una de las sustancias controladas enumeradas en el anexo F, correspondientes a

* UNEP/OzL.Pro.WG.1/39/1.

los años de base (2020-2022 para las Partes del grupo 1¹ y 2024-2026 para las Partes del grupo 2²) o las estimaciones más fidedignas que sea posible obtener de dichos datos, cuando no se disponga de ellos, a más tardar tres meses después de la fecha en que hayan entrado en vigor las disposiciones del Protocolo referentes a esas sustancias.

4. Se podría pedir a las Partes que operan al amparo del artículo 5 que ratifiquen la Enmienda de Kigali –antes de finales de 2022, para las Partes del grupo 1, y antes de finales de 2026 para las Partes del grupo 2– que rindan informe sobre una parte o la totalidad de los respectivos datos de referencia incluso antes de que los datos reales estén disponibles. Aunque el párrafo 2 del artículo 7 del Protocolo permite que las Partes presenten las estimaciones más fidedignas que sea posible obtener cuando no se disponga de datos reales, las Partes que deseen cambiar sus datos de referencia una vez que dispongan de ellos tendrían que presentar sus solicitudes de modificación al Comité de Aplicación establecido con arreglo al Procedimiento relativo al Incumplimiento del Protocolo de Montreal y la Reunión de las Partes para que estos órganos las examinen, de conformidad con lo dispuesto en el párrafo 5 de la decisión XIII/15.

5. En el pasado el Protocolo de Montreal no estipulaba ninguna obligación explícita en relación con la notificación de datos relativos a sus años de base por las Partes que operan al amparo del artículo 5. La Secretaría pidió a una Parte que opera al amparo del artículo 5 que rindiese informe sobre esos datos después de que entrasen en vigor medidas de control para un determinado grupo de sustancias para esa Parte y que la Parte anunciase que producía o consumía ese grupo de sustancias.

6. Por otra parte, la obligación de presentar datos respecto de los años de base para las Partes que no operan al amparo del párrafo 1 del artículo 5 (Partes que no operan al amparo del artículo 5) siempre se ha reflejado en el artículo 7 del Protocolo, como es el caso de la Enmienda de Kigali. Históricamente, los años de base guardaban relación con la fecha de entrada en vigor del Protocolo o de enmiendas pertinentes para los respectivos grupos de sustancias³.

7. Las Partes tal vez deseen aclarar cuándo deberían las Partes que operan al amparo del artículo 5 presentar los datos relativos a los HFC para cada uno de los años que constituyen sus años de base. Las Partes tal vez deseen considerar la posibilidad de exigir a cada Parte que opere al amparo del artículo 5 que presente los datos correspondientes a los años de base a más tardar a partir del momento en que se hizo efectiva la obligación para esa Parte en virtud del párrafo 8 *qua* del artículo 5 del Protocolo en relación con el consumo y la producción de HFC⁴ por la Parte de que se trate.

3. Presentación de informes sobre mezclas que contienen HFC con arreglo al artículo 7 del Protocolo

8. Una parte importante del comercio de HFC se realiza, y seguirá realizándose, con mezclas que contienen HFC y no con sustancias puras. En el anexo III de la presente nota figura una lista de las mezclas que contienen HFC recibida del Grupo de Evaluación Tecnológica y Económica. En lo que se refiere a las sustancias controladas anteriormente (clorofluorocarbonos (CFC), hidroclorofluorocarbonos (HCFC), etc.), el volumen del comercio que tuvo lugar en forma de mezclas es pequeño en comparación con el comercio de sustancias puras. Anteriormente, las Partes debían calcular la cantidad de cada sustancia pura presente en las mezclas, y notificar únicamente las sustancias puras. Sin embargo, debido al considerable número de mezclas que intervienen en el comercio de HFC, las Partes tal vez deseen considerar la posibilidad de permitir la presentación de informes sobre las cantidades de mezclas en lugar de sobre las cantidades específicas de HFC puro que

¹ Todas las Partes que operan al amparo del artículo 5, salvo las diez Partes que se mencionan en la nota de pie de página 2.

² Arabia Saudita, Bahrein, Emiratos Árabes Unidos, India, Irán (República Islámica del), Iraq, Kuwait, Omán, Pakistán y Qatar.

³ Para las sustancias del anexo A –los CFC y los halones– la versión original del Protocolo de Montreal, que introdujo esas sustancias, entró en vigor en 1989, mientras que el año de base para las Partes que no operan al amparo del artículo 5 era el año 1986. En cuanto a las sustancias del anexo B, el año de base para las Partes que no operan al amparo del artículo 5 era el año 1989, mientras que la Enmienda de Londres, que introdujo esas sustancias, entró en vigor en 1992. Con respecto a los HCFC y el bromuro de metilo, los años de base para las Partes que no operan al amparo del artículo 5 eran los años 1989 y 1991, respectivamente, mientras que la Enmienda de Copenhague, que introdujo esas sustancias, entró en vigor en 1994. Para los HFC, los años de base para las Partes que no operan al amparo del artículo 5 eran del 2011 al 2013, mientras que la Enmienda de Kigali, que introdujo esas sustancias, no entrará en vigor antes de 2019.

⁴ Ello permite que toda Parte que opera al amparo del artículo 5 rinda informe una vez que disponga de los datos de referencia y a tiempo para que la Parte adopte medidas respecto de sus obligaciones en materia de cumplimiento de las medidas de control en relación el nivel de base de los HFC.

contienen esas mezclas. Correspondría entonces a la Secretaría realizar los cálculos para determinar las distintas cantidades de sustancias puras contenidas en las mezclas.

9. La lista ilustrativa de mezclas que figura al final de las instrucciones y directrices relacionadas con los formularios de notificación de datos, como se indica en la sección 11 del apéndice X del anexo I de la presente nota, se utilizaría como base para calcular las cantidades de sustancias puras que aporta cada mezcla sobre la que se rinde informe. En el caso de que una Parte desee presentar datos sobre una mezcla no habitual que no se haya incluido en la lista ilustrativa de mezclas, deberá informar a la Secretaría la composición de la mezcla de que se trate. Este enfoque se refleja en el proyecto de formularios de presentación de datos, y en las instrucciones y directrices conexas que figuran en el anexo I de la presente nota.

B. Revisión de los formularios de presentación de datos

1. Actualización de los formularios de presentación de datos

10. Tras la aprobación de la Enmienda de Kigali, las Partes tal vez deseen examinar y actualizar los formularios de presentación de datos para incluir las obligaciones de presentación de informes derivadas de la aprobación de la Enmienda.

11. Todos los últimos cambios en los formularios de presentación de datos con arreglo al artículo 7 del Protocolo de Montreal han sido aprobados por la Reunión de las Partes mediante decisiones, según consta en el anexo II de la presente nota. Algunas de esas decisiones se adoptaron sobre la base de recomendaciones formuladas por la Secretaría o por el Comité de Aplicación.

12. La Secretaría propone un conjunto de formularios revisados y adicionales para dar cabida a las nuevas obligaciones en materia de presentación de datos con arreglo al artículo 7 del Protocolo, modificadas por la Enmienda de Kigali. En el anexo I de la presente nota figuran los formularios revisados de presentación de informes. Todos los cambios fundamentales que se han introducido en los formularios de presentación de informes anteriores figuran en rojo.

2. Componente de datos relativos a los HFC

13. Las Partes tal vez deseen considerar la posibilidad de ampliar los actuales formularios de presentación de informes para cubrir el componente de HFC y las nuevas obligaciones de la manera siguiente:

a) Añadir una página al formulario de datos sobre las “importaciones” (formulario 1), para incluir los nuevos HFC;

b) Añadir una página al formulario de datos sobre la “producción” (formulario 3), para incluir los nuevos HFC;

c) Añadir un nuevo formulario de datos (formulario 6) para cumplimentar el nuevo requisito en relación con la presentación de informes sobre las emisiones de HFC-23 por instalación, y añadir una pregunta sobre la página del “Cuestionario” en los formularios de presentación de datos para abarcar el nuevo formulario. El párrafo 3 *ter* del artículo 7 del Protocolo establece que se proporcionará información sobre las emisiones por cada instalación, de conformidad con el párrafo 1 d) del artículo 3 del Protocolo, que a su vez establece que las emisiones no incluyen las cantidades capturadas para su uso, destrucción o almacenamiento. Por consiguiente, el proyecto de formulario 6 incluye una columna para notificar las cantidades emitidas y columnas opcionales para que se puedan notificar con carácter voluntario las cantidades capturadas y las cantidades destruidas, lo cual facilitaría la contabilidad de la cantidad total de HFC-23 generada en cada instalación;

d) Preparar nuevos formularios de datos para la presentación de informes por separado de los datos de producción y consumo con arreglo a la exención por altas temperaturas ambiente para los subsectores a los que podría aplicar la exención (decisión XXVIII/2, párr. 30). Solo las Partes que producen HFC para satisfacer sus propias necesidades en lo que se refiere a los usos exentos por altas temperaturas ambiente utilizarían los formularios de presentación de informes sobre la producción.

14. No es necesario modificar los otros formularios vigentes de presentación de datos, a saber, sobre “exportaciones” (formulario 2), “destrucción” (formulario 4) y “comercio con Estados u organizaciones que no son Partes” (formulario 5), ya que en estos no se enumeran las sustancias, sino que la Parte que presenta el informe indica las sustancias pertinentes sobre las que desea informar.

3. Enfoque que propone la Secretaría

15. El enfoque que propone la Secretaría tiene por objeto realizar los menos cambios posibles a los formularios de presentación de datos con los cuales las Partes ya están familiarizadas.

16. Habida cuenta de que algunas Partes siguen rindiendo informes sobre los usos como materia prima y el comercio de cantidades recicladas de algunas sustancias eliminadas, la Secretaría ha mantenido las listas de sustancias eliminadas en la propuesta de formularios de datos revisados.
17. La Secretaría también ha ampliado las “instrucciones y directrices para la notificación de datos” añadiendo decisiones adicionales que son pertinentes para la presentación de informes y que siempre han guiado a las Partes en el proceso de presentación de datos.
18. Se invita al Grupo de Trabajo a examinar y proporcionar la orientación necesaria a la Secretaría sobre los formularios revisados de presentación de datos y la consiguiente revisión de las “instrucciones y directrices para la notificación de datos” que figuran en el anexo I de la presente nota.

C. Labor del Grupo de Evaluación Científica sobre la actualización de la información relativa al potencial de calentamiento atmosférico de las sustancias del grupo I del anexo A, el anexo C y el anexo F del Protocolo de Montreal

19. La Enmienda de Kigali introdujo un nuevo apartado 9 a) ii) del artículo 2 del Protocolo, que establece que las Partes pueden decidir si se deberán efectuar ajustes en los potenciales de calentamiento atmosférico especificados en el grupo I de los anexos A, C y F, y de ser así, indicar cuáles serían esos ajustes. Esta disposición es similar a la del apartado 9 a) i) del artículo 2 del Protocolo por el que las Partes pueden decidir si deben ajustarse los valores estimados del potencial de agotamiento del ozono de las sustancias que agotan el ozono.
20. Como se indica en el informe de la 28^a Reunión de las Partes (UNEP/OzL.Pro.28/12, párr. 204), se convino en que el Grupo de Evaluación Científica tendría que proporcionar a la Reunión de las Partes la información necesaria para ajustar el potencial de calentamiento atmosférico de las sustancias que figuran en el grupo I de los anexos A, C y F, e informar sobre los progresos realizados en ese sentido al Grupo de Trabajo de composición abierta en su 39^a reunión.
21. En virtud de la Enmienda de Kigali se asignaron valores del potencial de calentamiento atmosférico a algunos HCFC en el anexo C del Protocolo, mientras que a otros HCFC no se han asignado valores de este tipo. En el anexo C del Protocolo se incluyó una disposición en virtud de la cual se establece que para aquellas sustancias respecto de las cuales no se indica el potencial de calentamiento atmosférico, se aplica por defecto el valor cero hasta tanto se haya determinado un valor del potencial de calentamiento atmosférico conforme al procedimiento previsto en el párrafo 9 a) ii) del artículo 2 del Protocolo. Hasta la fecha, la Secretaría ha determinado que, en lo que se refiere a los años de referencia de los HCFC, según informes recibidos, solo seis HCFC, a saber, HCFC-121, HCFC-122, HCFC-133, HCFC-141, HCFC-142 y HCFC-225, no cuentan con valores del potencial de calentamiento atmosférico. Estos HCFC fueron notificados por 19 Partes, 11 de ellas son Partes que no operan al amparo del artículo 5 y ocho son Partes que operan al amparo de ese artículo.
22. Las Partes tal vez deseen tomar nota de que se han asignado valores del potencial de calentamiento atmosférico al HCFC-141b y el HCFC-142b, que son los isómeros más viables desde el punto de vista comercial de las dos sustancias HCFC-141 y HCFC-142, respectivamente. Las Partes tal vez deseen considerar la posibilidad de proporcionar orientación a la Secretaría sobre la conveniencia de utilizar esos valores del potencial de calentamiento atmosférico para las sustancias HCFC-141 y HCFC-142.
23. En relación con el tema 3 b) del programa provisional, se espera que el Grupo de Evaluación Científica proporcione información actualizada sobre estas cuestiones al Grupo de Trabajo de composición abierta en su 39^a reunión.

D. Valores del potencial de calentamiento atmosférico para los isómeros de HCFC-123 y HCFC-124 más viables desde el punto de vista comercial

24. El HCFC-123** y el HCFC-124** son las sustancias más viables desde el punto de vista comercial para los grupos correspondientes de isómeros. Los valores del potencial de agotamiento del ozono que las acompañan se utilizarán a los efectos del Protocolo. A ninguna de las sustancias se le ha asignado un valor del potencial de calentamiento atmosférico.
25. Los valores del potencial de calentamiento atmosférico que acompañan a todo el grupo de isómeros del HCFC-123 y el HCFC-124 se aplican también a los isómeros más viables desde el punto de vista comercial en cada uno de los dos grupos. La lógica de este razonamiento es que cada grupo de isómeros incluye todos los isómeros de ese grupo, entre otros el isómero que representa la sustancia más viable desde el punto de vista comercial. En caso de que no se asigne un valor del potencial de calentamiento atmosférico a un isómero específico, el valor del potencial de calentamiento atmosférico

para todo el grupo de isómeros se aplicaría al isómero específico al que no se ha asignado un valor para su potencial de calentamiento atmosférico. La Secretaría utilizará los valores 77 y 609 del potencial de calentamiento atmosférico para los dos isómeros HCFC-123*** y HCFC-124**, respectivamente, a los efectos del cálculo de los niveles de producción y consumo, expresados en equivalentes de CO₂.

E. Comercio con Estados que no son Partes: requisito de presentación de informes frente a restricciones comerciales

26. En el párrafo 2 del artículo IV de la Enmienda de Kigali se señala que los cambios en el artículo 4 del Protocolo sobre el control del comercio con Estados que no sean Partes, que se indican en el artículo I de la Enmienda entrarán en vigor el 1 de enero de 2033.

27. La prórroga hasta 2033 no se aplica a la presentación de informes anuales sobre el comercio con Estados que no son Partes, según lo dispuesto en el párrafo 3 del artículo 7 del Protocolo de Montreal. El tratamiento de las exportaciones a Estados que no son Partes se describe en el párrafo 1 c) del artículo 3 del Protocolo de Montreal y se aplicará a partir del año a que se refieren los datos anuales.

28. Por consiguiente, las Partes deben presentar información sobre el comercio con Estados que no son Partes a partir de la fecha de entrada en vigor de la Enmienda de Kigali para ellas. La Secretaría tratará esas exportaciones a Estados que no son Partes como consumo de la Parte exportadora.

29. Para facilitar la presentación de informes sobre el comercio con Estados que no son Partes, si una Parte notifica los países de destino de sus exportaciones o los países de origen de sus importaciones, la Secretaría puede determinar automáticamente cuáles de esas exportaciones o importaciones se realizaron con Estados que no son Partes, y reflejar los datos en el formulario sobre comercio con Estados que no son Partes en consecuencia.

Anexo I¹**Proposed data reporting forms and associated instructions and guidelines****Appendix I – Questionnaire (Significant changes in text are indicated red)**

Party: _____ Reporting Year: _____

Respondents are requested to read carefully the Introduction in section 1, the General Instructions in section 3 and the Definitions in section 4 before proceeding to the questionnaire and to refer to them as necessary when completing the data forms.

Questionnaire

1.1. Did your country import CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide **or HFCs** in the reporting year?

Yes [] No []

If No, ignore data form 1 and go to question 1.2. If Yes, please complete data form 1. Please read Instruction I of the document carefully before filling in the form.

1.2. Did your country export or re-export CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide **or HFCs** in the reporting year?

Yes [] No []

If No, ignore data form 2 and go to question 1.3. If Yes, please complete data form 2. Please read Instruction II of the document carefully before filling in the form.

1.3. Did your country produce CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide **or HFCs** in the reporting year?

Yes [] No []

If No, ignore data form 3 and go to question 1.4. If Yes, please complete data form 3. Please read Instruction III of the document carefully before filling in the form.

1.4. Did your country destroy any ODSs **or HFCs** in the reporting year?

Yes [] No []

If No, ignore data form 4 and go to question 1.5. If Yes, please complete data form 4. Please read Instruction IV of the document carefully before filling in the form.

1.5. Did your country import from or export or re-export to non-Parties in the reporting year?

Yes [] No []

If No, ignore data form 5 and go to question 1.6. If Yes, please complete data form 5. Please read Instruction V of the document carefully, and, particularly, the definition of non-Parties before filling in the form.

1.6. Did your country generate the substance HFC-23 in the reporting year from any facility that produces (manufactures) Annex C, Group I, or Annex F substances?

Yes [] No []

If No, ignore data form 6. If Yes, please complete data form 6. Please read Instruction VI of the document carefully before filling in the form.

Name of reporting officer:.....

Signature:.....

Designation:.....

Organization:.....

Postal Address:.....

Country:

Phone:.....

E-Mail:.....

Date:.....

¹ This annex has not been formally edited.

Appendix II – Data Form 1 on Imports (Significant changes in text are indicated red)

1. Fill in this form only if your country imported
**CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs,
 HBFCS, bromochloromethane, methyl bromide or HFCs**

Data Form 1

UNEP/OzL.Pro/Dataform17

2. Please read Instruction I carefully
before filling in this form.

in tonnes^[1] (not ODP or GWP tonnes)

Annexes A, B, C, E and F substances

Party :

Period : January - December 20

Annex/Group 1	Substances 2	Total Quantity Imported for All Uses		Quantity of New Substances Imported for Feedstock Uses 5	Quantity of New Substances Imported for Exempted Essential, Critical or Other Uses*	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use* 7
A-Group I	CFC-11 (CFCl ₃)					
	CFC-12 (CFC ₂ Cl ₂)					
	CFC-113 (C ₂ F ₃ Cl ₃)					
	CFC-114 (C ₂ F ₄ Cl ₂)					
	CFC-115 (C ₂ F ₅ Cl)					
A-Group II	HALON 1211 (CF ₂ BrCl)					
	HALON 1301 (CF ₃ Br)					
	HALON 2402 (C ₂ F ₄ Br ₂)					
B-Group I	CFC-13 (CF ₃ Cl)					
B-Group II	carbon tetrachloride (CCl ₄)					
B-Group III	methyl chloroform i.e. 1,1,1-trichloroethane (C ₂ H ₃ Cl ₃)					

[1] "tonne" = "metric ton".

Comments:

* Against each substance imported for exempted Essential, Critical or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.

Data Form 1 (continued)							UNEP/OzL.Pro/Dataform17
Annex/Group 1	Substances 2	Total Quantity Imported for All Uses		Quantity of New Substances Imported for Feedstock Uses 5	Quantity of New Substances Imported for Exempted Essential, Critical or Other Uses* 6		Decision / Type of Use* 7
		New 3	Recovered and Reclaimed 4		Quantity 6		
C-Group I	HCFC-21** (CHFCl ₂)						
	HCFC-22** (CHF ₂ Cl)						
	HCFC-31 (CH ₂ FCl)						
	HCFC-123** (CHCl ₂ CF ₃)						
	HCFC-124** (CHFCICF ₃)						
	HCFC-133 (C ₂ H ₂ F ₃ Cl)						
	HCFC-141b** (CH ₃ CFCl ₂)						
	HCFC-142b** (CH ₃ CF ₂ Cl)						
	HCFC-225 (C ₃ HF ₅ Cl ₂)						
	HCFC-225ca(CF ₃ CF ₂ CHCl ₂)						
	HCFC-225cb(CF ₂ ClCF ₂ CHClF)						
C-Group II	HBFCs						
C-Group III	bromochloromethane(CH ₂ BrCl)						
E-Group I	methyl bromide (CH ₃ Br)					Quantity of New Methyl Bromide Imported to be used for Quarantine and Pre-shipment Applications	
Comments:							
NB: As per paragraph 5bis of Article 2 of the Protocol, any transfer of HCFC consumption by non-Article 5 Parties shall be notified to the Secretariat, no later than the time of the transfer, by each of the Parties concerned, stating the terms of such transfer and the period for which it is to apply.							
* Against each substance imported for exempted Essential, Critical or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.							

Data Form 1 (continued)

UNEP/OzL.Pro/Dataform17

Annex/Group 1	Substances 2	Total Quantity Imported for All Uses		Quantity of New Substances Imported for Feedstock Uses 5	Quantity of New Substances Imported for Exempted Essential, Critical, HAT or Other Uses* 6	
		New 3	Recovered and Reclaimed 4		Quantity 7	Decision / Type of Use*
F-Group I	HFC-32 (CH ₂ F ₂)					
	HFC-41 (CH ₃ F)					
	HFC-125 (CHF ₂ CF ₃)					
	HFC-134 (CHF ₂ CHF ₂)					
	HFC-134a (CH ₂ FCF ₃)					
	HFC-143 (CH ₂ FCHF ₂)					
	HFC-143a (CH ₃ CF ₃)					
	HFC-152 (CH ₂ FCH ₂ F)					
	HFC-152a (CH ₃ CHF ₂)					
	HFC-227ea (CF ₃ CHFCF ₃)					
	HFC-236cb (CH ₂ FCF ₂ CF ₃)					
	HFC-236ea (CHF ₂ CHFCF ₃)					
	HFC-236fa (CF ₃ CH ₂ CF ₃)					
	HFC-245ca (CH ₂ FCF ₂ CHF ₂)					
	HFC-245fa (CHF ₂ CH ₂ CF ₃)					
	HFC-365mfc (CF ₃ CH ₂ CF ₂ CH ₃)					
	HFC-43-10mee (CF ₃ CHFCCHFCF ₂ CF ₃)					
Mixtures and Blends (Please add additional rows or additional pages as required for blends not listed below)						
	R-404A (HFC125 = 44%, HFC134a = 4%, HFC143a = 52%)					
	R-407A (HFC32 = 20%, HFC125 = 40%, HFC143a = 40%)					
	R-407C (HFC32 = 23%, HFC125 = 25%, HFC143a = 52%)					
	R-410A (HFC32 = 50%, HFC125 = 50%)					
	R507A (AZ50) (HFC125 = 50%, HFC143a = 50%)					
	R-508B (HFC23 = 46%, CFC116 = 54%)					
F-Group II	HFC-23 (CHF ₃)					
Comments:						
NB: If a non-standard blend not listed in section 11 of the Data Reporting Guidelines is to be reported, please indicate the percentage by weight of each constituent substance of the mixture being reported in the comments section of the form.						
* Against each substance imported for exempted Essential, Critical, HAT or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.						

Annex to Data Form 1 - Exporting Parties for Quantities reported as Imports

NB: This annex is excluded from the reporting requirements under Article 7 of the Protocol, and provision of the information in the annex is to be done on a voluntary basis (decision XXIV/12)

Appendix III – Data Form 2 on Exports (Significant changes in text are indicated red)

1. Fill in this form only if your country exported or re-exported CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide or HFCs		Data Form 2		UNEP/OzL.Pro/Dataform17	
2. Please read Instruction II carefully before filling in this form.		<u>DATA ON EXPORTS*</u>			
Party : _____		in tonnes ^[1] (not ODP or GWP tonnes)			
		<u>Annexes A, B, C, E and F substances</u>			
		Period : January - December 20____			
Substances 1	Country of Destination of Exports** 2	Total Quantity Exported for All Uses		Quantity of New Substances Exported for Feedstock*** 5	Quantity of New Substances Exported for Exempted Essential, Critical, HAT or Other Uses**** 6
		New 3	Recovered and Reclaimed 4		Decision / Type of Use**** 7
methyl bromide (CH ₃ Br)					Quantity of New Methyl Bromide Exported to be used for Quarantine and Pre-shipment Applications
[1] “tonne” = “metric ton”.					
Comments:					
<p>NB: If a non-standard blend not listed in section 11 of the Data Reporting Guidelines is to be reported, please indicate the percentage by weight of each constituent substance of the mixture being reported in the comments section of the form.</p> <p>* Includes re-exports. Ref. decisions IV/14 and XVII/16(4)</p> <p>** Applicable to all substances, including those contained in mixtures (blends)</p> <p>*** Do not deduct from total production in column 3 of data form 3 (data on production)</p> <p>**** Against each substance exported for exempted Essential, Critical, HAT or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the “comments” box above.</p>					

Appendix IV – Data Form 3 on Production (*Significant changes in text are indicated red*)

1. Fill in this form only if your country produced CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide **or HFCs**

2. Please read Instruction III carefully before filling in this form

Party : _____

Data Form 3

UNEP/OzL.Pro/Dataform17

DATA ON PRODUCTION

in tonnes^[1] (not ODP or GWP tonnes)

Annexes A, B, C, E and F substances

Period : January - December 20_____

Annex/Group 1	Substances 2	Total Production for All Uses 3	Production for Feedstocks within your Country 4	Production for Exempted Essential, Critical or Other Uses within your Country*		Production for Supply to Article 5 countries in accordance with Articles 2A-2H and 5 7
				Quantity 5	Decision / Type of Use* 6	
A-Group I	CFC-11 (CFCl ₃)					This column is no longer applicable to Annex A and B substances (CFCs, Halons, CCL ₄ and methyl chloroform)
	CFC-12 (CFC ₂ Cl ₂)					
	CFC-113 (C ₂ F ₃ Cl ₃)					
	CFC-114 (C ₂ F ₄ Cl ₂)					
	CFC-115 (C ₂ F ₅ Cl)					
A-Group II	HALON 1211 (CF ₂ BrCl)					
	HALON 1301 (CF ₃ Br)					
	HALON 2402 (C ₂ F ₄ Br ₂)					
B-Group I	CFC-13 (CF ₃ Cl)					
B-Group II	carbon tetrachloride (CCl ₄)					
B-Group III	methyl chloroform i.e. 1,1,1-trichloroethane (C ₂ H ₃ Cl ₃)					

[1] "tonne" = "metric ton".

Comments:

NB: As per paragraph 5 of Article 2 of the Protocol, any transfer of production shall be notified to the Secretariat, no later than the time of the transfer, by each of the Parties concerned, stating the terms of such transfer and the period for which it is to apply.

* Against each substance produced for exempted Essential, Critical or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.

Data Form 3 (continued)**UNEP/OzL.Pro/Dataform17**

Annex/Group	Substances	Total Production for All Uses	Production for Feedstocks within your Country	Production for Exempted Essential, Critical or Other Uses within your Country*		Production for Supply to Article 5 countries in accordance with Articles 2A-2H and 5
				Quantity	Decision / Type of Use*	
1	2	3	4	5	6	7
C-Group I	HCFC-21** (CHFCl ₂)					
	HCFC-22** (CHF ₂ Cl)					
	HCFC-31 (CH ₂ FCl)					
	HCFC-123** (CHCl ₂ CF ₃)					
	HCFC-124** (CHFCICF ₃)					
	HCFC-133 (C ₂ H ₂ F ₃ Cl)					
	HCFC-141b** (CH ₃ CFCl ₂)					
	HCFC-142b** (CH ₃ CF ₂ Cl)					
	HCFC-225 (C ₃ HF ₅ Cl ₂)					
	HCFC-225ca(CF ₃ CF ₂ CHCl ₂)					
	HCFC-225cb(CF ₂ ClCF ₂ CHClF)					
C-Group II	HBFCs					This column is no longer applicable to Annex groups C/II, C/III and E/I substances (HBFCs, BCM and methyl bromide)
C-Group III	bromochloromethane(CH ₂ BrCl)					
E-Group I	methyl bromide (CH ₃ Br)			Total Quantity of New Methyl Bromide Produced for Quarantine and Pre-shipment Applications within your Country and for Export		
<p>Comments:</p> <hr/> <p>NB: As per paragraph 5 of Article 2 of the Protocol, any transfer of production shall be notified to the Secretariat, no later than the time of the transfer, by each of the Parties concerned, stating the terms of such transfer and the period for which it is to apply.</p> <p>* Against each substance produced for exempted Essential, Critical or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the “comments” box above.</p>						

Data Form 3 (continued)

UNEP/OzL.Pro/Dataform17

Annex/Group	Substances	Total Production for All Uses	Production for Feedstocks within your Country	Production for Exempted Essential, Critical, HAT or Other Uses within your Country*		Production for Supply to Article 5 countries in accordance with Articles 2A-2H and 5
				Quantity	Decision / Type of Use*	
1	2	3	4	5	6	7
F-Group I	HFC-32 (CH ₂ F ₂)					
	HFC-41 (CH ₃ F)					
	HFC-125 (CHF ₂ CF ₃)					
	HFC-134 (CHF ₂ CHF ₂)					
	HFC-134a (CH ₂ FCF ₃)					
	HFC-143 (CH ₃ FCHF ₂)					
	HFC-143a (CH ₃ CF ₃)					
	HFC-152 (CH ₃ FCH ₂ F)					
	HFC-152a (CH ₃ CHF ₂)					
	HFC-227ea (CF ₃ CHFCF ₃)					
	HFC-236cb (CH ₂ FCF ₂ CF ₃)					
	HFC-236ea (CHF ₂ CHFCF ₃)					
	HFC-236fa (CF ₃ CH ₃ CF ₃)					
	HFC-245ca (CH ₂ FCF ₂ CHF ₂)					
	HFC-245fa (CHF ₂ CH ₂ CF ₃)					
	HFC-365mfc (CF ₃ CH ₂ CF ₂ CH ₃)					
	HFC-43-10mee (CF ₃ CHFCHFCF ₂ CF ₃)					
F-Group II	HFC-23 (CHF ₃)					

This column is not applicable
to Annex F substances
(HFCs)

Comments:

NB: As per paragraph 5 of Article 2 of the Protocol, any transfer of production shall be notified to the Secretariat, no later than the time of the transfer, by each of the Parties concerned, stating the terms of such transfer and the period for which it is to apply.

* Against each substance produced for exempted Essential, Critical, HAT or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.

Appendix V – Data Form 4 on Destruction of controlled substances (Significant changes in text are indicated red)

1. Fill in this form only if your country destroyed
**CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs,
HBFCs, bromochloromethane, methyl bromide or HFCs**

Data Form 4

UNEP/OzL.Pro/Dataform17

- 2. Please read Instruction IV carefully before filling in this form**

in tonnes^[1] (not ODP or GWP tonnnes)

Annexes A, B, C, E and F substances

Party : _____

Period : January - December 20____

[1] “tonne” = “metric ton”.

Comments:

NB: If a non-standard blend not listed in section 11 of the Data Reporting Guidelines is to be reported, please indicate the percentage by weight of each constituent substance of the mixture being reported in the comments section of the form.

Appendix VI – Data Form 5 on Trade with Non-Party (*Significant changes in text are indicated red*)

1. Fill in this form only if your country imported or exported
**CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs,
HBFCs, bromochloromethane, methyl bromide or HFCs
to Non-Parties**

Data Form 5

UNEP/OzL.Pro/Dataform17

DATA ON IMPORTS FROM AND/OR EXPORTS TO NON-PARTIES*

in tonnes^[1] (**not ODP or GWP** tonnes)

- 2. Please read Instruction V carefully before filling in this form.**

Annexes A, B, C, E and F substances

Party : - _____

Period : January - December 20____

[1] “tonne” = “metric ton”.

Comments:

NB: If a non-standard blend not listed in section 11 of the Data Reporting Guidelines is to be reported, please indicate the percentage by weight of each constituent substance of the mixture being reported in the comments section of the form.

* See definition of “Non-Parties” in Instruction V.

Appendix VII – Data Form 6 on Emissions (*New form*)

Appendix VIII – Separate reporting of consumption (imports) under the HAT exemption (New form)

1. Fill in this form only if your country is listed in Appendix II of decision XXVIII/2, has formally notified the Secretariat of its intent to use the HAT exemption and imported HFCs for its own use in the sub-sectors contained in Appendix I of decision XXVIII/2.		<p style="text-align: center;">HAT Exemption - Data Form 1</p> <p style="text-align: center;"><u>DATA ON IMPORTS OF ANNEX F SUB-SECTORS</u></p> <p style="text-align: center;">in tonnes^[1] (not ODP nor GWP tonnes)</p> <p style="text-align: center;">Period : January - December 20_____</p>					UNEP/OzL.Pro/HAT_Dataform17	
Party : _____		Quantity of New Substances IMPORTED for Approved Sub-sectors to which the HAT exemption applies Columns to be added as required for other sub-sectors that may be approved after the assessments under paragraph 32 of decision XXVIII/2)*						
Annex/Group 1	Substances 2	Multi-split air conditioners 3	Split ducted air conditioners 4	Ducted commercial packaged (self-contained) air-conditioners 5	Sub-Sector* 6	Sub-Sector* 7		
F-Group I		HFC-32 (CH ₂ F ₂) HFC-41 (CH ₃ F) HFC-125 (CHF ₂ CF ₃) HFC-134 (CHF ₂ CHF ₂) HFC-134a (CH ₂ FCF ₃) HFC-143 (CH ₂ FCHF ₂) HFC-143a (CH ₃ CF ₃) HFC-152 (CH ₂ FCH ₂ F) HFC-152a (CH ₃ CHF ₂) HFC-227ea (CF ₃ CHFCF ₃) HFC-236cb (CH ₂ FCF ₂ CF ₃) HFC-236ea (CHF ₂ CHFCF ₃) HFC-236fa (CF ₃ CH ₂ CF ₃) HFC-245ca (CH ₂ FCF ₂ CHF ₂) HFC-245fa (CHF ₂ CH ₂ CF ₃) HFC-365mfc (CF ₃ CH ₂ CF ₂ CH ₃) HFC-43-10mee (CF ₃ CHFCHFCF ₂ CF ₃)						
Mixtures and Blends (Please add additional rows or additional pages as required for blends not listed below)		R-404A (HFC125 = 44%, HFC134a = 4%, HFC143a = 52%)						
		R-407A (HFC32 = 20%, HFC125 = 40%, HFC143a = 40%)						
		R-407C (HFC32 = 23%, HFC125 = 25%, HFC143a = 52%)						
		R-410A (HFC32 = 50%, HFC125 = 50%)						
		R507A (AZ50) (HFC125 = 50%, HFC143a = 50%)						
		R-508B (HFC23 = 46%, CFC116 = 54%)						
F-Group II		HFC-23 (CHF ₃)						
Comments:								
[1] "tonne" = "metric ton".								
NB: If a non-standard blend not listed in section 11 of the Data Reporting Guidelines is to be reported, please indicate the percentage by weight of each constituent substance of the mixture being reported in the comments section of the form.								
* For each substance imported for use in sub-sectors that may be approved after the assessments under paragraph 32 of decision XXVIII/2, please specify the approved sub-sector. Should the column space be insufficient, further information can be provided in the "comments" box above.								

Appendix IX – Separate reporting of production under the HAT exemption (*New form*)

1. Fill in this form only if your country is listed in Appendix II of decision XXVIII/2, has formally notified the Secretariat of its intent to use the HAT exemption and produced HFCs for its own use in the sub-sectors contained in Appendix I of decision XXVIII/2.

HAT exemption - Data Form 2

UNEP/OzL.Pro/HAT_Dataform17

DATA ON PRODUCTION OF ANNEX F SUB-SECTORS

in tonnes^[1] (not ODP nor GWP tonnnes)

Party : _____

Period : January - December 20_____

Annex/Group 1	Substances 2	Quantity of New Substances PRODUCED for Approved Sub-sectors to which the HAT exemption applies (production should be for use within the producing country) (Columns to be added as required for other sub-sectors that may be approved after the assessments under paragraph 32 of decision XXVIII/2)*				
		3 Multi-split air conditioners	4 Split ducted air conditioners	5 Ducted commercial packaged (self-contained) air-conditioners	6 Sub-Sector*	7 Sub-Sector*
F-Group I	HFC-32 (CH ₂ F ₂)					
	HFC-41 (CH ₃ F)					
	HFC-125 (CHF ₂ CF ₃)					
	HFC-134 (CHF ₂ CHF ₂)					
	HFC-134a (CH ₂ FCF ₃)					
	HFC-143 (CH ₂ FCHF ₂)					
	HFC-143a (CH ₃ CF ₃)					
	HFC-152 (CH ₂ FCH ₂ F)					
	HFC-152a (CH ₃ CHF ₂)					
	HFC-227ea (CF ₃ CHFCF ₃)					
	HFC-236cb (CH ₂ FCF ₂ CF ₃)					
	HFC-236ea (CHF ₂ CHFCF ₃)					
	HFC-236fa (CF ₃ CH ₃ CF ₃)					
	HFC-245ca (CH ₂ FCF ₂ CHF ₂)					
	HFC-245fa (CHF ₂ CH ₂ CF ₃)					
	HFC-365mfc (CF ₃ CH ₂ CF ₂ CH ₃)					
	HFC-43-10mee (CF ₃ CHFCFCHFCF ₂ CF ₃)					
F-Group II	HFC-23 (CHF ₃)					

[1] “tonne” = “metric ton”.

Comments:

* For each substance **produced** for use in sub-sectors that may be approved after the assessments under paragraph 32 of decision XXVIII/2, please specify the approved sub-sector. Should the column space be insufficient, further information can be provided in the “comments” box above.

Appendix X – DATA REPORTING INSTRUCTIONS AND GUIDELINES

(Significant changes in text are indicated red)

1. INTRODUCTION

- 1.1 The attached data forms have been designed to make reporting easier for the Parties. The reporting is prescribed by Article 7 of the Montreal Protocol and by various decisions of the Meeting of the Parties.
- 1.2 The major features of the forms are as follows:
 - (a) **Six** separate data forms are provided for imports, exports, production, destruction, trade with non-Parties and emissions of controlled substances, respectively. Please use only those data forms applicable to your country and ignore the other forms, after ticking off the respective “No” box in the questionnaire. For example, many Parties only import and do not export, produce, destroy or trade with non-Parties in any of the substances. If this is the case, please use only the Imports Data Form 1 and ignore the other forms, after ticking off the “No” boxes for questions 1.2 – **1.6** on the questionnaire.
 - (b) A row has been provided for each of the substances in Annex A and **Annex F**. However, for categories of Annex B CFCs and HCFCs, the form is made shorter by providing rows only for substances which have been reported by Parties in the past. A few blank rows are provided for more substances, if needed. HBFCs and BCM (Annex C, Groups II & III) have already been phased out by all Parties. Hence, only one blank row has been provided for them, as a formality. You can use the computerized forms supplied by the Secretariat or paper forms. Parties who use the computerized forms can easily add more rows as needed; if using paper forms, Parties are free to add pages as required.
 - (c) The following are the exempted categories of **uses of controlled substances**:
 - Feedstock uses for all the substances,
 - Essential uses, including laboratory and analytical uses, for substances as approved by Meetings of the Parties from time to time,
 - Quarantine and pre-shipment applications for Methyl Bromide,
 - **Process agent uses for specific applications as approved in table A of decision X/14, and updated periodically, by the Meetings of the Parties**,
 - Critical or emergency uses of Methyl Bromide as approved from time to time, and
 - **Exemption for high-ambient-temperature parties (HAT exemption)**.
 - (d) The same forms can be used for reporting of base years and other years.
 - (e) The basis for reporting requirements and definitions are given in section 2 and section 4 below, respectively.
 - (f) A “comments” box has been provided at the end of each form for Parties to include any additional information that they believe would assist the Secretariat in processing their data report.

2. REPORTING CALLED FOR UNDER THE PROTOCOL

2.1 Reporting set out under the Montreal Protocol, and requested pursuant to decisions by Meetings of the Parties are as follows:

<u>Basis for reporting</u>	<u>Information to be provided</u>
<u><i>Annual Data Reporting under Article 7</i></u>	<u><i>(reported annually)</i></u>
a) Article 7 paragraphs 3, 3 bis and 3 ter	<ul style="list-style-type: none"> - Production, imports and exports of each of the controlled substances - Amounts used for feedstock - Amounts destroyed by technologies approved by the Parties - Imports from and exports to non-Parties - Imports and exports of recycled halons and HCFCs - Emissions of HFC-23 from facilities producing HCFCs or HFCs
b) To verify implementation of Articles 2A - 2H	<ul style="list-style-type: none"> - Increased (annual) production to meet the basic domestic needs of Article 5 Parties
c) Decision IV/11, paragraph 3	<ul style="list-style-type: none"> - Statistical data on the actual quantities of controlled substances destroyed
d) Decision IV/17 A, paragraph 1	<ul style="list-style-type: none"> - Information on the implementation of Article 4 of the Protocol, trade with non-Parties
e) Decision IV/24, paragraph 2	<ul style="list-style-type: none"> - Import and export of recycled and used controlled substances
f) Decision VII/30, paragraph 1	<ul style="list-style-type: none"> - Amount of controlled substances produced and exported for the purpose of being entirely used as feedstock in importing countries so that it is not the subject of the calculation of "production" or "consumption" in exporting countries
g) Decision VII/30, paragraph 2	<ul style="list-style-type: none"> - Importing countries -the volumes of controlled substances imported for feedstock
h) Decision XI/13, paragraph 3	<ul style="list-style-type: none"> Statistical data on amount used for quarantine and pre-shipment applications
i) Decision XVII/16, paragraph 4	<ul style="list-style-type: none"> - Types, quantities and destinations of exports of all controlled substances
j) Decision XXIV/12, paragraph 1	<ul style="list-style-type: none"> - Types of controlled substances, quantities and exporting party for quantities reported as imports
<u><i>Baseline Data Reporting under Article 7</i></u>	<u><i>(reported once)</i></u>
a) Article 7 paragraphs 1 and 2	<ul style="list-style-type: none"> - Statistical data on production, imports and exports of each of the controlled substances for the baseline years, or the best possible estimates of such data where actual data are not available, within 3 months of entry into force
b) Decision XIII/15, paragraph 5	<ul style="list-style-type: none"> - Requests for changes in reported baseline data for the base years - to be presented to the Implementation Committee which will in turn work with the Ozone Secretariat and the Executive Committee to confirm the justification for the changes and present them to the Meeting of the Parties for approval.
c) Decision XV/19, paragraph 2	<ul style="list-style-type: none"> - Methodology for submission of requests for revision of baseline data: the information and documentation to be submitted
<u><i>Transfer or addition of production or consumption</i></u>	<u><i>(reported as and when it occurs)</i></u>
Article 2, paragraphs 5, 5 bis, 6, 7	<ul style="list-style-type: none"> - Transfer or addition of production or consumption

<u>Basis for reporting</u>	<u>Information to be provided</u>
<u>Research, development, public awareness and exchange of information</u>	<u>(reported every two years)</u>
Article 9	<ul style="list-style-type: none"> - Summary of activities
<u>Process agent uses</u>	<u>(reported annually)</u>
Decisions X/14, XV/7, XVII/6 and XXI/3	<ul style="list-style-type: none"> - Use of controlled substances as process agents, make-up amounts, resulting emissions, emission containment technologies employed and opportunities for emission reduction. Report on quantities of controlled substances produced or imported for process agent applications
<u>Essential use exemptions other than laboratory and analytical uses*</u>	<u>(reported the year following an exemption)</u>
Decision VIII/9, paragraph 9	<ul style="list-style-type: none"> - Report on quantities and uses of controlled substances produced and consumed for essential uses (reporting accounting framework)
* Decisions relating to essential use exemptions for CFCs for metered-dose inhalers (MDIs) for the treatment of asthma and chronic obstructive pulmonary diseases (COPD) are no longer included here, since such exemptions have been phased-out.	
<u>Essential use exemptions: laboratory and analytical uses</u>	<u>(reported annually)</u>
Decision VI/9, paragraph 3 and paragraph 4 of Annex II to the report of the Sixth Meeting of the Parties	<ul style="list-style-type: none"> - Each controlled substance produced for laboratory and analytical uses
<u>Exemption for high-ambient-temperature parties (HAT Exemption)</u>	<u>(reported the year following an exemption)</u>
Decision XXVIII/2, paragraph 30	<ul style="list-style-type: none"> - Report separately production and consumption data for the sub-sectors to which the exemption applies
<u>Licensing information</u>	<u>(reporting periodicity specified below)</u>
a) Article 4B - Licensing	<ul style="list-style-type: none"> - The establishment and operation of its licensing system (<i>reported once</i>)
b) Decision IX/8, paragraph 2	<ul style="list-style-type: none"> - Focal points for licensing systems for trade in controlled substances (<i>reported once, updated as required</i>)
c) Decision XIV/7, paragraph 7	<ul style="list-style-type: none"> - Information reported by the Parties on illegal trade in controlled substances (<i>reported when cases occur</i>)
d) Decision XXVII/8	<ul style="list-style-type: none"> - Parties wishing to avoid the unwanted import of products and equipment containing or relying on hydrochlorofluorocarbons (<i>notification sent once</i>)
<u>Critical use exemptions for Methyl bromide information</u>	<u>(reporting requirements specified below)</u>
a) Decision Ex.I/3, paragraph 5	<ul style="list-style-type: none"> - Parties that have a methyl bromide critical use exemption to report on the implementation of the requirement to ensure that the criteria in paragraph 1 of decision IX/6 are applied when licensing, permitting or authorizing the use of methyl bromide and that such procedures take into account available stocks

<u>Basis for reporting</u>	<u>Information to be provided</u>
b) Decision Ex.I/4, paragraph 2	<ul style="list-style-type: none"> - Parties seeking methyl bromide critical use exemptions and Parties that have ceased methyl bromide consumption to submit information on the alternatives available, listed according to their pre-harvest or post-harvest uses and the possible date of registration, if required, for each alternative; and on the alternatives which the Parties can disclose to be under development, listed according to their pre-harvest or post-harvest uses and the likely date of registration, if required and known, for those alternatives
c) Decision Ex.I/4, paragraphs 3 and 6	<ul style="list-style-type: none"> - Parties seeking methyl bromide critical use exemptions to submit national methyl bromide phase out strategy and describe methodology used to determine economic feasibility in the event that economic feasibility is used as a criterion to justify the critical use
d) Decision Ex.I/4, paragraph 9 (f) and Decision Ex.II/1 paragraph 3	<ul style="list-style-type: none"> - Report on quantities and uses of methyl bromide produced, imported and export for critical uses in accounting framework
<u>Other information</u>	
a) Decision V/15	<ul style="list-style-type: none"> - Information relevant to international halon bank management (see the On-line Halon Trader, http://www.halontrader.org, a “business to business” web portal developed by the OzonAction Programme under the Multilateral Fund, to contribute to the ozone protection by promoting halon banking and responsible halon management) (<i>reported once</i>)
b) Decision V/25 and VI/14 A	<ul style="list-style-type: none"> - Parties supplying controlled substances to Article 5 Parties to provide annually summary of requests from importing Parties (<i>reported annually</i>)
c) Decision VI/19, paragraph 4	<ul style="list-style-type: none"> - List of reclamation facilities and their capacities (<i>reported annually</i>)
d) Decisions X/8 and IX/24	<ul style="list-style-type: none"> - New ozone depleting substances reported by the Parties (<i>reported when new substances emerge</i>)
e) Decision XX/7, paragraph 5	<ul style="list-style-type: none"> - Strategies on Environmentally Sound Management of Banks of ozone depleting substances (<i>reported onc , updated as required</i>)

3. GENERAL INSTRUCTIONS

- 3.1 Parties are requested to report the production and consumption of bulk controlled substances in tonnes, without multiplying by the relevant ODPs (ozone depleting potentials) or GWPs (global warming potentials).
- 3.2 In order to avoid duplication, quantities contained in manufactured products should not be included in a country's consumption, regardless of whether the end-products are imported or exported.
- 3.3 The data reported in accordance with the data forms will be used to determine the calculated levels of production and consumption, upon which the control measures are based. It is, therefore, crucial that data be provided separately for each individual substance listed in the forms. **Further, as requested in decision XXIV/14, parties should enter a number in each cell in the data reporting forms that they submit, including zero, where appropriate, rather than leaving any cells blank;**
- 3.4 When calculating production, the Montreal Protocol allows countries to deduct amounts of **controlled substances destroyed, amounts** used for feedstock uses, and for quarantine and pre-shipment applications. However, when reporting data, Parties should not deduct these figures from their data. The Secretariat will make the necessary deductions.
- 3.5 It should be noted that both paragraphs 1 and 2 of Article 7 of the Montreal Protocol provide that the Parties may submit the best possible estimates of data for the base years if actual data are not available.
- 3.6 Parties producing or consuming controlled substances for approved essential uses should also report to the Secretariat using the accounting form approved by decision VIII/9, paragraph 9.

- 3.7 Parties producing or consuming methyl bromide for approved critical uses should also report to the Secretariat using the form approved by decision Ex.I/4 paragraph 9 (f) and decision Ex.II/1 paragraph 3.
- 3.8 Parties might import or export mixtures or blends containing controlled substances. If this is the case, the Parties are requested to report the quantity of the mixture or blend. Parties should take care to ensure quantities are only reported as the blend, and not the individual constituents of the blend. The Secretariat will calculate the quantity of each pure substance from the mixtures or blends and will include the appropriate quantities of those pure substances in the reported data. An illustrative list of mixtures and blends containing controlled substances with their compositions is given in section 11. If the mixture or blend being reported is not included in section 11 of this guide, Parties need to indicate percentage by weight of each constituent of the mixture being reported. For further information about the composition and commercial trade names of chemical products containing controlled substances, visit the "Trade Names of Chemicals Containing Ozone Depleting Substances and their Alternatives" on the OzonAction web site. This worldwide database service is designed to help customs officials and National Ozone Units control imports and exports of controlled substances and prevent their illegal trade.
- 3.9 Parties producing or consuming controlled substances under the HAT exemption should also report separately to the Secretariat production and consumption data for the sub-sectors to which the exemption applies (decision XXVIII/2, paragraph 30). Sub-sector specific information should be provided by the country using the exemption, not by the producer country. Production under the HAT exemption should only be reported if the production is not for export, and is for use internally by the producing country.

4. DEFINITIONS

- 4.1 "Consumption" means production plus imports minus exports of controlled substances (Montreal Protocol, Article 1).
- 4.2 "Controlled substance" means a substance in Annex A, Annex B, Annex C, Annex E or Annex F to the Protocol, whether existing alone or in a mixture. It includes the isomers of any such substance except as specified in the relevant Annex, but excludes any controlled substance or mixture (blend) which is in a manufactured product other than a container used for the transportation or storage of that substance (Montreal Protocol, Article 1).
- 4.3 "Destruction process" is one which, when applied to controlled substances, results in the permanent transformation or decomposition of all or a significant portion of such substances (decisions I/12F, IV/11, V/26 and VII/35).
- 4.4 "Production" means the amount of controlled substances produced, minus the amount destroyed by technologies approved by the Parties and minus the amount entirely used as feedstock in the manufacture of other chemicals. The data forms prescribe reporting of feedstock use and of quantities destroyed separately, and reporting of total production without deduction. The Secretariat will make the necessary deduction.
- 4.5 The amounts recovered, reclaimed or recycled (or reused) are not to be considered as "Production" (Montreal Protocol, Article 1), even though they are to be reported (Article 7 of the Protocol).
- "Recovery, Recycling and Reclamation" have been defined by the Parties (Decision IV/24) as follows:
- (a) "Recovery": The collection and storage of controlled substances from machinery, equipment, containment vessels, etc., during servicing or prior to disposal;
 - (b) "Recycling": The reuse of a recovered controlled substance following a basic cleaning process such as filtering and drying. For refrigerants, recycling normally involves recharge back into equipment. It often occurs "on-site";
 - (c) "Reclamation": The re-processing and upgrading of a recovered controlled substance through such mechanisms as filtering, drying, distillation and chemical treatment in order to restore the substance to a specified standard of performance. It often involves processing "off-site" at a central facility.
- 4.6 "Quarantine and pre-shipment applications" have been defined by the Parties (decision VII/5) as follows:
- (a) "Quarantine applications", with respect to methyl bromide, are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases), or to ensure their official control, where:
 - (i) Official control is that performed by, or authorized by, a national plant, animal or environmental protection or health authority;
 - (ii) Quarantine pests are pests of potential importance to the areas endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.
 - (b) "Pre-shipment applications" are those treatments applied directly preceding and in relation to export, to meet the phytosanitary or sanitary requirements of the importing country or existing phytosanitary or sanitary requirements of the exporting country.

- 4.7 The Eleventh Meeting of the Parties decided in decision XI/12 that pre-shipment applications are those non-quarantine applications applied within 21 days prior to export to meet the official requirements of the importing country or existing official requirements of the exporting country. Official requirements are those which are performed by, or authorized by, a national plant, animal, environmental, health or stored product authority.
- 4.8 On transshipment and re-export of substances, the Parties decided at their Fourth Meeting (Decision IV/14):
 "To clarify Article 7 of the amended Protocol so that it is understood to mean that, in cases of transshipment of controlled substances through a third country (as opposed to imports and subsequent re-exports), the country of origin of the controlled substances shall be regarded as the exporter and the country of final destination shall be regarded as the importer. Cases of import and re-export should be treated as two separate transactions; the country of origin would report shipment of the country of intermediate destination, which would subsequently report the import from the country of origin and export to the country of final destination, while the country of final destination would report the import."
- 4.9 With respect to trade in bulk methyl bromide, the Parties decided at their Eighth Meeting (Decision VIII/14):
 "To clarify decision I/12A of the First Meeting of the Parties as follows: trade and supply of methyl bromide in cylinders or any other container will be regarded as trade in bulk in methyl bromide."
- 4.10 Decision IV/25 on essential uses states that a use of a controlled substance should qualify as "essential" only if:
- (a) It is necessary for the health, safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and
 - (b) There are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health;
- The conditions applied to exemption for laboratory and analytical uses, which fall under essential uses, are provided in annex II to the report of the sixth meeting of the Parties.
- 4.11 In decision IX/6 on critical uses, the Parties agreed to apply the following criteria and procedure in assessing a critical methyl bromide use for the purposes of control measures in Article 2 of the Protocol:
- (a) That a use of methyl bromide should qualify as "critical" only if the nominating Party determines that:
 - (i) The specific use is critical because the lack of availability of methyl bromide for that use would result in a significant market disruption; and
 - (ii) There are no technically and economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances of the nomination;
 - (b) That production and consumption, if any, of methyl bromide for critical uses should be permitted only if:
 - (i) All technically and economically feasible steps have been taken to minimize the critical use and any associated emission of methyl bromide;
 - (ii) Methyl bromide is not available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide, also bearing in mind the developing countries' need for methyl bromide;
 - (iii) It is demonstrated that an appropriate effort is being made to evaluate, commercialize and secure national regulatory approval of alternatives and substitutes, taking into consideration the circumstances of the particular nomination and the special needs of Article 5 Parties, including lack of financial and expert resources, institutional capacity, and information. Non-Article 5 Parties must demonstrate that research programmes are in place to develop and deploy alternatives and substitutes. Article 5 Parties must demonstrate that feasible alternatives shall be adopted as soon as they are confirmed as suitable to the Party's specific conditions and/or that they have applied to the Multilateral Fund or other sources for assistance in identifying, evaluating, adapting and demonstrating such options;
- 4.12 "Process agents" should be understood to mean the use of controlled substances for the applications listed in table A of decision X/14, as amended by various decisions. Amounts produced or imported for use as process agents in plants and installations in operation before 1 January 1999, should not be taken into account in the calculation of production and consumption from 1 January 2002 onwards, provided that:
- (a) In the case of non-Article 5 Parties, the emissions of controlled substances from these processes have been reduced to insignificant levels as defined in table B of decision X/14, as amended by various decisions;

- (b) In the case of Article 5 Parties, the emissions of controlled substances from process-agent use have been reduced to levels agreed by the Executive Committee to be reasonably achievable in a cost-effective manner without undue abandonment of infrastructure.
- 4.12 “Regional Economic Integration Organization” means an organization constituted by sovereign States of a given region which has competence in respect of matters governed by the Vienna Convention or its protocols and has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to the instruments concerned. The only such organization for the purpose of the Montreal Protocol is the European Union.
- 4.13 The Montreal Protocol stipulates, under paragraph 8(a) of Article 2, that any Parties which are member States of a regional economic integration organization as defined above may agree that they shall jointly fulfil their obligations respecting consumption provided that their total combined calculated level of consumption under Articles 2A to 2J of the Protocol does not exceed the levels required by these Articles.
- 5. INSTRUCTION I: Data on Imports of controlled substances (Data Form 1)**
- 5.1 For reporting data on imports of substances listed in Annex A (CFCs and halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs, HBFCs or BCM), Annex E (methyl bromide) or Annex F (HFCs), please use data form 1.
- 5.2 In column 2 of Data Form 1, all substances of Annex A, Annex B (Groups II and III) and Annex F have been listed. For Annex B Group I (Other fully halogenated CFCs) and Annex C Group I (HCFCs), only substances which have been reported by Parties in the past are listed. HBFCs have already been phased out by all Parties and hence for HBFCs only one blank row has been provided as a formality. If you are importing controlled substances other than those listed, please use the blank space to report data on these substances, and use additional pages, if necessary.
- 5.3 If your country imported mixtures (blends) of controlled substances, e.g. R-502 (HCFC-22 48.8%; CFC-115 51.2%), please report only the quantity of the mixture or blend. Parties should take care to ensure quantities are only reported as the blend, and not the individual constituents of the blend. The Secretariat will calculate the quantity of the individual pure controlled substances contained in the mixture or blend and enter the appropriate data under each controlled substance. An illustrative list of mixtures with their compositions is given in section 11. If the mixture being reported is not included in section 11 of this guide, Parties need to indicate the percentage by weight of each constituent of the mixture being reported. For further information about the composition and commercial trade names of chemical products containing controlled substances, visit the "Trade Names of Chemicals Containing Ozone Depleting Substances and their Alternatives" on the OzonAction web site. This worldwide database service is designed to help customs officials and National Ozone Units control imports and exports of controlled substances and prevent their illegal trade.
- 5.4 Please enter the number of tonnes imported in column 3 of Data Form 1 for each substance imported. If you did not import any of the substances listed, or if you have imported only recovered or reclaimed substances, please enter zero (0) in column 3 for "New" for each substance. If you imported any recovered or reclaimed substances, please enter the data in column 4.
- 5.5 When calculating a Party's consumption, substances used as feedstock for the production of other chemicals are exempted. Substances so used are completely transformed in the manufacturing process of the new chemical. In reporting total quantities of new substances imported in column 3, the quantities imported for feedstocks, reported in column 5, should not be deducted. Similarly, the quantities imported for exempted essential, critical, HAT or other uses, reported in column 6, should not be deducted. The Secretariat will make the necessary deductions. With regard to column 7, provision has been made for Parties to indicate against each type of controlled substance imported for exempted essential, critical, HAT or other uses, the decision of the Meeting of the Parties that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the “comments” box at the end of the form.
- 5.6 When calculating a Party's consumption of methyl bromide, the quantities used for quarantine and pre-shipment (QPS) applications are excluded. In data form 1, quantities of methyl bromide imported for quarantine and pre-shipment applications should be entered separately at the bottom of the form, and not deducted from the total quantity imported. The Secretariat will make the necessary deductions.
- 5.7 Decision XXIV/12, paragraph 1, requested the Ozone Secretariat to revise the reporting forms resulting from decision XVII/16 to include in the data forms an annex indicating the exporting party for the quantities reported as import, noting that the annex is excluded from the reporting requirements under Article 7 of the Protocol and that the provision of the information in the annex would be done on a voluntary basis. If a particular controlled substance is imported from more than one country, the quantity imported from each country should be indicated separately. Please see the example below.

Annex to Data Form 1 - Exporting Parties for Quantities reported as Imports

UNEP/OzL.Pro/Dataform17

NB: This annex is excluded from the reporting requirements under Article 7 of the Protocol, and provision of the information in the annex is to be done on a voluntary basis (decision XXIV/12)

Substances 1	Exporting Party for the quantities reported as imports 2	Total Quantity Imported for All Uses		Quantity of New Substances Imported for Feedstock Uses 5	Quantity of New Substances Imported for Exempted Essential, Critical or Other Uses* 6	
		New 3	Recovered and Reclaimed 4		Decision / Type of Use* 7	
HCFC-22	Country AAA	50				
HCFC-22	Country BBB	75				
HFC-134a	Country AAA	80				
HFC-134a	Country CCC	60				
HFC-134a	Country DDD	30				
methyl bromide (CH ₃ Br)					Quantity of New Methyl Bromide Imported to be used for Quarantine and Pre-shipment Applications within your country	

6. INSTRUCTION II: Data on Export of controlled substances (Data Form 2)

- 6.1 For reporting data on exports, including re-exports, of substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs, HBFCs or BCM), Annex E (methyl bromide), **or Annex F (HFCs)**, please use data form 2.
- 6.2 Data on re-exports of the substances listed above should also be included in this form. Decision IV/14 clarified that cases of import and re-export should be treated as two separate transactions, so that the country of intermediate destination would report both the import from the country of origin and re-export to the country of final destination.
- 6.3 The first column ("SUBSTANCES") has been left blank because each Party may export different substances. Please add the names and relevant information of only those substances being exported by your country.
- 6.4 If your country exported mixtures (blends) of controlled substances, e.g. R-502 (which contains 48.8% HCFC-22 and 51.2% CFC-115), please **report only the quantity of the mixture or blend. Parties should take care to ensure quantities are only reported as the blend, and not the individual constituents of the blend. The Secretariat will calculate** the quantity of the individual pure controlled substances contained in the mixture or blend and enter the appropriate data under each controlled substance. An illustrative list of mixtures with their compositions is given in section 11. **If the mixture being reported is not included in section 11 of this guide, Parties need to indicate the percentage by weight of each constituent of the mixture being reported.** For further information about the composition and commercial trade names of chemical products containing **controlled substances**, visit the "Trade Names of Chemicals Containing Ozone Depleting Substances and their Alternatives" on the OzonAction web site. This worldwide database service is designed to help customs officials and National Ozone Units control imports and exports of **controlled substances** and prevent illegal trade.
- 6.5 Decision VII/9, paragraph 4, requests the Parties to report on the destination of Annex A and Annex B substances (new, recovered or reclaimed) that are exported. Decision XVII/16 paragraph 4 extended this arrangement to cover the export of all **controlled substances** contained in the annexes of the Protocol. Fill in column 2 on the destination of exports. Please ensure that, if a particular controlled substance is exported to more than one country, the quantity exported to each country is separately indicated. Please see the example below.

1. Fill in this form only if your country exported or re-exported
**CFCs, halons, carbon tetrachloride, methyl chloroform,
 HCFCs,
 HBFCS, bromochloromethane, methyl bromide or
 HFCs**

Data Form 2

UNEP/OzL.Pro/Dataform17

2. Please read Instruction II
 carefully
 before filling in this form.

DATA ON EXPORTS*in tonnes (not ODP or GWP tonnes)Annexes A, B, C, E and F substances

Party :

Period : January - December 20

Substances 1	Country of Destination of Exports** 2	Total Quantity Exported for All Uses		Quantity of New Substances Exported for Feedstock*** 5	Quantity of New Substances Exported for Exempted Essential, Critical or Other Uses****	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use**** 7
HCFC-22	Destination AAA	50				
HCFC-22	Destination BBB	75				
HFC-134	Destination AAA	80				
HFC-134	Destination CCC	60				
HFC-134	Destination DDD	30				
methyl bromide (CH ₃ Br)						
					Quantity of New Methyl Bromide Exported to be used for Quarantine and Pre-shipment Applications	

Comments:

NB: If a non-standard blend is to be reported, please indicate the composition of the mixture being reported.

* Includes re-exports. Ref. decisions IV/14 and XVII/16(4)

** Applicable to all substances, including those contained in mixtures (blends)

*** Do not deduct from total production in column 3 of data form 3 (data on production)

**** Against each substance exported for exempted Essential, Critical, HAT or Other Uses, please specify the Meeting of the Parties decision that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box above.

- 6.6 If your country is exporting new **controlled substances**, please provide in column 3 the quantity in tonnes for the chemical(s) you exported. If you exported any recovered or reclaimed substances, please enter the data in column 4.
- 6.7 When calculating a Party's consumption, the Montreal Protocol does not include **controlled substances** used as feedstock for the production of other chemicals. **Controlled substances** so used are completely transformed in the manufacturing process of new chemicals. On reporting in column 3 the total quantities of new substances exported, the quantities exported to be used as feedstock reported in column 5, should not be deducted. Similarly, the quantities exported for **exempted** essential, critical, **HAT or other** uses, reported in column 6, should not be deducted. With regard to column 7, provision has been made for Parties to indicate against each type of **controlled substance** exported for **exempted** essential, critical, **HAT or other** uses, the decision of the Meeting of the Parties that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the "comments" box at the end of the form.
- 6.8 When calculating a Party's consumption of methyl bromide, quantities used for quarantine and pre-shipment (QPS) applications are exempted. In Data Form 2, quantities of Methyl Bromide exported for quarantine and pre-shipment applications should be entered separately, and not deducted from the quantity exported. The Secretariat will make the necessary deductions.

7. INSTRUCTION III: Data on Production of controlled substances (Data Form 3)

- 7.1 For reporting data on production of substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs, HBFCs or BCM), Annex E (methyl bromide) **or Annex F (HFCs)**, use data form 3.
- 7.2 In column 2 of data form 3, all substances in Annex A, Annex B Groups II and III, **and Annex F** have been listed. For Annex B, Group I (other fully halogenated CFCs) and Annex C, Group I (HCFCs), only substances which have been reported by Parties in the past are listed. HBFCs and BCM have already been phased out by all Parties and hence only one row has been provided as a formality. If you are producing controlled substances other than those listed, please use the blank space to report data on these substances, or use additional pages, if necessary.
- 7.3 In column 3 of data form 3, please give the total production of your country without making any deductions for feedstock, destruction, export for feedstock uses, or any other use. The quantity of production used for feedstock within your country reported in column 4, and for **exempted** essential, critical, **HAT or other** uses, within your country reported in columns 5, should not be deducted from the total production. Similarly, production for supply to Article 5 Parties filled in the form in column 7, should not be deducted from the total production. Please report exports of **controlled substances** to be used for feedstock by the importing country in column 5 of data form 2 (Data on Exports) and not in data form 3 (this form). The Secretariat will make the necessary deductions. With regard to production for **exempted** essential, critical, **HAT or other** uses, provision has been made in column 6 for Parties to indicate against each type of **controlled substance** produced for **exempted** essential, critical, **HAT or other** uses, the decision of the Meeting of the Parties that approved the use or, in the case of uses covered by the global laboratory and analytical essential use exemption, the type of laboratory or analytical use. Should the column space be insufficient, further information can be provided in the “comments” box at the end of the form.
- 7.4 When calculating a Party's consumption, the Montreal Protocol does not include **controlled substances** which are used as a feedstock for the production of other chemicals. **Controlled substances** so used are completely transformed in the manufacturing process of the new chemical. If your country produced **controlled substances** for feedstock use within the reporting period, please provide data on the quantity of each **controlled substance** produced for feedstock purposes in column 4. The Secretariat will make the necessary deductions.
- 7.5 Producers are allowed to produce additional amounts to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5. If your country produced **controlled substances** for this purpose, please enter the amount so produced in column 7 on Data Form 3.
- 7.6 When calculating a Party's consumption of methyl bromide, quantities produced for quarantine and pre-shipment (QPS) applications are exempted. In data form 3, the total quantities of methyl bromide produced for quarantine and pre-shipment applications should be entered separately at the bottom of the form and not deducted from the total quantity produced. The Secretariat will make the necessary deductions.

8. INSTRUCTION IV: Data on Destruction of controlled substances (Data Form 4)

- 8.1 Very few countries have the capacity to destroy **controlled substances** using approved destruction technologies. If your country has destroyed any of the substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs, HBFCs or BCM), Annex E (methyl bromide) **or Annex F (HFCs)** in the reporting period, please use data form 4.
- 8.2 The first column ("SUBSTANCES") has been left blank because each Party may destroy different substances. Please list only the names of those substances destroyed in the reporting year.
- 8.3 When calculating a Party's production and consumption, the Montreal Protocol does not include the amount of substances destroyed, if destruction occurred through the use of a Protocol-approved technology (listed in decision XXIII/12). If you have destroyed any substance in the reporting year, do not deduct the quantity destroyed reported in column 2 of Data Form 4 from the quantity produced reported in column 3 of Data Form 3. The Secretariat will make the necessary deductions.

9. INSTRUCTION V: Data on Imports from and Exports to Non-Parties (Data Form 5)

- 9.1 Please use Data Form 5 for reporting data on imports from and exports to non-Parties of substances of Annex A (CFCs and halons), Annex B (Other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs, HBFCs or BCM), Annex E (methyl bromide) **or Annex F (HFCs)**.
- 9.2 The first column "SUBSTANCES" has been left blank because each Party may import different substances from and/or export different substances to non-Parties. Please fill in only the names of those substances that were imported from and/or exported to non-Parties.
- 9.3 "Non-Party" means:
- With respect to Annex A substances, all countries that have not ratified the 1987 Montreal Protocol.
 - With respect to Annex B substances, all countries that have not ratified the London Amendment.
 - With respect to Annex C substances, all countries that have not ratified the Copenhagen and Beijing Amendments.
 - With respect to Annex E substances, all countries that have not ratified the Copenhagen Amendment.
 - With respect to Annex F substances, all countries that have not ratified the Kigali Amendment.
- 9.4 The status of ratification of the Montreal Protocol and its Amendments can be found in a document published by the Secretariat and updated several times a year. This information is also available on the website of the Ozone Secretariat, at: <http://ozone.unep.org/>.

10. INSTRUCTION VI: Data on Emissions of Annex G, Group II substance – HFC-23 (Data Form 6)

- 10.1 Very few countries will have manufacturing facilities for Annex C, Group I, or Annex F substances that generate HFC-23. If your country has such facilities that were operational in the reporting period, please use data form 6 to report emissions of HFC-23 from each facility. If there were no emissions from a manufacturing facility, please include the facility in the data form and enter zero in the emissions column.
- 10.2 Reporting of the amounts captured for use, destruction or storage may be done on a voluntary basis as these are not requested under Article 7 of the Protocol. The information conforms with the elements enumerated in paragraph 1(d) of Article 3 of the Protocol and a party's adherence to paragraph 7 of Article 2J, namely ensuring that amounts of HFC-23 generated in each production facility are destroyed, using technologies approved by the parties.

11. ILLUSTRATIVE LIST OF MIXTURES CONTAINING CONTROLLED SUBSTANCES*

11.1: Zeotrope Mixtures

No.	Refrigerant Number (Trade Name) of Mixture	Composition					
		Component 1		Component 2		Component 3	
1	R401A (MP 39)	HCFC22	53%	HFC152a**	13%	HCFC124	34%
2	R401B (MP 66)	HCFC22	61%	HFC152a**	11%	HCFC124	28%
3	R401C (MP 52)	HCFC22	33%	HFC152a**	15%	HCFC124	52%
4	R402A (HP 80)	HFC125**	60%	HC290**	2%	HCFC22	38%
5	R402B (HP 81)	HFC125**	38%	HC290**	2%	HCFC22	60%
6	R403A (69S)	HC290**	5%	HCFC22	75%	FC218**	20%
7	R403B (69L)	HC290**	5%	HCFC22	56%	FC218**	39%
8	R-404A	HFC125**	44%	HFC134a**	4%	HFC143a**	52%
9	R405A (G2015)	HCFC22	45%	HFC152a**	7%	HCFC142b	6%
10	R406A (GHG-12)	HCFC22	55%	HC600a**	4%	HCFC142b	41%
11	R-407A	HFC32**	20%	HFC125**	40%	HFC143a**	40%
12	R-407C	HFC32**	23%	HFC125**	25%	HFC143a**	52%
13	R408A (FX10)	HFC125**	7%	HFC143a**	46%	HCFC22	47%
14	R409A (FX56)	HCFC22	60%	HCFC124	25%	HCFC142b	15%
15	R409B (FX 57)	HCFC22	65%	HCFC124	25%	HCFC142b	10%
16	R-410A	HFC32**	50%	HFC125**	50%		
17	R411A (G2018A)	HC1270**	1.5%	HCFC22	87.5%	HFC152a**	11%
18	R411B (G2018B)	HC1270**	3%	HCFC22	94%	HFC152a**	3%
19	R412A (TP5R)	HCFC22	70%	FC218**	5%	HCFC142b	25%
20	R414B(Hotshot)	HCFC22	50%	HCFC124	39%	HCFC142b	9.5%
21	R-416A (FRIGC)	HCFC124	39.5 %	HFC134a**	59%	HC600a**	1.5%

11.2: Azeotrope Mixtures

No.	Refrigerant Number (Trade Name) of Mixture	Composition			
		Component 1		Component 2	
1	R500	CFC12	73.8%	HFC152a**	26.2%
2	R501	HCFC22	75%	CFC12	25%
3	R502	HCFC22	48.8%	CFC115	51.2%
4	R503	HFC23**	40.1%	CFC13	59.9%
5	R504	HFC32**	48.2%	CFC115	51.8%
6	R505	CFC12	78%	HCFC31	22%
7	R506	HCFC31	55%	CFC114	45%
8	R507A (AZ50)	HFC125**	50%	HFC143a**	50%
9	R-508A	HFC23**	39%	CFC116	61%
10	R-508B	HFC23**	46%	CFC116	54%
11	R509 (TP5R2)	HCFC22	46%	FC218**	54%
12	R-509A	HCFC22	44%	FC218**	56%
13	R-512A	HFC134a**	5%	HFC152a**	95%
14	R-513A/XP10/DR11	HFO-1234yf**	56%	HFC134a**	44%
15	R-513B	HFO-1234yf**	58.5%	HFC134a**	41.5%
16	R-515A	HFO-1234ze(E)**	88%	HFC227ea**	12%

* For more information about trade names for mixtures and pure substances, visit the “Trade Names of Chemicals Containing Ozone Depleting Substances and their Alternatives” on the UNEP DTIE OzonAction at <http://www.unep.fr/ozonaction/library/tradenames/main.asp>. This worldwide database service is designed to help customs officials and National Ozone Units control imports and exports of controlled substances and prevent their illegal trade.

** Not ozone-depleting substances.

11.3: Other Mixtures

No.	Trade Name of Mixture	Composition						
		Component 1		Component 2		Component 3		Component 4
1	FX20	HFC125**	45%	HCFC22	55%			
2	FX55	HCFC22	60%	HCFC142b	40%			
3	D136	HCFC22	50%	HCFC124	47%	HC600a**	3%	
4	Daikin Blend	HFC23**	2%	HFC32**	28%	HCFC124	70%	
6	Free Zone	HCFC142b	19%	HFC134a**	79%	Lubricant**	2%	
7	GHG-HP	HCFC22	65%	HCFC142b	31%	HC600a**	4%	
8	GHG-X5	HCFC22	41%	HCFC142b	15%	HFC227ea**	40%	HC600a* *
9	NARM-502	HCFC22	90%	HFC152a**	5%	HFC23**	5%	
10	NASF-S-III*	HCFC22	82%	HCFC123	4.75%	HCFC124	9.5%	
								3.75%

11.4: Methyl Bromide Mixtures

No.	Trade Name of Mixture	Composition			
		Component 1		Component 2	
1	methyl bromide with chloropicrin	methyl bromide	67%	chloropicrin**	33%
2	methyl bromide with chloropicrin	methyl bromide	98%	chloropicrin**	2%

* A halon alternative

** Not ozone depleting substances

Anexo II

Registro de decisiones relativas a la adopción o revisión de formularios de presentación de datos

Las Partes han aprobado o revisado los formularios de presentación de datos en las decisiones siguientes:

- a) En 1991, en virtud de la decisión III/9, la Reunión de las Partes aprobó los formularios revisados de presentación de datos anuales con arreglo al artículo 7 del Protocolo (es decir, un año después de la aprobación de la Enmienda de Londres, que añadió las sustancias enumeradas en el anexo B como sustancias controladas);
- b) En 1993, en virtud de la decisión V/5, la Reunión de las Partes aprobó un formulario revisado para la presentación de datos de conformidad con al artículo 7 del Protocolo (es decir, un año después de la aprobación de la Enmienda de Copenhague, en virtud de la cual se añadieron las sustancias del grupo I del anexo C y el anexo E como sustancias controladas);
- c) En 1996, en la decisión VIII/21, la Reunión de las Partes pidió al Comité de Aplicación que examinase un informe de la Secretaría sobre todos los requisitos de presentación de informes que figuraban en el Protocolo, que estudiase qué disposiciones relativas a la presentación de informes eran esenciales para evaluar el cumplimiento y cuáles ya no eran necesarias, y que formulase recomendaciones sobre posibles formas de simplificar los requisitos de presentación de informes;
- d) En 1997, en la decisión IX/28, la Reunión de las Partes aprobó los formularios revisados de presentación de datos preparados con arreglo al artículo 7 del Protocolo (es decir, un año después de la aprobación de la Enmienda de Montreal) sobre la base de la labor realizada por el Comité de Aplicación y la Secretaría, de conformidad con la decisión VIII/21 sobre los formularios revisados de presentación de datos con arreglo al artículo 7 del Protocolo;
- e) En 2005, en su decisión XVII/16, la Reunión de las Partes pidió a la Secretaría que revisase el formato de presentación de información para incluir las exportaciones (incluidas las reexportaciones) de todas las sustancias controladas que agotan el ozono e instó a las Partes a que utilizasen el formato revisado de presentación de información de manera expedita. En consecuencia, la Secretaría actualizó los formularios de presentación de información sobre la base de la solicitud;
- f) En 2008, en la decisión XX/6, la Reunión de las Partes pidió a la Secretaría del Ozono que actualizase la definición de “usos previos al envío” del bromuro de metilo, que figuraba en el párrafo 5.6 de las Instrucciones/Directrices para la notificación de datos, de manera que reflejase la decisión XI/12, en virtud de la cual se había revisado la definición;
- g) En 2012, en la decisión XXIV/12, la Reunión de las Partes solicitó a la Secretaría del Ozono que revisase el formato de presentación de información dimanante de la decisión XVII/16 para incluir en los formularios de datos un anexo en el que se indicase la Parte exportadora de las cantidades notificadas como importaciones, y se señalase que el anexo estaba excluido del requisito de notificación con arreglo al artículo 7 del Protocolo y que la información incluida en él se facilitaría con carácter voluntario. En consecuencia, la Secretaría actualizó los formularios de presentación de información y añadió el anexo que se pedía.

Anexo III¹**Mixtures and blends containing HFCs as received from TEAP**

Refrigerant	Number	Molecular Weight	Bubble point/dew point (°C)	ATEL/ODL (kg/m3)	LFL (kg/m3)	Safety class	ODP
Composition (Mass %)							
Zeotropes							
R-401A	R-22/152a/124 (53,0/13,0/34,0)	94,4	-34,4/-28,8	0,10	NF	A1	0,02
R-401B	R-22/152a/124 (61,0/11,0/28,0)	92,8	-35,7/-30,8	0,11	NF	A1	0,03
R-401C	R-22/152a/124 (33,0/15,0/52,0)	101	-30,5/-23,8	0,083	NF	A1	0,02
R-402A	R-125/290/22 (60,0/2,0/38,0)	101,5	-49,2/-47,0	0,27	NF	A1	0,01
R-402B	R-125/290/22 (38,0/2,0/60,0)	94,7	-47,2/-44,9	0,24	NF	A1	0,02
R-403A	R-290/22/218 (5,0/75,0/20,0)	92	-44,0/-42,3	0,24	0,480	A2	0,03
R-403B	R-290/22/218 (5,0/56,0/39,0)	103,3	-43,8/-42,3	0,29	NF	A1	0,02
R-404A	R-125/143a/134a (44,0/52,0/4,0)	97,6	-46,6/-45,8	0,52	NF	A1	
R-406A	R-22/600a/142b (55,0/4,0/41,0)	89,9	-32,7/-23,5	0,14	0,302	A2	0,04
R-407A	R-32/125/134a (20,0/40,0/40,0)	90,1	-45,2/-38,7	0,31	NF	A1	
R-407B	R-32/125/134a (10,0/70,0/20,0)	102,9	-46,8/-42,4	0,33	NF	A1	
R-407C	R-32/125/134a (23,0/25,0/52,0)	86,2	-43,8/-36,7	0,29	NF	A1	
R-407D	R-32/125/134a (15,0/15,0/70,0)	91	-39,4/-32,7	0,25	NF	A1	
R-407E	R-32/125/134a (25,0/15,0/60,0)	83,8	-42,8/-35,6	0,27	NF	A1	
R-407F	R-32/125/134a (30,0/30,0/40,0)	82,1	-46,1/-39,7	0,32	NF	A1	
R-407G	R-32/125/134a (2,5/2,5/95,0)	100	-29,2/-27,2			A1	
R-408A	R-125/143a/22 (7,0/46,0/47,0)	87	-45,5/-45,0	0,33	NF	A1	0,02
R-409A	R-22/124/142b (60,0/25,0/15,0)	97,4	-35,4/-27,5	0,12	NF	A1	0,03
R-409B	R-22/124/142b (65,0/25,0/10,0)	96,7	-36,5/-29,7	0,12	NF	A1	0,03
R-410A	R-32/125 (50,0/50,0)	72,6	-51,6/-51,5	0,42	NF	A1	
R-410B	R-32/125 (45,0/55,0)	75,6	-51,5/-51,4	0,43	NF	A1	
R-411A	R-1270/22/152a (1,5/87,5/11,0)	82,4	-39,7/-37,2	0,074	0,186	A2	0,03
R-411B	R-1270/22/152a (3,0/94,0/3,0)	83,1	-41,6/-41,3	0,044	0,239	A2	0,03
R-412A	R-22/218/142b (70,0/5,0/25,0)	92,2	-36,4/-28,8	0,17	0,329	A2	0,04
R-413A	R-218/134a/600a (9,0/88,0/3,0)	104	-29,3/-27,6	0,21	0,375	A2	
R-414A	R-22/124/600a/142b (51,0/28,5/4,0/16,5)	96,9	-34,0/-25,8	0,10	NF	A1	0,03
R-414B	R-22/124/600a/142b (50,0/39,0/1,5/9,5)	101,6	-34,4/-26,1	0,096	NF	A1	0,03
R-415A	R-22/152a (82,0/18,0)	81,9	-37,5/-34,7	0,19	0,188	A2	0,03
R-415B	R-22/152a (25,0/75,0)	70,2	-23,4/-21,8	0,15	0,13	A2	0,009
R-416A	R-134a/124/600 (59,0/39,5/1,5)	111,9	-23,4/-21,8	0,064	NF	A1	0,008
R-417A	R-125/134a/600 (46,6/50,0/3,4)	106,7	-38,0/-32,9	0,057	NF	A1	
R-417B	R-125/134a/600 (79,0/18,3/2,7)	113,1	-44,9/-41,5	0,069	NF	A1	
R-417C	R-125/134a/600 (19,5/78,8/1,7)	103,7	-32,7/-29,2		NF	A1	
R-418A	R-290/22/152a (1,5/96,0/2,5)	84,6	-41,2/-40,1	0,20	0,31	A2	0,03
R-419A	R-125/134a/E170 (77,0/19,0/4,0)	109,3	-42,6/-36,0	0,31	0,25	A2	
R-419B	R-125/134a/E170 (48,5/48,0/3,5)	105,2	-37,4/-31,5			A2	
R-420A	R-134a/142b (88,0/12,0)	101,8	-25,0/-24,2	0,18	NF	A1	0,007
R-421A	R-125/134a (58,0/42,0)	111,7	-40,8/-35,5	0,28	NF	A1	
R-421B	R-125/134a (85,0/15,0)	116,9	-45,7/-42,6	0,33	NF	A1	
R-422A	R-125/134a/600a (85,1/11,5/3,4)	113,6	-46,5/-44,1	0,29	NF	A1	
R-422B	R-125/134a/600a (55,0/42,0/3,0)	108,5	-40,5/-35,6	0,25	NF	A1	
R-422C	R-125/134a/600a (82,0/15,0/3,0)	113,4	-45,3/-42,3	0,29	NF	A1	
R-422D	R-125/134a/600a (65,1/31,5/3,4)	109,9	-43,2/-38,4	0,26	NF	A1	
R-422E	R-125/134a/600a (58,0/39,3/2,7)	109,3	-41,8/-36,4		NF	A1	

¹ This annex has not been formally edited.

Refrigerant		Molecular Weight	Bubble point/dew point (°C)	ATEL/ODL (kg/m3)	LFL (kg/m3)	Safety class	ODP
Number	Composition (Mass %)						
Zeotropes							
R-423A	134a/227ea (52,5/47,5)	126	-24,2/-23,5	0,30	NF	A1	
R-424A	R-125/134a/600a/600/601a (50,5/47,0,0,9,1,0,0,6)	108,4	-39,1/-33,3	0,10	NF	A1	
R-425A	R-32/134a/227ea (18,5/69,5/12)	90,3	-38,1/-31,3	0,27	NF	A1	
R-426A	R-125/134a/600/601a (5,1/93,0/1,3/0,6)	101,6	-28,5/-26,7	0,083	NF	A1	
R-427A	R-32/125/143a/134a (15,0/25,0/10,0/50,0)	90,4	-43,0/-36,3	0,29	NF	A1	
R-428A	R-125/143a/290/600a (77,5/20,0/0,6/1,9)	107,5	-48,3/-47,5	0,37	NF	A1	
R-429A	R-E170/152a/600a (60,0/10,0/30,0)	50,8	-26,0/-25,6	0,098	0,052	A3	
R-430A	R-152a/600a (76,0/24,0)	64	-27,6/-27,4	0,10	0,084	A3	
R-431A	R-290/152a (71,0/29,0)	48,8	-43,1/-43,1	0,10	0,044	A3	
R-432A	R-1270/E170 (80,0/20,0)	42,8	-46,6/-45,6	0,002 1	0,039	A3	
R-433A	R-1270/290 (30,0/70,0)	43,5	-44,6/-44,2	0,005 5	0,036	A3	
R-433B	R-1270/290 (5,0/95,0)	44	-42,7/-42,5	0,025	0,025	A3	
R-433C	R-1270/290 (25,0/75,0)	43,6	-44,3/-43,9	0,006 6	0,032	A3	
R-434A	R-125/143a/134a/600a (63,2/18,0/16,0/2,8)	105,7	-45,0/-42,3	0,32	NF	A1	
R-435A	R-E170/152a (80,0/20,0)	49	-26,1/-25,9	0,09	0,069	A3	
R-436A	R-290/600a (56,0/44,0)	49,3	-34,3/-26,2	0,073	0,032	A3	
R-436B	R-290/600a (52,0/48,0)	49,9	-33,4/-25,0	0,071	0,033	A3	
R-437A	R-125/134a/600/601 (19,5/78,5/1,4/0,6)	103,7	-32,9/-29,2	0,081	NF	A1	
R-438A	R-32/125/134a/600/601a (8,5/45,0/44,2/1,7/0,6)	99,1	-43,0/-36,4	0,079	NF	A1	
R-439A	R-32/125/600a (50,0/47,0/3,0)	71,2	-52,0/-51,8	0,34	0,304	A2	
R-440A	R-290/134a/152a (0,6/1,6/97,8)	66,2	-25,5/-24,3	0,14	0,124	A2	
R-441A	R-170/290/600a/600 (3,1/54,8/6,0/36,1)	48,3	-41,9/-20,4	0,006 3	0,032	A3	
R-442A	R-32/125/134a/152a/227ea (31,0/31,0/30,0/3,0/5,0)	81,8	-46,5/-39,9	0,33	NF	A1	
R-443A	R-1270/290/600a (55,0/40,0/5,0)	43,5	-44,8/-41,2			A3	
R-444A	R-32/152a/1234ze(E) (12,0/5,0/83,0)	96,7	-34,3/-24,3			A2L	
R-444B	R-32/1234ze(E)/152a (41,5/48,5/10)	72,8	-44,6/-34,9			A2L	
R-445A	R-744/134a/1234ze(E) (6,0/9,0/85,0)	103,1	-50,3/-23,5			A2L	
R-446A	R-32/1234ze(E)/600 (68,0/29,0/3,0)	62	-49,4/-44,0			A2L	
R-447A	R-32/125/1234ze(E) (68,0/3,5/28,5)	63	-49,3/-44,2			A2L	
R-447B	R-32/125/1234ze(E) (68,0/8,0/24,0)	63,1	-50,1/-46,0			A2L	
R-448A	R-32/125/1234yf/134a/1234ze(E) (26,0/26,0/20,0/21,0/7,0)	86,3	-45,9/-39,8			A1	
R-449A	R-32/125/1234yf/134a (24,3/24,7/25,3/25,7)	87,2	-46,0/-39,9			A1	
R-449B	R-32/125/1234yf/134a (25,2/24,3/23,2/27,3) (Arkema)	86,4	-46,1/-40,2			A1	
R-449C	R-32/125/1234yf/134a (20,0/20,0/31,0/29,0)	90,3	-44,6/-38,1			A1	
R-450A	R-1234ze(E)/134a (58/42)	108,7	-23,4/-22,8			A1	
R-451A	R-1234yf/134a (89,8/10,2)	112,7	-30,8/-30,5			A2L	
R-451B	R-1234yf/134a (88,8/11,2)	112,6	-31,0/-30,6			A2L	
R-452A	R-1234yf/32/125 (30/11/59)	103,5	-47,0/-43,2			A1	
R-452B	R-32/125/1234yf (67,0/7,0/26,0)	63,5	-51,0/-50,3			A2L	
R-452C	R-32/125/1234yf (12,5/61,0/26,5)	101,9	-47,5/-44,2			A1	

Refrigerant		Molecular Weight	Bubble point/dew point (°C)	ATEL/ODL (kg/m³)	LFL (kg/m³)	Safety class	ODP
Number	Composition (Mass %)						
Zeotropes							
R-453A	R-32/125/134a/227ea/600/601a (20,0/20,0/53,8/5,0/0,6/0,6)	88,8	-42,2/-35,0			A1	
R-454A	R-32/1234yf (35,0/65,0)	80,5	-48,4/-41,6			A2L	
R-454B	R-32/1234yf (68,9/31,1)	62,6	-50,9/-50,0			A2L	
R-454C	R-32/1234yf (21,5/78,5)	90,8	-46,0/-37,8			A2L	
R-455A	R-744/32/1234yf (3,0/21,5/75,5)	87,5	-51,6/-39,1			A2L	
R-456A	R-32/134a/1234ze(E) (6,0/45,0/49,0)	101,4	-30,4/-25,6			A1/ A1	
R-457A	R-32/1234yf/152a (18,0/70,0/12,0)	87,6	-42,7/-35,5			A2L	
R-458A	R-32/125/134a/227ea/236fa (20,5/4,0/61,4/13,5/0,6)	89,9	-39,8/-32,4			A1	
R-459A	R-32/1234yf/1234ze(E) (68,0/26,0/6,0)	63	-50,3/-48,6			A2L	
R-459B	R-32/1234yf/1234ze(E) (21,0/69,0/10,0)	91,2	-44,0/-36,1			A2L	
R-460A	R-32/125/134a/1234ze(E) (12,0/52,0/14,0/22,0)	100,6	-44,6/-37,2			A1	
R-460B	R-32/125/134a/1234ze(E) (28,0/25,0/20,0/27,0)	84,8	-45,2/-37,1			A1	

Refrigerante		Peso molecular	Normal boiling point (°C)	ATEL/ODL (kg/m³)	LFL (kg/m³)	Safety class	ODP
Número	Composición (porcentaje en masa)						
Azeótropos							
R-500	R-12/152a (73,8/26,2)	99,3	-33,6/-33,6	0,12	NF	A1	0,5
R-501	R-22/12 (75,0/25,0)	93,1	-40,5/-40,3	0,21	NF	A1	0,2
R-502	R-22/115 (48,8/51,2)	111,6	-45,3/-45,0	0,33	NF	A1	0,1
R-503	R-23/13 (40,1/59,9)	87,2	-87,5/-87,5	ND	NF	A1	0,6
R-504	R-32/115 (48,2/51,8)	79,2	-57,1/-56,2	0,45	NF	A1	0,1
R-507A	R-125/143a (50,0/50,0)	98,9	-47,1/-47,1	0,53	NF	A1	
R-508A	R-23/116 (39,0/61,0)	100,1	-87,4/-87,4	0,23	NF	A1	
R-508B	R-23/116 (46,0/54,0)	95,4	-87,4/-87,0	0,2	NF	A1	
R-509A	R-22/218 (44,0/56,0)	124	-40,4/-40,4	0,38	NF	A1	0,01
R-510A	R-E170/600a (88,0/12,0)	47,2	-25,2/-25,2	0,087	0,056	A3	
R-511A	R-290/E170 (95,0/5,0)	44,2	-42,18/-42,1	0,092	0,038	A3	
R-512A	R-134a/152a (5,0/95,0)	67,2	-24,0/-24,0	0,14	0,124	A2	
R-513A / XP10 / DR11	R-1234yf/134a (56/44)	108,4	-29,2/-29,1			A1	
R-513B	R-1234yf/134a (58,5/41,5)	108,7	-29,2/-29,1			A1	
R-514A	R-1336mzz(Z)/1130(E) (74,7/25,3)	139,6	29,0/29,0			B1	
R-515A	R-1234ze(E)/227ea (88,0/12,0)	118,7	-18,9/-18,9			A1	