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联合国
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关于消耗臭氧层物质的蒙特利尔议定书
缔约方不限成员名额工作组
第三十九次会议
2017年7月11日至14日，曼谷
临时议程*项目 3(a)和 3(b)

旨在逐步减少氢氟碳化物的《蒙特利尔议定书基加利修正案》：依照《蒙特利尔议定书》第 7 条进行的数据报告和相关问题

秘书处的说明

一、 引言

1. 本说明汇总了《基加利修正案》获得通过后出现的与依照《关于消耗臭氧层物质的蒙特利尔议定书》第 7 条进行的数据报告相关的问题，供缔约方审议和缔约方会议采取可行的适当行动。

二、 供缔约方会议审议和采取行动的问题

A. 报告氢氟碳化物数据

1. 所有缔约方进行数据报告

2. 《基加利修正案》生效后，该修正案的所有缔约方将依照《议定书》第 7 条向秘书处报告氢氟碳化物的年度生产和消费数据及三氟甲烷的年度排放量数据。要了解更多信息，可参见秘书处关于供不限成员名额工作组讨论的问题的说明(UNEP/OzL.Pro.WG.1/39/2)。

2. 按第 5 条第 1 款行事的缔约方报告氢氟碳化物基准数据的时限

3. 按照《基加利修正案》，《议定书》第 7 条第 2 款要求按第 5 条第 1 款行事的每一个缔约方（第 5 条缔约方）在《议定书》中关于附件 F 所列受控物质的条款对其生效之日起三个月内，向秘书处提供关于此类物质的基准年（第

* UNEP/OzL.Pro.WG.1/39/1。

一类缔约方¹为 2020-2022 年，第二类缔约方²为 2024-2026 年）的生产、进口和出口统计数据，或在没有确实数据时提供此种数据的最佳估计数据。

4. 可要求批准《基加利修正案》的第 5 条缔约方在拥有确实数据前，即第一类缔约方在 2022 年结束前，第二类缔约方在 2026 年结束前报告各自的部分或全部基准数据。尽管《议定书》第 7 条第 2 款允许缔约方在没有确实数据前提交最佳估计数据，但是若缔约方此后在确实数据可获取后想要更改基准数据，则根据第 XIII/15 号决定第 5 段的要求，其变更请求须交由蒙特利尔议定书不遵守情事程序下设履行委员会和缔约方会议审议。

5. 过去，《议定书》没有明确规定第 5 条缔约方须承担报告基准年数据的义务。秘书处要求第 5 条缔约方在针对特定类别物质的控制措施已对其生效且其已经消费或生产此类物质的情况下，报告此类数据。

6. 另一方面，《议定书》第 7 条中一直包含关于非按第 5 条第 1 款行事的缔约方（非第 5 条缔约方）须承担报告基准年数据义务的规定，《基加利修正案》也是如此。按照惯例，基准年往往与《议定书》或有关各类物质的相关修正案生效的日期相对应。³

7. 缔约方不妨澄清，第 5 条缔约方应何时报告其基准年中每一年的数据。还不妨考虑要求每个第 5 条缔约方至少应在其开始履行《议定书》第 5 条第 8 款之四所规定的氢氟碳化合物消费和生产义务前汇报其基准年的数据。⁴

3. 按《议定书》第 7 条汇报含有氢氟碳化合物的混合物数据

8. 氢氟碳化合物的大量贸易目前为含有氢氟碳化合物的混合物的贸易，而非纯物质的贸易，今后也将如此。技术和经济评估小组提供的含有氢氟碳化合物的混合物清单载于本说明附件三。此前的受控物质（氯氟碳化合物、氢氯氟碳化合物等）中，含有相关受控物质的混合物所占的贸易量相对于纯物质而言较小。各缔约方此前被要求计算混合物中所含的每种纯物质的数量，并仅报告纯物质的数据。然而，由于氢氟碳化合物的贸易涉及大量混合物，缔约方不妨考虑允许报告混合物的数量，而非混合物中所含纯氢氟碳化合物的具体数量。随后由秘书处负责计算所报告的各类混合物中含有的纯物质的不同数量。

9. 数据报告表相关指示和准则的最后部分列出的混合物说明性清单（见本说明附件一附录十第 11 节）将被用作计算所报告的每种混合物中含有的纯物质数量的基础。在缔约方希望报告混合物说明性清单中未包含的非标准混合物的情况下，报告缔约方需要向秘书处提供非标准混合物组成的信息。这一方法在拟议数据报告表内做了说明，相关指示和准则载于本说明附件一。

¹ 所有第 5 条缔约方，脚注 2 中所列的 10 个缔约方除外。

² 巴林、印度、伊朗伊斯兰共和国、伊拉克、科威特、阿曼、巴基斯坦、卡塔尔、沙特阿拉伯和阿拉伯联合酋长国。

³ 对于附件 A 所列物质，即氯氟碳化合物和哈龙，原先列入此类物质的《蒙特利尔议定书》于 1989 年生效，非第 5 条缔约方的基准年为 1986 年。对于附件 B 所列物质，非第 5 条缔约方的基准年为 1989 年，列入此类物质的《伦敦修正案》的生效日期为 1992 年。对于氢氯氟碳化合物和甲基溴，非第 5 条的基准年分别为 1989 年和 1991 年，列入此类物质的《哥本哈根修正案》的生效日期为 1994 年。对于氢氟碳化合物，非第 5 条缔约方的基准年为 2011-2013 年，列入此类物质的《基加利修正案》将于 2019 年以后生效。

⁴ 这允许第 5 条缔约方在可获取基准数据后进行汇报，供其及时采取行动，通过与氢氟碳化合物基准有关的控制措施，履行其履约义务。

B. 修订数据报告表

1. 更新数据报告表

10. 《基加利修正案》获得通过后，缔约方不妨审查和更新数据报告表，以纳入因通过该修正案而产生的报告义务。

11. 此前对《蒙特利尔议定书》第 7 条所涉数据报告表做出的所有调整均由缔约方会议通过本说明附件二所载的决定加以批准。其中部分决定系根据秘书处或履行委员会的建议予以通过。

12. 秘书处正在提议一套经修订和扩充的表格来满足经由《基加利修正案》修订的《议定书》第 7 条下的新的数据报告义务。修订后的报告表载于本说明附件一。对此前报告表所做的所有主要变更均以红色标示。

2. 氢氟碳化合物数据的组成

13. 缔约方不妨考虑按下述内容扩充现有报告表，以包含氢氟碳化合物的相关内容和新的义务：

(a) “进口”数据表（表 1）增加一页，用于列举新的氢氟碳化合物；

(b) “生产”数据表（表 3）增加一页，用于列举新的氢氟碳化合物；

(c) 增加一张新的数据表（表 6），以满足报告每项设施的三氟甲烷排放量的新要求，并在数据报告表“问卷调查”页增加一个有关新表格的相关问题。《议定书》第 7 条第 3 款之三要求按照《议定书》第 3 条第 1(d)款报告每项设施的排放量，并又规定排放量应扣除使用、销毁或存储的数量。因此，拟议的新表格 6 包含排放数据列和备选列，后者供自愿报告捕获量和销毁的数量，以方便计算每项设施产生的三氟甲烷总量；

(d) 制定新的数据表，供可适用高环境温度豁免的分部门单独报告生产和消费数据（第 XXVIII/2 号决定，第 30 段）。只有生产氢氟碳化合物用于满足自己的高环境温度豁免用途需求的缔约方需要使用生产量报告表。

14. 关于“出口”（表 2）、“销毁”（表 4）和“与非缔约方的贸易”（表 5）的其他数据报告表可不做变更，因为这些表格未列举物质，而是由报告缔约方来填写其想要报告的相关物质。

3. 秘书处提议的办法

15. 秘书处提议的办法旨在对各缔约方均熟悉的现有数据报告表单做出最小改动。

16. 由于一些缔约方仍在报告原料用途和一些逐步淘汰物质回收数量的贸易，秘书处在拟议修订的数据表单中保留了逐步淘汰物质的清单。

17. 秘书处还通过纳入与报告相关的其他决定和一直指导缔约方提交数据的其他决定，使“数据报告的指示和准则”更加全面。

18. 邀请工作组审议本说明附件一中所载的经修订的数据报告表单及其相关的经修订的“数据报告指示和数据报告准则”，并就其向秘书处提供任何必要的指导。

C. 科学评估小组更新《蒙特利尔议定书》附件 A 第一类、附件 C 和附件 F 中物质的全球升温潜能值信息的工作

19. 《基加利修正案》在《议定书》第 2 条下新增了第 9(a)款第（二）项，规定缔约方可决定附件 A 第一类、附件 C 和附件 F 所规定的全球升温潜能值是否应予以调整，如是，应如何调整。该规定类似于《议定书》第 2 条第 9(a)款第（一）项的规定，即缔约方可决定是否调整消耗臭氧层物质的消耗臭氧潜能值。

20. 正如缔约方第二十八次会议报告（UNEP/OzL.Pro.28/12，第 204 段）所体现的，与会者一致认为，科学评估小组需向缔约方会议提交调整附件 A 第一类、附件 C 和附件 F 中物质的全球升温潜能值所需的信息，并为此向不限成员名额工作组第三十九次会议报告进展情况。

21. 根据《基加利修正案》，只有《议定书》附件 C 中一些氢氯氟碳化合物的全球升温潜能被赋值，而其他氢氯氟碳化合物的全球升温潜能均未被赋值。

《议定书》附件 C 所载的一项条款规定，对于未指明全球升温潜能值的物质，适用的默认值为 0，直到通过《议定书》第 2 条第 9(a)款第（二）项设想的程序加入全球升温潜能值。秘书处已确定，在氢氯氟碳化合物基准年，只有六种氢氯氟碳化合物，即 HCFC-121、HCFC-122、HCFC-133、HCFC-141、HCFC-142 和 HCFC-225 被报告其全球升温潜能未被赋值。19 个缔约方报告了这些氢氯氟碳化合物，其中 11 个是非第 5 条缔约方，8 个是第 5 条缔约方。

22. 缔约方不妨注意，HCFC-141b 和 HCFC-142b 的全球升温潜能被赋值，这两者分别是 HCFC-141 和 HCFC-142 这两种物质最具商业可行性的异构体。缔约方不妨考虑，就是否利用 HCFC-141 和 HCFC-142 这两种物质的全球升温潜能值，向秘书处提供指导。

23. 根据临时议程的议程项目 3(b)，预计科学评估小组将向不限成员名额工作组第三十九次会议提供这些问题的最新情况。

D. HCFC-123 和 HCFC-124 最具商业可行性的异构体的全球升温潜能值

24. HCFC-123**和 HCFC-124**这两种物质是为《议定书》的目的列出其消耗臭氧潜能值的相应异构体类别中最具商业可行性的物质。这两种物质都未被赋予全球升温潜能值。

25. 对 HCFC-123 和 HCFC-124 的全组异构体列出的全球升温潜能值也适用于这两组各自最具商业可行性的异构体。这种理解背后的逻辑是，每组异构体包括该组中的所有异构体，包括代表最具商业可行性物质的异构体。如果某一特定异构体未被赋予全球升温潜能值，赋予全组异构体的全球升温潜能值将适用于无全球升温潜能值的特定异构体。秘书处将对 HCFC-123**和 HCFC-124**这两种异构体分别采用全球升温潜能值 77 和 609，以便计算生产和消费水平（以二氧化碳当量表示）。

E. 与非缔约方的贸易：针对贸易限制的报告要求

26. 《基加利修正案》第四条第 2 款指出，本修正第一条对《议定书》关于控制与非缔约方贸易的第 4 条所做的更改应于 2033 年 1 月 1 日生效。

27. 延迟至 2033 年不适用于对与非缔约方贸易相关信息所做的年度报告，《议定书》第 7 条第 3 款要求编制该年度报告。对向非缔约方出口的处理方法载于《蒙特利尔议定书》第 3 条第 1(c)款，并将于报告年度数据的当年起适用。

28. 因此，自《基加利修正案》对其生效之日起，缔约方必须报告其与非缔约方贸易的信息。秘书处将把那些向非缔约方的出口视为出口方的消费。
29. 为便利报告与非缔约方的贸易，如果一缔约方报告其出口目的国或进口来源国，秘书处可自动确定哪些出口或进口系与非缔约方的贸易，并在与非缔约方贸易的数据表单中填写相应信息。

Annex 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)*

<p>1. Fill in this form only if your country imported CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide or HCFCs</p> <p>2. Please read Instruction I carefully before filling in this form.</p> <p>Party : _____</p>	<p>Data Form 1</p> <p>DATA ON IMPORTS</p> <p>in tonnes^[1] (not ODP <u>or</u> GWP tonnes)</p> <p><u>Annexes A, B, C, E and F substances</u></p> <p>Period : January - December 20____</p>	<p>UNEP/OzL.Pro/Dataform17</p>
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Annex/Group	Substances	Total Quantity Imported for All Uses		Quantity of New Substances Imported for Feedstock Uses	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*	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use* 7
C-Group I	HCFC-21** (CHFCI ₂)					
	HCFC-22** (CHF ₂ Cl)					
	HCFC-31 (CH ₂ FCI)					
	HCFC-123** (CHCl ₂ CF ₃)					
	HCFC-124** (CHFClCF 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:						
<p>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.</p> <p>* 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.</p>						

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*	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use* 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:						
<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>* 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.</p>						

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*	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use* 7
methyl bromide (CH ₃ Br)						
					Quantity of New Methyl Bromide Imported to be used for Quarantine and Pre-shipment Applications within your country	
Comments:						

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

<p>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</p> <p>2. Please read Instruction II carefully before filling in this form.</p> <p>Party : _____</p>	<p>Data Form 2</p> <p>UNEP/OzL.Pro/Dataform17</p> <p><u>DATA ON EXPORTS*</u></p> <p>in tonnes^[1] (not ODP or GWP tonnes)</p> <p><u>Annexes A, B, C, E and F substances</u></p> <p>Period : January - December 20____</p>
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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****	
		New 3	Recovered and Reclaimed 4		Quantity 6	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:

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.

* 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.

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

<p>1. Fill in this form only if your country produced CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs, bromochloromethane, methyl bromide or HCFCs</p> <p>2. Please read Instruction III carefully before filling in this form</p> <p>Party : _____</p>	<p>Data Form 3</p> <p>UNEP/OzL.Pro/Dataform17</p> <p><u>DATA ON PRODUCTION</u></p> <p>in tonnes^[1] (not ODP or GWP tonnes)</p> <p><u>Annexes A, B, C, E and F substances</u></p> <p>Period : January - December 20 ____</p>				
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* Quantity Decision / Type of Use* 5 6	Production for Supply to Article 5 countries in accordance with Articles 2A-2H and 5 7
A-Group I	CFC-11 (CFC1 ₃)				<p>This column is no longer applicable to Annex A and B substances (CFCs, Halons, CCL₄ and methyl chloroform)</p>
	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)				
<p>[1] "tonne" = "metric ton".</p> <p>Comments:</p>					
<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 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** (CH ₂ Cl ₂)					
	HCFC-22** (CHF ₂ Cl)					
	HCFC-31 (CH ₂ FCI)					
	HCFC-123** (CHCl ₂ CF ₃)					
	HCFC-124** (CHFClCF 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 ₃ 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		
Comments:						
<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)					This column is not applicable to Annex F substances (HFCs)
	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 CHF ₂ CF ₃)					
	HFC-236cb (CH ₂ FCF ₂ CF ₃)					
	HFC-236ea (CHF ₂ CH ₂ CF 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 CH ₂ CH ₂ CF ₂ CF ₃)					
F-Group II	HFC-23 (CHF ₃)					
Comments:						
<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, 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 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

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

Party : - _____

Data Form 5

UNEP/OzL.Pro/Dataform17

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

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

Annexes A, B, C, E **and F** substances

Period : January - December 20__

[illegible]

[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)*

<p>1. Fill in this form only if your country generated HFC-23 from any facility that produced (manufactured) Annex C, Group I, or Annex F substances</p> <p>2. Please read Instruction VI carefully before filling in this form</p> <p>Party : _____</p>	<p>Data Form 6</p> <p><u>DATA ON QUANTITY OF EMISSIONS OF HFC-23 FROM FACILITIES MANUFACTURING ANNEX C GROUP I OR ANNEX F SUBSTANCES</u></p> <p>in tonnes^[1] (not ODP or GWP tonnes)</p> <p>Period : January - December 20____</p>	<p>UNEP/OzL.Pro/Dataform17</p>
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INFORMATION REQUIRED UNDER PARAGRAPH 3 <i>ter</i> OF ARTICLE 7		OPTIONAL INFORMATION - provision of the information in these columns is to be done on a voluntary basis				
FACILITY NAME OR IDENTIFIER	EMISSIONS OF HFC-23 (AMOUNT)	SUBSTANCE MANUFACTURED BY THE FACILITY (HCFC or HFC)	AMOUNT OF HCFC OR HFC PRODUCED (MANUFACTURED)	QUANTITY OF HFC-23 CAPTURED FOR USE, DESTRUCTION OR STORAGE		
1	2	3	4	DESTROYED	STORED	OTHER USES
5	6	7				

[1] "tonne" = "metric ton".
NB: Amount of HFC-23 generated is the sum of emissions (column 2) and quantities captured (sum of columns 5, 6 and 7)

Comments:

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.		HAT Exemption - Data Form 1				UNEP/OzL.Pro/HAT_Dataform17	
DATA ON IMPORTS OF ANNEX F SUB-SECTORS							
in tonnes ^[1] (not ODP nor GWP tonnes)							
Party : _____		Period : January - December 20_____					
Annex/Group 1	Substances 2	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)*					
		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 DATA ON PRODUCTION OF ANNEX F SUB-SECTORS in tonnes ^[1] (not ODP nor GWP tonnes)	UNEP/OzL.Pro/HAT_Dataform17
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) (Column to be added as required for other sub-sectors that may be approved after the assessments under paragraph 32 of decision XXVIII/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 CHF ₂ CF ₃)	
	HFC-236cb (CH ₂ FCF ₂ CF ₃)	
	HFC-236ea (CHF ₂ CH ₂ CF 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 CHFCH ₂ CF 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).**

It is necessary for each Party to specify how much of its production, export or import is used for these exempted categories. The Secretariat will deduct, where applicable, these exempted quantities from the total figures. Provision is made in the data forms for these exempted categories. For **exempted** essential, critical, **HAT or other** uses, provision has also been made for Parties to specify 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.
 - (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>Annual Data Reporting under Article 7</u>	<i>(reported annually)</i>
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	- Increased (annual) production to meet the basic domestic needs of Article 5 Parties
c) Decision IV/11, paragraph 3	- Statistical data on the actual quantities of controlled substances destroyed
d) Decision IV/17 A, paragraph 1	- Information on the implementation of Article 4 of the Protocol, trade with non-Parties
e) Decision IV/24, paragraph 2	- Import and export of recycled and used controlled substances
f) Decision VII/30, paragraph 1	- 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	- Importing countries -the volumes of controlled substances imported for feedstock
h) Decision XI/13, paragraph 3	Statistical data on amount used for quarantine and pre-shipment applications
i) Decision XVII/16, paragraph 4	- Types, quantities and destinations of exports of all controlled substances
j) Decision XXIV/12, paragraph 1	- Types of controlled substances, quantities and exporting party for quantities reported as imports
<u>Baseline Data Reporting under Article 7</u>	<i>(reported once)</i>
a) Article 7 paragraphs 1 and 2	- 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	- 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	- Methodology for submission of requests for revision of baseline data: the information and documentation to be submitted
<u>Transfer or addition of production or consumption</u>	<i>(reported as and when it occurs)</i>
Article 2, paragraphs 5, 5 bis, 6, 7	- Transfer or addition of production or consumption

<u>Basis for reporting</u>	<u>Information to be provided</u>
<u><i>Research, development, public awareness and exchange of information</i></u>	<u><i>(reported every two years)</i></u>
Article 9	- Summary of activities
<u><i>Process agent uses</i></u>	<u><i>(reported annually)</i></u>
Decisions X/14, XV/7, XVII/6 and XXI/3	- 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><i>Essential use exemptions other than laboratory and analytical uses*</i></u>	<u><i>(reported the year following an exemption)</i></u>
Decision VIII/9, paragraph 9	- Report on quantities and uses of controlled substances produced and consumed for essential uses (reporting accounting framework)
<i>* 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.</i>	
<u><i>Essential use exemptions: laboratory and analytical uses</i></u>	<u><i>(reported annually)</i></u>
Decision VI/9, paragraph 3 and paragraph 4 of Annex II to the report of the Sixth Meeting of the Parties	- Each controlled substance produced for laboratory and analytical uses
<u><i>Exemption for high-ambient-temperature parties (HAT Exemption)</i></u>	<u><i>(reported the year following an exemption)</i></u>
Decision XXVIII/2, paragraph 30	- Report separately production and consumption data for the sub-sectors to which the exemption applies
<u><i>Licensing information</i></u>	<u><i>(reporting periodicity specified below)</i></u>
a) Article 4B - Licensing	- The establishment and operation of its licensing system (reported once)
b) Decision IX/8, paragraph 2	- Focal points for licensing systems for trade in controlled substances (reported once, updated as required)
c) Decision XIV/7, paragraph 7	- Information reported by the Parties on illegal trade in controlled substances (reported when cases occur)
d) Decision XXVII/8	- Parties wishing to avoid the unwanted import of products and equipment containing or relying on hydrochlorofluorocarbons (notification sent once)
<u><i>Critical use exemptions for Methyl bromide information</i></u>	<u><i>(reporting requirements specified below)</i></u>
a) Decision Ex.I/3, paragraph 5	- 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	- 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	- 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	- Report on quantities and uses of methyl bromide produced, imported and export for critical uses in accounting framework
<u>Other information</u>	<u>(reporting periodicity specified below)</u>
a) Decision V/15	- 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	- 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	- List of reclamation facilities and their capacities <i>(reported annually)</i>
d) Decisions X/8 and IX/24	- New ozone depleting substances reported by the Parties <i>(reported when new substances emerge)</i>
e) Decision XX/7, paragraph 5	- Strategies on Environmentally Sound Management of Banks of ozone depleting substances <i>(reported once, 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:**
- It is necessary for the health, safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and
 - 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:**
- That a use of methyl bromide should qualify as "critical" only if the nominating Party determines that:
 - The specific use is critical because the lack of availability of methyl bromide for that use would result in a significant market disruption; and
 - 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;
 - That production and consumption, if any, of methyl bromide for critical uses should be permitted only if:
 - All technically and economically feasible steps have been taken to minimize the critical use and any associated emission of methyl bromide;
 - 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;
 - 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:
- 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*	
		New 3	Recovered and Reclaimed 4		Quantity 6	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	
Comments:						

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, HBCFCs, bromochloromethane, methyl bromide or HFCs 2. Please read Instruction II carefully before filling in this form.		Data Form 2 UNEP/OzL.Pro/Dataform17 DATA ON EXPORTS* in tonnes (not ODP or GWP tonnes) Annexes A, B, C, E and F substances	
Party : _____		Period : January - December 20____	

Substances	Country of Destination of Exports**	Total Quantity Exported for All Uses		Quantity of New Substances Exported for Feedstock***	Quantity of New Substances Exported for Exempted Essential, Critical or Other Uses****	
		New	Recovered and Reclaimed		Quantity	Decision / Type of Use****
1	2	3	4	5	6	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 Preshipment 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		Component 4	
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%	C318**	43%
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%	HC600a**	1.5%
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**	4%
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

附件二

关于通过或修订数据报告表的决定记录

各缔约方已在下列决定中通过或审查了数据报告表：

(a) 在 1991 年的第 III/9 号决定中，缔约方会议根据《议定书》第 7 条通过了经修订的年度数据报告格式（即在通过《伦敦修正案》一年后，其将载于附件 B 的物质作为受控物质添加到了《议定书》中）；

(b) 在 1993 年的第 V/5 号决定中，缔约方会议根据《议定书》第 7 条批准了经修订的数据报告格式（即在通过《哥本哈根修正案》一年后，其将附件 C 第一类物质和载于附件 E 的物质作为受控物质添加到了《议定书》中）；

(c) 在 1996 年的第 VIII/21 号决定中，缔约方会议请履行委员会审查秘书处一份关于《议定书》下报告任务的报告，审议哪些报告规定对评估遵守情况至关重要，哪些不再必要，并对简化报告要求的可能方法提出建议；

(d) 在 1997 年的第 IX/28 号决定中，基于履行委员会和秘书处依照关于《议定书》第 7 条规定的报告表的修订版格式的第 VIII/21 号决定开展的工作，缔约方会议根据《议定书》第 7 条批准了经修订的数据报告表（即在通过《蒙特利尔修正案》一年后）；

(e) 在 2005 年的第 XVII/16 号决定中，缔约方会议请臭氧秘书处修订报告格式，以涵盖所有受控臭氧消耗物质以及含有此类物质的混合物的出口情况（包括再出口情况），并敦促各缔约方迅速实施经修订的报告格式。因此，秘书处应要求更新了数据报告表；

(f) 在 2008 年的第 XX/6 号决定中，缔约方会议请臭氧秘书处更新载于数据报告指示/准则第 5.6 段的甲基溴“装运前”应用的定义，以反映对该定义做出修订的第 XI/12 号决定；

(g) 在 2012 年的第 XXIV/12 号决定中，缔约方会议请臭氧秘书处修订第 XVII/16 号决定产生的报告格式，以在数据表中纳入一份附件，用于指明报告进口量的出口方，同时指出《议定书》第 7 条的报告要求没有涵盖该附件，且各缔约方在自愿的基础上提供该附件中的信息。因此，秘书处修订了数据报告格式并添加了缔约方会议要求的附件。

Annex III¹

Mixtures and blends containing HFCs as received from TEAP

Number	Refrigerant	Molecular Weight	Bubble point/dew point (°C)	ATEL/ODL (kg/m ³)	LFL (kg/m ³)	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	
R-423A	134a/227ea (52,5/47,5)	126	−24,2/−23,5	0,30	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-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 (Arkema)	R-32/125/1234yf/134a (25,2/24,3/23,2/27,3)	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	

Refrigerant		Molecular Weight	Normal boiling point (°C)	ATEL/ODL (kg/m3)	LFL (kg/m3)	Safety class	ODP
Number	Composition (Mass %)						
Azeotropes							
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	