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**Programme
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pour l'environnement**

**Groupe de travail à composition non limitée des Parties
au Protocole de Montréal relatif à des substances
qui appauvrissent la couche d'ozone
Trente-neuvième réunion
Bangkok, 11–14 juillet 2017
Points 3 a) et 3 b) de l'ordre du jour provisoire***

**Communication des données en application de l'article 7
du Protocole de Montréal et questions connexes découlant
de l'Amendement de Kigali au Protocole de Montréal visant
à réduire progressivement l'utilisation des hydrofluorocarbones**

Note du Secrétariat

I. Introduction

1. La présente note contient un résumé des questions découlant de l'adoption de l'Amendement de Kigali concernant la communication des données en application de l'article 7 du Protocole de Montréal relatif à des substances qui appauvrissent la couche d'ozone, pour examen par les Parties et suite à donner, éventuellement, par la Réunion des Parties.

**II. Questions soumises à la Réunion des Parties pour examen
et suite à donner**

A. Communication de données sur les hydrofluorocarbones (HFC)

1. Communication de données par toutes les Parties

2. Suite à l'entrée en vigueur de l'Amendement de Kigali, toutes les Parties à l'Amendement sont censées communiquer au Secrétariat, au titre de l'article 7 du Protocole, des données annuelles sur leur production et leur consommation d'hydrofluorocarbones (HFC) ainsi que des données sur leurs émissions annuelles de HFC-23. La note du Secrétariat sur les questions soumises pour examen au Groupe travail à composition non limitée (UNEP/OzL.Pro.WG.1/39/2) contient de plus amples informations à ce sujet.

**2. Calendrier de communication des données de référence concernant les HFC
pour les Parties visées au paragraphe 1 de l'article 5**

3. Suite à l'Amendement de Kigali, le paragraphe 2 de l'article 7 du Protocole dispose que chacune des Parties visées au paragraphe 1 de l'article 5 (Parties visées à l'article 5) communique au Secrétariat des données statistiques sur sa production, ses importations et ses exportations de substances réglementées de l'Annexe F pour les années de référence (2020-2022 pour les Parties du

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

groupe 1¹ et 2024-2026 pour les Parties du groupe 2²) ou les meilleures estimations possibles si les données exactes font défaut, dans les trois mois suivant la date à laquelle les dispositions du Protocole applicables à ces substances entrent en vigueur pour cette Partie.

4. Les Parties visées à l'article 5 qui ratifient l'Amendement de Kigali, avant la fin de l'année 2022 pour les Parties du groupe 1 et avant la fin de l'année 2026 pour les Parties du groupe 2, pourraient se voir dans l'obligation de communiquer tout ou partie de leurs données de référence respectives avant que ces données ne deviennent effectivement disponibles. Bien que le paragraphe 2 de l'article 7 du Protocole autorise les Parties à communiquer les meilleures estimations possibles lorsque les données proprement dites font défaut, les Parties pourraient souhaiter modifier leurs données de référence dès que les données réelles seraient disponibles, auquel cas elles devraient soumettre leurs demandes de révision au Comité d'application de la procédure applicable en cas de non-respect du Protocole de Montréal et à la Réunion des Parties, pour examen, conformément au paragraphe 5 de la décision XIII/15.

5. Dans le passé, le Protocole n'exigeait pas expressément que les Parties visées à l'article 5 communiquent des données pour leurs années de référence. Le Secrétariat ne demandait à une Partie visée à l'article 5 de communiquer ses données de référence qu'à compter de la date à laquelle les mesures de réglementation applicables à un groupe de substances particulier entraient en vigueur pour cette Partie et que celle-ci consommait ou produisait des substances de ce groupe.

6. En revanche, pour les Parties non visées au paragraphe 1 de l'article 5 (Parties non visées à l'article 5) l'obligation de communiquer des données pour les années de référence a toujours été prévue à l'article 7 du Protocole, tout comme pour l'Amendement de Kigali. Historiquement, les années de référence ont toujours été déterminées en fonction de la date d'entrée en vigueur du Protocole ou des Amendements pertinents pour les groupes de substances considérés³.

7. Les Parties souhaiteront peut-être préciser quand les Parties visées à l'article 5 devraient communiquer des données sur les HFC pour chacune des années constituant leurs années de référence. Elles pourraient envisager de demander à chacune des Parties visées à l'article 5 de communiquer ses données pour les années de référence au plus tard à compter de la date à laquelle ses obligations entreraient en vigueur au titre du paragraphe 8 *qua* de l'article 5 du Protocole, s'agissant de sa consommation et de sa production de HFC.⁴

3. Communication de données sur les mélanges contenant des HFC au titre de l'article 7 du Protocole

8. Une proportion non négligeable du commerce des HFC porte, et continuera de porter, sur les mélanges contenant de ces substances, et non sur ces substances à l'état pur. Une liste des mélanges contenant des HFC, reçue du Groupe de l'évaluation technique et économique, est reproduite dans l'annexe III à la présente note. S'agissant des précédentes substances réglementées (chlorofluorocarbones (CFC) et hydrochlorofluorocarbones (HCFC), notamment), le volume des échanges commerciaux de ces substances sous forme de mélanges était relativement modeste comparé à celui de ces substances à l'état pur. Dans le passé, les Parties devaient calculer la quantité de chacune des substances se trouvant à l'état pur dans un mélange et ne signaler que cette dernière. Par contraste, vu le nombre élevé des mélanges faisant l'objet du commerce de HFC, les Parties souhaiteront peut-être envisager d'autoriser la communication des quantités de mélanges plutôt que des quantités précises de HFC contenues dans ces mélanges. Le Secrétariat serait alors chargé d'effectuer les calculs nécessaires pour déduire les quantités de substances à l'état pur contenues dans les mélanges signalés.

¹ Toutes les Parties visées à l'article 5 sauf les 10 Parties énumérées dans la note 2.

² Arabie saoudite, Bahreïn, Émirats arabes unis, Inde, Iran (République islamique d'), Iraq, Koweït, Oman, Pakistan et Qatar.

³ S'agissant des substances de l'Annexe A (CFC et halons), le Protocole de Montréal, qui a introduit ces substances dès l'origine, est entré en vigueur en 1989, tandis que pour les Parties non visées à l'article 5 l'année de référence était l'année 1986. S'agissant des substances de l'Annexe B, pour les Parties non visées à l'article 5, l'année de référence était l'année 1989, tandis que l'Amendement de Londres, relatif à ces substances, est entré en vigueur en 1992. Concernant les HCFC et le bromure de méthyle, pour les Parties non visées à l'article 5, les années de référence étaient les années 1989 et 1991, respectivement, tandis que l'Amendement de Copenhague, relatif à ces substances, est entré en vigueur en 1994. Quant aux HFC, pour les Parties non visées à l'article 5, les années de référence sont 2011 à 2013, tandis que l'Amendement de Kigali, relatif à ces substances, n'entrera pas en vigueur avant 2019.

⁴ Toute Partie visée à l'article 5 peut ainsi communiquer ses données dès lors que ses données de référence sont disponibles et à temps pour qu'elle puisse prendre les mesures voulues pour s'acquitter de son obligation de respecter les mesures de réglementation prises par rapport au niveau de référence fixé pour les HFC.

9. La liste indicative des mélanges figurant à la fin des instructions et directives accompagnant les formulaires de communication des données, reproduite dans la section 11 de l'appendice X de l'annexe I à la présente note, servirait de base au calcul des quantités de substances à l'état pur contenues dans chaque mélange signalé. Au cas où une Partie souhaiterait signaler un mélange ne figurant pas sur la liste, elle serait tenue d'indiquer au Secrétariat la composition de ce mélange. Cette démarche est expliquée dans les formulaires proposés pour la communication des données ainsi que dans les instructions et directives connexes reproduites dans l'annexe I à la présente note.

B. Révision des formulaires de communication des données

1. Mise à jour des formulaires

10. Suite à l'adoption de l'Amendement de Kigali, les Parties souhaiteront peut-être revoir et mettre à jour les formulaires à utiliser pour la communication des données en vue d'y inclure les obligations découlant de l'adoption de l'Amendement en matière de communication des données.

11. Toutes les modifications apportées par le passé aux formulaires de communication des données au titre de l'article 7 du Protocole de Montréal ont été approuvées dans le cadre de décisions de la Réunion des Parties, comme indiqué dans l'annexe II à la présente note. Plusieurs d'entre elles ont été adoptées comme suite à des recommandations formulées soit par le Secrétariat soit par le Comité d'application.

12. Le Secrétariat propose une série de formulaires révisés et supplémentaires pour tenir compte des nouvelles obligations en matière de communication des données au titre de l'article 7 du Protocole, tel que modifié par l'Amendement de Kigali. Les formulaires révisés à utiliser pour la communication des données sont reproduits dans l'annexe I à la présente note. Les principales modifications apportées aux formulaires utilisés précédemment sont indiquées en rouge.

2. Données sur les HFC

13. Les Parties souhaiteront peut-être envisager de rallonger les formulaires actuellement utilisés pour la communication des données afin d'y inclure les HFC et les nouvelles obligations comme suit :

- a) Ajouter une page au formulaire sur les importations (formulaire 1) en y énumérant les nouveaux HFC;
- b) Ajouter une page au formulaire sur la production (formulaire 3) en y énumérant les nouveaux HFC;
- c) Ajouter un nouveau formulaire (formulaire 6) pour tenir compte de l'obligation d'indiquer les émissions de HFC-23 engendrées par chaque installation de production et ajouter une question correspondante à la page « Questionnaire » des formulaires de communication des données afin de tenir compte du nouveau formulaire. Le paragraphe 3 *ter* de l'article 7 du Protocole demande que les émissions soient indiquées pour chaque installation de production conformément au paragraphe 1 d) de l'article 3 du Protocole, qui dispose que sont exclues des émissions les quantités capturées pour utilisation, destruction ou stockage. Le nouveau formulaire 6 proposé comporte une colonne destinée à la communication des quantités émises, ainsi que des colonnes facultatives destinées à la communication, à titre volontaire, des quantités capturées et détruites, pour faciliter la comptabilisation des quantités totales de HFC-23 engendrées par chaque installation;
- d) Ajouter de nouveaux formulaires pour indiquer séparément les données de production et de consommation au titre de la dérogation pour utilisations à des températures ambiantes élevées pour les sous-secteurs auxquels la dérogation peut s'appliquer (décision XXVIII/2, par. 30). Seules les Parties produisant des HFC pour répondre à leurs propres besoins au titre de la dérogation pour utilisations à des températures ambiantes élevées se serviraient des formulaires sur la production.

14. Les autres formulaires existant pour la communication des données sur les exportations (formulaire 2), la destruction (formulaire 4) et le commerce avec des non-Parties (formulaire 5) peuvent rester inchangés puisqu'ils n'énumèrent pas les substances considérées. Au lieu de cela, la Partie qui remplit le formulaire indique les substances pour lesquelles elle souhaite communiquer des données.

3. Méthode proposée par le Secrétariat

15. La méthode proposée par le Secrétariat a pour but de n'apporter que des changements d'ordre mineur aux formulaires actuellement utilisés pour la communication des données, avec lesquels les Parties sont familiarisées.

16. Étant donné que quelques Parties continuent de signaler les utilisations comme produits intermédiaires et les échanges commerciaux de quantités recyclées de certaines substances déjà éliminées, le Secrétariat a conservé la liste des substances éliminées dans les formulaires révisés proposés pour la communication des données.

17. Le Secrétariat a aussi complété les instructions et directives concernant la communication des données en y ajoutant d'autres décisions pertinentes qui ont toujours guidé les Parties dans la communication des données.

18. Le Groupe de travail est invité à envisager de fournir au Secrétariat toutes les orientations nécessaires concernant les formulaires révisés de communication des données et la version révisée des instructions et directives concernant la communication des données qui les accompagnent, reproduits dans l'annexe I à la présente note.

C. Travaux du Groupe de l'évaluation scientifique visant à ajuster le potentiel de réchauffement global des substances du groupe I de l'Annexe A, de l'Annexe C et de l'Annexe F au Protocole de Montréal

19. L'Amendement de Kigali a introduit un nouvel alinéa a) ii) au paragraphe 9 de l'article 2 du Protocole, qui dispose que les Parties peuvent décider si des ajustements devraient être apportés aux potentiels de réchauffement global (PRG) spécifiés pour les substances du groupe I de l'Annexe A, de l'Annexe C et de l'Annexe F et, dans l'affirmative, quels devraient être ces ajustements. Cette disposition est identique à celle figurant à l'alinéa a) i) du paragraphe 9 de l'article 2 du Protocole, qui stipule que les Parties peuvent décider d'ajuster les potentiels de destruction de l'ozone (PDO) des substances qui appauvrissent la couche d'ozone.

20. Comme indiqué dans le rapport de la vingt-huitième Réunion des Parties (UNEP/OzL.Pro.28/12, par. 204), il a été convenu que le Groupe de l'évaluation scientifique fournirait à la Réunion des Parties les informations dont elle avait besoin pour ajuster les PRG des substances du groupe I de l'Annexe A, de l'Annexe C et de l'Annexe F et qu'il ferait rapport sur les progrès de ses travaux au Groupe de travail à composition non limitée à sa trente-neuvième réunion.

21. Aux fins de l'Amendement de Kigali, des PRG ont été assignés à certains HCFC inscrits à l'Annexe C du Protocole, mais pas à tous. L'Annexe C du Protocole contient une disposition stipulant que pour les substances auxquelles aucun PRG n'a été assigné, la valeur 0 s'applique par défaut jusqu'à ce qu'une valeur soit déterminée en suivant la procédure prévue au paragraphe 9 a) ii) de l'article 2 au Protocole. Le Secrétariat a depuis lors établi que pour les années de référence applicables aux HCFC signalés par les Parties, six d'entre eux (HCFC-121, HCFC-122, HCFC-133, HCFC-141, HCFC-142 et HCFC-225) n'ont pas de PRG assigné. Ces HCFC ont été signalés par 19 Parties, dont 11 sont des Parties non visées à l'article 5 et 8 sont des Parties visées à l'article 5.

22. Les Parties souhaiteront peut-être noter que des valeurs du PRG ont été assignées au HCFC-141b et au HCFC-142b, qui sont les isomères du HCFC-141 et du HCFC-142 les plus viables sur le plan commercial. Les Parties souhaiteront peut-être indiquer au Secrétariat s'il convient d'utiliser ces valeurs du PRG pour le HCFC-141 et le HCFC-142.

23. Au titre du point 3 b) de l'ordre du jour provisoire, le Groupe de l'évaluation scientifique devra présenter au Groupe de travail à composition non limitée, à sa trente-neuvième réunion, une mise à jour sur ces questions.

D. Valeurs du potentiel de réchauffement global des isomères du HCFC-123 et du HCFC-124 les plus viables sur le plan commercial

24. Le HCFC-123** et le HCFC-124** sont les deux substances les plus viables sur le plan commercial pour les groupes d'isomères correspondants auxquels ont été assignés des potentiels de destruction de l'ozone (PDO) aux fins du Protocole de Montréal. Aucune de ces substances ne s'est vu assigner une valeur du potentiel de réchauffement global (PRG).

25. Les valeurs du PRG attribuées aux groupes d'isomères du HCFC-123 et du HCFC-124 s'appliquent également aux isomères les plus viables sur le plan commercial pour chacun de ces deux groupes. Ce raisonnement suppose que chaque groupe d'isomères comprend tous les isomères appartenant à ce groupe, y compris les isomères les plus prometteurs sur le plan commercial. Faute d'une valeur du PRG assignée à un isomère donné, la valeur du PRG assignée à l'ensemble du groupe d'isomères considéré s'appliquerait à cet isomère. Le Secrétariat utilisera des PRG de 77 et 609 pour les deux isomères HCFC-123** et HCFC-124**, respectivement, pour calculer les niveaux de production et de consommation en équivalent CO₂.

E. Commerce avec des États non Parties : obligation de communiquer des données et restrictions commerciales

26. Le paragraphe 2 de l'article IV de l'Amendement de Kigali prévoit que les modifications apportées à l'article 4 du Protocole (réglementation des échanges commerciaux avec les États non Parties), qui figurent à l'article I de l'Amendement, entreront en vigueur le 1^{er} janvier 2033.

27. Le sursis jusqu'en 2033 ne s'applique pas à la communication de données annuelles sur les échanges commerciaux avec des États non Parties au titre du paragraphe 3 de l'article 7 du Protocole. Le traitement des exportations vers des États non Parties, précisé au paragraphe 1 c) de l'article 3 du Protocole, s'appliquera à compter de l'année pour laquelle des données annuelles seront communiquées.

28. Les Parties devront donc communiquer des informations sur leurs échanges commerciaux avec des États non Parties depuis la date d'entrée en vigueur de l'Amendement de Kigali à leur égard. Le Secrétariat traitera les exportations vers des États non Parties comme « consommation » de la Partie exportatrice.

29. Pour faciliter la communication de données sur les échanges commerciaux avec des États non Parties, lorsqu'une Partie signale les pays de destination de ses exportations ou les pays d'origine de ses importations, le Secrétariat pourra déterminer automatiquement quelles étaient les exportations ou les importations faisant l'objet d'un commerce avec des États non Parties et inclure ces informations dans le formulaire utilisé pour la communication des données sur le commerce avec des États non Parties.

Annexe 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 DATA ON IMPORTS		UNEP/OzL.Pro/Dataform17		
2. Please read Instruction I carefully before filling in this form.		in tonnes ^[1] (not ODP or GWP tonnes) <u>Annexes A, B, C, E and F substances</u>				
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*	
		New 3	Recovered and Reclaimed 4		Quantity 6	Decision / Type of Use* 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 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*	
		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 CHFCF 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

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)*

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 DATA ON EXPORTS*		UNEP/OzL.Pro/Dataform17	
2. Please read Instruction II carefully before filling in this form.				in tonnes ^[1] (not ODP or GWP tonnes) <u>Annexes A, B, C, E and F substances</u>			
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, 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)*

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 <u>DATA ON PRODUCTION</u> in tonnes^[1] (not ODP or GWP tonnes) Annexes A, B, C, E and F substances Period : January - December 20 ____					
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
1	2	3	4	Quantity	Decision / Type of Use*	7
A-Group I	CFC-11 (CFC ₁₃)					This column is no longer applicable to Annex A and B substances (CFCs, Halons, CCL₄ 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** (CH ₂ Cl ₂)					
	HCFC-22** (CHF ₂ Cl)					
	HCFC-31 (CH ₂ FCl)					
	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					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:						
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, 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 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)					
F-Group II	HFC-23 (CHF ₃)					
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 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)*

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

Data Form 6

UNEP/OzL.Pro/Dataform17

DATA ON QUANTITY OF EMISSIONS OF HFC-23 FROM
FACILITIES MANUFACTURING ANNEX C GROUP I OR ANNEX F SUBSTANCES

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

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

Party : _____

Period : January - December 20__

[illegible]

[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 DATA ON IMPORTS 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 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 <u>DATA ON PRODUCTION OF ANNEX F SUB-SECTORS</u> 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 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)						
		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	- 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>Research, development, public awareness and exchange of information</u>	<u>(reported every two years)</u>
Article 9	- Summary of activities
<u>Process agent uses</u>	<u>(reported annually)</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>Essential use exemptions other than laboratory and analytical uses*</u>	<u>(reported the year following an exemption)</u>
Decision VIII/9, paragraph 9	- 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	- 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	- 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	- 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>Critical use exemptions for Methyl bromide information</u>	<u>(reporting requirements specified below)</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:**
- (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*	
		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

Annexe II

Rappel des décisions concernant l'adoption ou la révision des formulaires de communication des données

Les Parties ont adopté ou révisé des formulaires de communication des données par les décisions ci-après :

- a) En 1991, par sa décision III/9, la Réunion des Parties a adopté les formulaires révisés pour la communication des données annuelles au titre de l'article 7 du Protocole (un an après l'adoption de l'Amendement de Londres ajoutant les substances de l'Annexe B aux substances réglementées);
- b) En 1993, par sa décision V/5, la Réunion des Parties a approuvé un formulaire révisé pour la communication des données au titre de l'article 7 du Protocole (un an après l'adoption de l'Amendement de Copenhague ajoutant les substances du groupe I de l'Annexe C et de l'Annexe E aux substances réglementées);
- c) En 1996, dans sa décision VIII/21, la Réunion des Parties a demandé au Comité d'application d'examiner un rapport du Secrétariat sur les obligations en matière de communication des données au titre du Protocole, de déterminer quelles étaient les dispositions essentielles à cet égard pour évaluer le respect du Protocole et quelles étaient les dispositions devenues superflues, et de faire des recommandations sur les moyens de rationaliser l'établissement et la présentation des rapports;
- d) En 1997, dans sa décision IX/28, la Réunion des Parties a approuvé les formulaires révisés pour la communication des données au titre de l'article 7 du Protocole (un an après l'adoption de l'Amendement de Montréal) sur la base des travaux menés par le Comité d'application et le Secrétariat comme suite à la décision VIII/21 concernant les formulaires révisés pour la communication des données au titre de l'article 7 du Protocole;
- e) En 2005, dans sa décision XVII/16, la Réunion des Parties a demandé au Secrétariat de l'ozone de réviser le formulaire à utiliser pour la communication des données afin d'y inclure les exportations (y compris les réexportations) de toutes les substances appauvrissant la couche d'ozone réglementées, y compris les mélanges contenant de ces substances, et d'engager vivement les Parties à se servir rapidement du formulaire révisé pour communiquer leurs données. Comme suite à cette demande, le Secrétariat a mis à jour les formulaires de communication des données;
- f) En 2008, dans sa décision XX/6, la Réunion des Parties a demandé au Secrétariat de l'ozone de revoir la définition des applications de bromure de méthyle « préalables à l'expédition » figurant au paragraphe 5.6 des instructions et directives à suivre pour la communication des données, afin de tenir compte de la décision XI/12 par laquelle cette définition avait été révisée;
- g) En 2012, dans sa décision XXIV/12, la Réunion des Parties a demandé au Secrétariat de l'ozone de réviser le formulaire de communication des données issu de la décision XVII/16 pour y inclure une annexe où serait indiquée la Partie exportatrice au regard des quantités signalées comme importations, en notant que cette annexe était exclue des obligations en matière de communication des données au titre de l'article 7 du Protocole et en précisant que la fourniture d'informations dans l'annexe serait facultative. Comme suite à cette demande, le Secrétariat a révisé le formulaire de communication des données et ajouté l'annexe demandée.

Annexe III¹

Mixtures and blends containing HFCs as received from TEAP

Refrigerant		Molecular Weight	Bubble point/dew point (°C)	ATEL/ODL (kg/m3)	LFL (kg/m3)	Safety class	ODP
Number	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	