

Environmental Management (Prohibition and Control of Ozone Depleting Substances,  
Greenhouse Gases, Ozone Depleting Substances and Greenhouse Gases Dependent Equipment)  
Regulations, 2016.

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IT is hereby notified that the Minister of Environment, Water and Climate has in terms of section 140(2)(b) of the Environmental Management Act [*Chapter 20:27*] made the following regulations—

*Title*

1. These regulations may be cited as the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substance Dependent Equipment and Greenhouse Gases Dependent Equipment) Regulations, 2016.

*Interpretation*

2. In these regulations—

“form” means the appropriate form prescribed in the First Schedule;

“officer” means a Zimbabwe Revenue Authority officer appointed in terms of section 20 of the Revenue Authority Act [*Chapter 23:11*];

“enforcement officer” means an officer appointed in terms of section 35(1) of the Environmental Management Act [*Chapter 20:27*] or any other officer appointed by the Secretary for Environment, Water and Climate to enforce the provisions of these regulations;

“license” means an import or export license issued in terms of section 6 ;

“Montreal Protocol” means the Montreal Protocol on Substances that Deplete the Ozone layer;

“ozone depleting substance” or “ODS” , means any chemical substance which destroys the ozone layer and is controlled under the Montreal Protocol;

“greenhouse gas” or “GHG”, means an chemical which contributes to global warming and is controlled and listed by the Montreal Protocol or the United Nations FCCC;

“ozone depleting substance dependent equipment” or “ODS dependent equipment” means products or equipment consisting of ozone depleting substances, including equipment whose continuous functioning relies on the use of ozone depleting substances;

“greenhouse gas dependent equipment” or “GHG dependent equipment” means products or equipment consisting of greenhouse gases, including equipment whose continuous functioning relies on the use of greenhouse gases;

“Ozone Office” means the National Ozone Office established by the Ministry responsible for Environment, Water and Climate.

#### *Application*

3. These regulations shall apply to private and public industrial and commercial importers, exporters, producers and consumers of ozone depleting substances and greenhouse gases listed in the Second, Third and Fourth Schedules and ozone depleting substance and greenhouse gas dependent equipment listed in the Fifth Schedule.

#### *Prohibited substances and equipment*

4(1) No person shall import into Zimbabwe, any substances listed and equipment or appliance which uses or whose function relies on the substances listed in the Second Schedule.

(2) Any person who contravenes subsection (1) shall be guilty of an offence and liable to a fine not exceeding level fourteen or imprisonment for a period not exceeding twelve months or both such fine and such imprisonment.

(3) In addition, the court convicting a person of an offence under subsection (1), may, upon the application of the Prosecutor, declare any ODS, GHG, GHG dependent equipment or ODS dependent equipment in respect of which the offence has been committed to be forfeited to the State.

(4) Any ozone depleting substance and ozone depleting substance dependent equipment forfeited in terms of subsection (3) shall be destroyed or otherwise dealt with as the Secretary for Environment, Water and Climate may direct.

(5) The court convicting a person of an offence under subsection (1) shall cancel any license issued to such a person.

*Import and export licenses*

5. (1) Any person who wishes to import or export ozone depleting substance, greenhouse gas, ozone depleting substance dependent equipment or greenhouse gas dependent equipment or any chemical listed in the Third and Fourth Schedules shall apply to the Ozone Office in **Form AP1**.

(2) Any application for a licence made in terms of subsection (1), shall be accompanied by an application fee, which is non-refundable and a registration fee which is refundable.

*Processing of application*

6. (1) The Ozone Office shall, as soon as practicable, but in any case not later than sixty days from the date of receipt of an application—

- (a) grant the application (subject to such conditions as it may think fit to impose) and issue to the applicant the import or export license applied for; or
- (b) refuse the application giving reasons thereof.

(2) For the avoidance of doubt, the fee for registration paid in terms of section 4 shall be refunded to an unsuccessful applicant.

(3) Where the Ozone Office issues a license in terms of subsection (1), the license shall—

- (a) be valid for a period of one year; and
- (b) not be transferable to another person.

(4) Any person who contravenes subsection (3)(b) shall be guilty of an offence and liable to a fine not exceeding level eleven or imprisonment for a period not exceeding six months or both such fine and such imprisonment.

*Suspension or cancellation of licences*

7(1) Subject to subsections (2) and (4), the Ozone Office may at any time suspend (for a period not exceeding sixty (60) days) or cancel any licence if the Ozone Office has reasonable grounds for believing that—

- (a) the licence was issued in error or through fraud or misrepresentation or non-disclosure of a material fact by the licensee; or
- (b) the licensee has contravened any provision of the Act or these regulations or any condition of his or her licence; or
- (c) the licensee has ceased the licensed importation or exportation.

(2) The Ozone Office shall notify the licensee in writing of its intention to suspend or cancel his or her licence and the reasons for doing so, and shall call upon the licensee to show cause, within 14 days from the date of the notice, why the licence should not be suspended or cancelled, as the case may be:

Provided that if in the opinion of the Ozone Office the licence needs to be immediately suspended or cancelled in the public interest or to avert an environmental emergency he or she

can issue the notice requiring the licensee to show cause after suspending or cancelling the licence.

(3) If, at the expiry of the period specified in the notice given in terms of subsection (2), and after considering any representations made by the licensee, the Ozone Office is satisfied for any reason specified in subsection (1) that the licence concerned should be suspended or cancelled, the Ozone Office shall, by notice in writing to the licensee, suspend or cancel the licence or take such other action as it considers appropriate.

(4) The penalty of suspension is only available where there has been a contravention of any provision of the Act or these regulations or any condition of a licence which, in the opinion of the Ozone Office, is a contravention that can be easily or speedily remediated by the licensee:

Provided that —

- (a) if after the expiry of the period of suspension the licensee has not taken the remedial action, the Ozone Office shall forthwith cancel the licence; or
- (b) on good cause shown by the licensee, the Ozone Office may extend the suspension for a period not exceeding thirty (30) days to allow the licensee to take the required remedial action.

(5) The Ozone Office shall immediately make an appropriate entry in the register of licences where he or she suspends or lifts a suspension of any licence or cancels it in accordance with this section.

#### *Amendment and replacement of licences*

8(1) The Ozone Office may at any time amend a licence or any terms or conditions of a licence—

- (a) to correct any error in the licence ; or
- (b) if the licensee requests the amendment; or
- (c) if it considers the amendment necessary to reflect the true nature of the licensed activities; or
- (d) if for any other reason it considers the amendment necessary or desirable in the interests of the environment or in the public interest.

(2) The Ozone Office shall notify the licensee in writing of its intention to amend a licence on a ground referred to in subsection (1)(a),(c) or (d) and shall call upon the licensee to show cause, within 14 days from the date of the notice, why the licence should not be amended.

(3) Where a licensee requests an amendment to his or her licence, he or she shall make an application to the Ozone Office therefore in **Form AP2**, together with the prescribed fee.

(4) If in the opinion of the Ozone Office the amendment sought by the licensee is a material amendment, section 6(2),(3),(4),(5) and(6) shall apply as if the application for the amendment is an application for a licence.

(5) Where a licence is lost or destroyed, the licensee may apply to the appropriate licensing authority in **Form AP3**, together with the prescribed fee, for a replacement licence:

Provided that, if the licensee finds the lost licence he or she shall forthwith surrender it to the Ozone Office.

(6) Any person who contravenes the proviso to subsection (5) shall be guilty of an offence and liable to a fine not exceeding level three or imprisonment for a period not exceeding one month or both such fine and such imprisonment.

*Register of licensed importers and exporters*

9 (1) The Ozone Office shall establish and maintain a register of licences to be known as the Import and Export Licensing Register, which shall be for the purposes of registering all licensed importers, exporters or consumers of ozone depleting substances, greenhouse gases, ozone depleting substance dependent equipment and greenhouse gas dependent equipment and in which the following shall be recorded—

- (a) the name and address of every licensee and the addresses at which he or she operates from; and
- (b) the date of issue of every licence and of any renewal thereof; and
- (c) any special terms or conditions subject to which any licence is issued or renewed; and
- (d) the particulars of any suspension or cancellation or amendment of a licence.

(2) Any person may—

- (a) inspect the register of licences free of charge at all reasonable times at the premises of the Ozone Office or at such other place that the Ozone Office may direct; or
- (b) obtain copies of or extracts from the register for a prescribed fee.

(3) The Ozone Office shall keep and maintain the register in both material and electronic form.

(3) The Ozone Office through an officer tasked with the duty, shall be responsible, subject to any direction given to him or her by the Secretary for Environment, Water and Climate that all consignments are marked clearly, recording—

- (a) the name, identity and quantity of imported or exported ozone depleting substances; and
- (b) details concerning contact address, labels and the packaging; and
- (c) any other particulars that may be required by the Ozone Office.

(3) All imported ozone depleting substances and ozone depleting substance dependent equipment shall be utilized before their phase out.

(4) The officer shall not allow the importation of a substance whose phase-out date has expired.

*Returns to be furnished by licensed importers, exporters or consumers*

10. (1) Every licensed importer or exporter of ozone depleting substances, greenhouse gas, ozone depleting substances dependent equipment or greenhouse gas dependent equipment shall in the form and manner and within the time required by the Ozone Office, furnish the Ozone Office with annual reports or other information in connection with—

- (a) quantities of ozone depleting substances, greenhouse gases, ozone depleting substances dependent equipment and greenhouse gas dependent equipment imported or exported, used or destroyed by approved means; and
  - (b) sources of each ozone depleting substance, greenhouse gas, ozone depleting substance dependent equipment and greenhouse gas dependent equipment imported or exported indicating country, address, contact person, address and contact telephone or fax numbers; and
  - (c) quarterly or half-yearly inventories of ozone depleting substance, greenhouse gas, ozone depleting substance dependent equipment, greenhouse gas dependent equipment indicating total capacity, consumed quantities and projected imports or exports and consumption for the following year.
- (2) Any person who does not comply with the requirements of subsection (1) shall be guilty of an offence and liable to a fine not exceeding level five or imprisonment for a period not exceeding three months or both such fine and such imprisonment

*Authorized persons to repair, service, handle, install and decommission ozone depleting substances, greenhouse gases, ozone depleting substances dependent equipment and greenhouse gas dependent equipment*

11. (1) No person shall repair, service, handle, install or decommission an ozone depleting substance, greenhouse gas, ozone depleting substance dependent equipment and greenhouse gas dependent equipment unless he or she has been trained and certified to do any such activity by the National Ozone Office, in accordance with the National Standard on certification.

(2) Retailers, sellers and distributors of ozone depleting substances and greenhouse gases, shall not sell such substances to any person unless he or she has been trained and certified in the handling of such substances by the National Ozone Office.

(3) The owner of the ozone depleting substance dependent equipment or greenhouse gas dependent equipment with a rated charge of ten kilograms to be repaired, serviced, handled, installed or decommissioned shall submit a written request to the National Ozone Office before any work commences.

(4) The National Ozone Office shall supervise, monitor and certify the recovery of refrigerant, installation or decommissioning of ozone depleting substances dependent equipment or greenhouse gas dependent equipment.

(5) Any person who contravenes the proviso to subsection (5) shall be guilty of an offence and liable to a fine not exceeding level three or imprisonment for a period not exceeding one month or both such fine and such imprisonment.

*Permission to destroy ozone depleting substance, greenhouse gases, ozone depleting substances dependent equipment and greenhouse gas dependent equipment*

12.(1) If the owner or other person having control of ozone depleting substance, greenhouse gas, ozone depleting substance dependent equipment or greenhouse gas dependent equipment wishes to destroy them, he or she shall submit a written statement to the National Ozone Office.

(2) If the Ozone Office grants permission for the goods to be destroyed, an enforcement officer shall be appointed to witness the destruction and when the substance and equipment has been destroyed the enforcement officer shall record the quantities destroyed and sign a certificate of destruction.

(3) Any person who does not comply with the requirements of subsection (1) shall be guilty of an offence and liable to a fine not exceeding level eleven or imprisonment for a period not exceeding six months or both such fine and such imprisonment.

*Labelling and packaging*

13.(1) All importers, exporters or consumers of ozone depleting substances, greenhouse gases, ozone depleting substances dependent equipment and greenhouse gas dependent equipment shall ensure that such products are clearly labeled and packaged to national and international standards.

(2) The labels must state clearly, among other things, chemical formulae, chemical name, safety measures, names and addresses of manufacturers, instructions for use and disposal, United Nations number, Chemical Abstract Service numbers and any other relevant information such as “ozone friendly”, “climate friendly”, “ global warming”, or “ozone depleting”.

(3) Any person who does not comply with the requirements of subsections (1) and (2) shall be guilty of an offence and liable to a fine not exceeding level eleven or imprisonment for a period not exceeding six months or both such fine and such imprisonment

*Repeal*

14. The Environmental Management (Prohibition and Control of Ozone Depleting Substances and Ozone Depleting Substances Dependant Equipment) Regulations, 2011, published in Statutory Instrument 7 of 2011 is repealed.

FIRST SCHEDULE (*Section 2*)

FORMS

Table of contents

Form AP1	Application for a licence to import
Form AP2	Application to amend licence
Form AP3	Application for replacement of a Licence
Form AP4	Notice of Intention to dispose of ozone depleting substances or Equipment

FORM AP1

AP1

SERIAL No.....

**APPLICATION FOR A LICENCE TO IMPORT/EXPORT ODS, GHG, ODS DEPENDENT EQUIPMENT OR GHG DEPENDENT EQUIPMENT**

**Issued in accordance with the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substances and Greenhouse Gases Dependent Equipment) Regulations, 2016.**

**Explanatory Notes**

- Three copies of this Form must be completed by the applicant, two of which the applicant must deliver to the Ozone Office licensing officer.
- If the spaces provided in this Form are insufficient an applicant may affix attachments to this Form.
- Where an ID number of an individual is required by this Form to be given the individual may give his or her National Registration Number, Driver’s Licence Number or Passport Number and must indicate beside the number which of the foregoing he or she is using.
- Applicants are warned that the deliberate provision of any false information in or together with this application is a criminal offence.

Name of Organisation/Individual.....

Physical Address.....

Postal Address.....

Responsible Person.....

Address (if different from above).....

Telephone.....

E-mail.....

Fax.....

State ODS/GHG/GHG dependent equipment/ODS dependent equipment imported during the previous year and their quantities

1.....

2.....



3.....

State ODS/GHG/GHG dependent equipment/ODS dependent equipment to be imported and their quantities

1.....

2.....

3.....

State the intended uses (if for resale, indicate to which organisations/individuals

1.....

2.....

3.....

Note: Upon completion of this form in triplicate, the forms shall be submitted to:

The Permanent Secretary, Ministry of Environment, Water and Climate, Private Bag 7753, Causeway, Harare, 11<sup>th</sup> Floor Kaguvi Building Corner 4<sup>th</sup> street and Central Avenue.

**Declaration by applicant:**

I declare that the particulars given by me in this Form are to the best of my knowledge and belief true.

Signature of Applicant:

.....

If signed in a representative capacity state in what capacity:

.....

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**FOR OFFICIAL USE ONLY**

.....

Name of Officer

.....

Designation

Signature:.....

Date &Stamp



Receipt No.:.....

Application No. :.....

Permit Number (if granted).....

Approved : YES ..... NO.....

If No give reasons for rejection:

.....  
.....  
.....  
.....  
.....  
.....

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**NOTIFICATION PARTICULARS**

The decision on this application was notified to the applicant:

ON ..... SIGNED.....

FORM AP2

AP 2

Serial No.

**APPLICATION TO AMEND LICENCE**

**Issued in accordance with the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substances and Greenhouse Gases Dependent Equipment) Regulations, 2016.**

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**APPLICANT DETAILS**

- 1. Name of person making this application:  
.....
- 2. I hereby apply to amend my licence that was issued on..... being  
licence number.....
- 3. The following are the amendments I seek:
- 4. ....  
.....  
.....  
.....
- 5. Date:.....
- 6. Signature of applicant: .....

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**FOR OFFICIAL USE OF LICENSING AUTHORITY ONLY**

**Where amendment sought is not material:**

Name of Officer.....  
Designation.....

Signature:..... Date &Stamp



**Where amendment sought is material:**

- 1. Receipt No.:.....
- 2. Application No.:.....

**NOTIFICATION PARTICULARS**

The decision on this application was notified to the applicant:

ON ..... SIGNED.....

FORM AP3

AP3

Serial No.

**APPLICATION FOR REPLACEMENT LICENCE**

**Issued in accordance with the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substances and Greenhouse Gases Dependent Equipment) Regulations, 2016.**

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**APPLICANT DETAILS**

- 1. Name of person making this application:  
.....
- 2. I hereby apply for a replacement of my licence that was issued on..... being licence number.....
- 3. I declare that to the best of my knowledge and belief that licence has been lost/destroyed (*delete inapplicable*)

*N.B If the license was lost and is subsequently found the licensee must immediately return a copy of that licence to the licensing authority. Failure to do so is a criminal offence.*

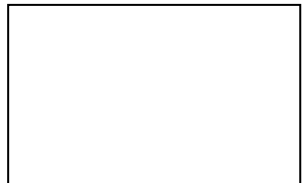
- 4. Date: .....
- 5. Signature of applicant: .....

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**FOR OFFICIAL USE OF LICENSING AUTHORITY ONLY**

Name of Officer.....  
Designation.....

Signature:..... Date &Stamp



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**NOTIFICATION PARTICULARS**

The decision on this application was notified to the applicant:  
ON ..... SIGNED.....

FORM AP4

**AP4** **Serial No.**  
**NOTICE OF INTENTION TO DISPOSE OF OZONE DEPLETING SUBSTANCE/GHG OR  
RELEVANT DEPENDANT EQUIPMENT**

**Issued in accordance with the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substances and Greenhouse Gases Dependent Equipment) Regulations, 2016.**

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**NOTIFICATION DETAILS**

1. Name of person making this notice and I.D Number:  
.....
2. Physical Address and contact details of person notifying:  
.....  
.....  
Cellphone Number:.....  
Email:.....
3. Address and location of regulated gases and dependant equipment concerned—  
(a) Physical address  
.....  
.....  
.....
4. Quantity.....  
.....
5. Other Particulars.....
6. Date.....
7. Signature of applicant:.....

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**FOR OFFICIAL USE ONLY**

8. ....  
Name of Officer Designation

9. Signature:..... Date &Stamp



10. Receipt No.:.....

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**NOTIFICATION PARTICULARS**

The decision on this application was notified to the applicant:

ON ..... SIGNED.....

## SECOND SCHEDULE (SECTION 3)

## LIST OF PROHIBITED OZONE DEPLETING SUBSTANCES

S ubstance	Chemical Name & Formula	Ozone Depleting Potential	HS code 2012	HS code 2017
CFC-11	Trichlorofluoromethane CFCl <sub>3</sub>	1.0	Ex 2903.77	
CFC-12	Dichlorodifluoromethane CF <sub>2</sub> Cl <sub>2</sub>	1.0	Ex 2903.77	
CFC-13	Chlorotrifluoromethane CF <sub>3</sub> Cl	1.0	Ex 2903.77	
R-111	Pentachlorofluoroethane C <sub>2</sub> FCl <sub>5</sub>	1.0	Ex 2903.77	
R-112	Tetrachlorodifluoroethane C <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub>	1.0	Ex 2903.77	
R-113	Trichlorotrifluoroethane C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	0.8	Ex 2903.77	
R-114	Dichlorotetrafluoroethane C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub>	1.0	Ex 2903.77	
R-115	Chloropentafluoroethane CClF <sub>2</sub> CF <sub>3</sub>	0.6	ex 2903.77	
R-211	Heptachlorofluoropropane C <sub>3</sub> FCl <sub>7</sub>	1.0	ex 2903.77	
R-212	Hexachlorodifluoropropane C <sub>3</sub> F <sub>2</sub> Cl <sub>6</sub>	1.0	ex 2903.77	
R-213	Pentachlorotrifluoropropane C <sub>3</sub> F <sub>3</sub> Cl <sub>5</sub>	1.0	ex 2903.77	
R-214	Tetrachlorotetrafluoropropane C <sub>3</sub> F <sub>4</sub> Cl <sub>4</sub>	1.0	ex 2903.77	
R-215	Trichloropentafluoropropane C <sub>3</sub> F <sub>5</sub> Cl <sub>3</sub>	1.0	ex 2903.77	
R-216	Dichlorohexafluoropropane C <sub>3</sub> F <sub>6</sub> Cl <sub>2</sub>	1.0	ex 2903.77	
R-217	Chloroheptafluoropropane C <sub>3</sub> F <sub>7</sub> Cl	1.0	ex 2903.77	
R-12B1	Bromochlorodifluoromethane CF <sub>2</sub> BrCl	3.0	ex 2903.77	
R-13B1	Bromotrifluoromethane CF <sub>3</sub> Br	10.0	ex 2903.77	

R-14B2	Dibromotetrafluoroethane C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>	6.0	ex 2903.77	
	Carbon tetrachloride CCl <sub>4</sub>	1.1	2903.14	
R-141b	1,1-dichloro-1-fluoromethane	0.11	2903.49.15	
	Methyl Bromide	0.6	2903.39.11	
	1,1,1-trichloroethane C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> (Methyl chloroform)	0.1	2903.19	

### THIRD SCHEDULE

#### CONTROLLED SUBSTANCES: OZONE DEPLETING SUBSTANCES

[ to be prohibited on 1<sup>ST</sup> JANUARY 2030]

ASHRAE NUMBER	SUBSTANCE/ COMPONENTS	Ozone Depleting Potential	HS code 2012	HS code 2017
R-21	Dichlorofluoromethane CHFC1 <sub>2</sub>	0.04	2903.49	ex 2903.79
R-22	Chlorodifluoromethane CHF <sub>2</sub> Cl	0.055	2903.49	ex 2903.71
R-31	Monochlorofluoromethane CH <sub>2</sub> FC1	0.02	2903.49	ex 2903.79
R-121	Tetrachlorofluoroethane C <sub>2</sub> HFCl <sub>4</sub>	0.01-0.04	2903.49	
R-122	Trichlorotrifluoroethane C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub>	0.02-0.08	2903.49	
R-123	2,2-dichloro-1,1,1-trifluoroethane C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub>	0.02-0.08	2903.49	
R-123a	Dichlorotrifluoroethane CHClFCClF <sub>2</sub>	0.02	-	
R-124	2-chloro-1,1,1-tetrafluoroethane C <sub>2</sub> ClH <sub>2</sub> F <sub>4</sub>	0.02-0.04	2903.49	
R-124a	Chlorotetrafluoroethane CHFClCF <sub>3</sub>	0.022		
R-131	Trichlorofluoroethane C <sub>2</sub> H <sub>2</sub> FC1 <sub>3</sub>	0.007-0.05	2903.49	
R-132	Dichlorodifluoroethane C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub>	0.008-0.05	2903.49	
R-133	Chlorodifluoroethane C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl	0.02-0.06	2903.49	

R-141	Dichlorofluoroethane $C_2H_3FCl_2$	0.005-0.07	2903.49	
R-141b	1,1-dichloro-1-fluoroethane $CH_3CFCl_2$	0.11	2903.49	
R-142	Chlorodifluoroethane $C_2H_2F_2Cl$	0.008-0.07	2903.49	
R-142b	1-chloro-1,1-difluoroethane $CH_3CF_2Cl$	0.065	2903.49	
R-151	Chlorofluoroethane $C_2H_4FCl$	0.003-0.005	2903.49	
R-221	Hexachlorofluoropropane $C_3HFCl_6$	0.015-0.07	2903.49	
R-222	Pentachlorodifluoropropane $C_3HF_2Cl_5$	0.01-0.09	2903.49	
R-223	Tetrachlorotrifluoropropane $C_3HF_3Cl_4$	0.01-0.08	2903.49	
R-224	Trichlorotetrafluoropropane $C_3HF_4Cl_3$	0.01-0.09	2903.49	
R-225	Dichloropentafluoropropane $C_3HF_5Cl_2$	0.02-0.07	2903.49	
R-225ca	1,1-dichloro-2,2,3,3,3-pentafluoropropane $CF_3CF_2CHCl_2$	0.025	2903.49	
R-225cb	1,3-dichloro-2,2,3,3,3-pentafluoropropane $CF_2ClCF_2CHClF$	0.033	2903.49	
R-226	Chlorohexafluoropropane $C_3HF_6Cl$	0.02-0.10	2903.49	
R-231	Pentachlorofluoropentanes $C_3H_2FCl_5$	0.05-0.09	2903.49	
R-232	Tetrachlorodifluoropropane $C_3H_2FCl_5$	0.008-0.10	2903.49	
R-233	Trichlorotrifluoropropane $C_3H_2F_3Cl$	0.007-0.23	2903.49	
R-234	Dichlorotetrafluoropropane $C_3H_2F_4Cl$	0.01-0.28	2903.49	
R-235	Chloropentafluoropropane $C_3H_2F_5Cl$	0.03-0.52	2903.49	
R-241	Tetrachlorofluoropropane $C_3H_3FCl_4$	0.004-0.09	2903.49	



R-242	Trichlorodifluoropropane $C_3H_3F_2Cl_3$	0.005-0.13	2903.49	
R-243	Dichlorotrifluoropropane $C_3H_3F_3Cl_2$	0.007-0.12	2903.49	
R-244	Chlorotetrafluoropropane $C_3H_3F_3Cl$	0.009-0.14	2903.49	
R-251	Trichlorotetrafluoropropane $C_3HF_4Cl_3$	0.001-0.01	2903.49	
R-252	Dichlorodifluoropropane $C_3H_4F_2Cl_2$	0.005-0.004	2903.49	
R-253	Chlorotrifluoropropane $C_3H_4F_3Cl$	0.003-0.03	2903.49	
R-261	Dichlorofluoropropane $C_3H_5FCl_2$	0.002-0.02	2903.49	
R-262	Chlorodifluoropropane $C_3H_5F_2Cl$	0.002-0.02	2903.49	
R-271	Chlorofluoropropane $C_3H_6FCl$	0.001-0.03	2903.49	
R-21B2	Dibromofluoromethane $CHFBr_2$	1.0	2903.49	
R-22B1	Bromodifluoromethane $CHF_2Br$	0.74	2903.49	
	Bromofluoromethane $CH_2FBr$	0.73	2903.49	
	Tetrabromofluoroethane $C_2HFBr_4$	0.3-0.8	2903.49	
	Tribromodifluoroethane $C_2HF_2Br_3$	0.5-1.8	2903.49	
	Dibromotrifluoroethane $C_2HF_3Br_2$	0.4-1.6	2903.49	
	Bromotetrafluoroethane $C_2HF_4Br$	0.7-1.2	2903.49	
	Tribromofluoroethane $C_2H_2FBr_3$	0.1-1.1	2903.49	
	Dibromodifluoroethane $C_2H_2F_2Br_2$	0.2-1.5	2903.49	
	Bromotrifluoroethane $C_2H_2F_3Br$	0.7-1.6	2903.49	
	Dibromofluoroethane $C_2H_3F_2Br_2$	0.1-1.7	2903.49	

	$C_2H_3FBr_2$			
	Bromodifluoroethane $C_2H_3F_2Br$	0.2-1.1	2903.49	
	1-Bromo-2-fluoroethane $C_2H_4FBr$	0.07-0.1	2903.49	
	Hexabromofluoropropane $C_3HFBr_6$	0.3-1.5	2903.49	
	Pentabromodifluoropropane $C_3HF_2Br_5$	0.2-1.9	2903.49	
	Tetrabromotrifluoropropane $C_3HF_3Br_4$	0.3-1.8	2903.49	
	Tribromotetrafluoropropane $C_3HF_4Br_3$	0.5-2.2	2903.49	
	Dibromopentafluoropropane $C_3HF_5Br_2$	0.9-2.0	2903.49	
	Bromohexafluoropropane $C_3HF_6Br$	0.7-3.3	2903.49	
	Pentabromofluoropropane $C_3H_2FBr_5$	0.1-1.9	2903.49	
	Tetrabromodifluoromethane $C_3H_2F_2Br_4$	0.2-2.1	2903.49	
	Tribromotrifluoropropane $C_3H_2F_3Br_3$	0.2-5.6	2903.49	
	Dibromotetrafluoropropane $C_3H_2F_4Br_2$	0.3-7.5	2903.49	
	Bromopentafluoropropane $C_3H_2F_5Br$	0.9-1.4	2903.49	
	Tetrabromofluoropropane $C_3H_3FBr_4$	0.08-1.9	2903.49	
	Tribromodifluoropropane $C_3H_3F_2Br_3$	0.1-3.1	2903.49	
	Dibromotrifluoropropane $C_3H_3F_3Br_2$	0.1-2.5	2903.49	
	Bromotetrafluoropropane $C_3H_3F_4Br$	0.3-4.4	2903.49	
	Tribromofluoropropane $C_3H_4FBr_3$	0.03-0.3	2903.49	
	Dibromodifluoropropane $C_3H_4F_2Br_2$	0.1-1.0	2903.49	

	Bromotrifluoropropane C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Br	0.07- 0.8	2903.49	
	Dibromofluoropropane C <sub>3</sub> H <sub>3</sub> FBr <sub>2</sub>	0.04-0.4	2903.49	
	Bromodifluoropropane C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Br	0.07-0.8	2903.49	
	Bromofluoropropane C <sub>3</sub> H <sub>6</sub> FBr	0.02-0.7	2903.49	
-	Bromochloromethane CH <sub>2</sub> BrCl	0.12	2903.49	

**LIST OF HCFC CONTAINING BLENDS AND THEIR COMPOSITION  
TO BE PHASED OUT ON 1<sup>ST</sup> JANUARY 2030**

ASHRAE #	COMPONENTS	COMMON TRADE NAMES	HS code 2012	HS code 2017
R-400	CFC-12 CFC-114	-	3824.71	
R-401a	HCFC-22 HFC-152a HCFC-124	MP 39, Suva MP 39	3824.74	
R-401b	HCFC-22 HFC-152a HCFC-124	MP 66, Suva MP 66	3824.74	
R-401c	HCFC-22 HFC-152a HCFC-124	MP 52, Suva MP 52	3824.74	
R-402a	HFC-125 HC-290 HCFC-22	HP 80, Arcton 402a, Suva HP 80, Genetron HP 80	3824.74	
R-402b	HFC-125 HC-290 HCFC-22	HP 81, Arcton 402b, Suva HP 81	3824.74	
R-403a	HC-290 HCFC-22 FC-218	69S, ISCEON 69 S	3824.74	
R-403b	HCFC-22 Propane PFC-218	-	3824.74	
R-405a	HCFC-22 HFC-152a	GU 2015	3824.74	

	HCFC-142b C-318			
R-406a	HCFC-22 HC-600a HCFC-142b	GHG, GHG-12, Solkane 406a	3824.74	
R-408a	HFC-125 HFC-143a HCFC-22	FX55, Arcton 408a, Forane 408a, Forane FX 10, Genetron 408a	3824.74	
R-409a	HCFC-22 HCFC-124 HCFC-142b	FX56, Forane 409a, Forane FX 56, Forane FX 57, Genetron 409a	3824.74	
R-409b	HCFC-22 HCFC-124 HCFC-142b	FX 57, Forane FX 27	3824.74	
R-411a	HC-1270 HCFC-22 HFC-152a	G 2018A	3824.74	
R-411b	HC-1270 HCFC-22 HFC-152a	G 2018B	3824.74	
R-412a	HCFC-22 FC-218 HCFC-142b	TP5R, Arcton 412a, Arcton TP5R	3824.74	
R-414a	HCFC-22 HCFC-124 HCFC142b HC-600a	GHG-X4	3824.74	
R-414b	HCFC-22 HCFC-124; HCFC-142b HC-600a	Hotshot	3824.74	
R-500	Cfc-12 Hfc-152a	Asahifron R-500, Daiflon 500, Forane 500, Frigen 500, Genetron 500, MP 39, MP 66, ISCEON 49	3824.71	
R-501	HCFC-22 CFC-12	-	3824.71	
R-502	HCFC-22	Algorene 502, Arcton 502,	3824.71	

	CFC-115	Asahifron R-502, Daiflon 502 Forane 502, Freon 502, Genetron 502, HP 80, HP 81, ISCEON 69S		
R503	HFC-23 CFC-13	Genetron 503, Suva 95, 5R3	3824.71	
R-504	HFC-23 CFC-115	-	3824.71	
R-505	CFC-12 HCFC-31	-	3824.71	
R-506	HCFC-31 CFC-114	-	3824.71	
R-507	HCFC-124 HFC-143a	AZ-50, 507	3824.74	
R-509	HCFC-22 FC-218	Arcton 509, Arcton TP5R2	3824.74	
-	HFC-25 HCFC-22	FX-20	3824.74	
-	HCFC-22 HCFC-142b	FX-10	3824.74	
-	HCFC-22; HCFC-124 HC-600a	Di36, Merofex DI 36	3824.74	
-	HFC-23; HFC-32 HCFC-124	Daikin Blend	3824.74	
-	HCFC-124; HFC-134a HC-600a	FRIGC	3824.74	
-	HCFC-142b HFC-134a Lubricant	Free Zone	3824.74	
-	HCFC-22 HCFC-142b HC-600a	GHG-HP	3824.74	
-	HCFC-22 HCFC-142b; HFC-227ca HC-600a	GHG-X5	3824.74	
-	HCFC-22 HFC-152a; HCFC-23	NARM-502	3824.74	
-	HCFC-22 HCFC-123; HCFC-124; C <sub>10</sub> H <sub>16</sub>	NAF-S-III	3824.74	

-	HFC-134a; HCFC-123 HCFC-124; HC	NAF-P-III	3824.74	
-	HCFC-22; HFC-23; HFC-152a	NARM-502	3824.74	

#### FOURTH SCHEDULE

#### CONTROLLED SUBSTANCES: GREENHOUSE GASES

ASHRAE NUMBER	Chemical name/ COMPONENTS	Global Warming Potential (100yr)	HS Code 2012	HS Code 2017
R-134a	1,1,1,2-tetrafluoroethane	1430	2903.39.90	
R-134	1,1,2,2-tetrafluoroethane	1100	2903.39.90	
R-152a	1,1-Difluoroethane	124	2903.39.90	
R-152	1,2-Difluoroethane	53	2903.39.90	
R-125	1,1,2,2,2- Pentafluoroethane	3500	2903.39.90	
R-143a	1,1,1-trifluoroethane	4470	2903.39.90	
R-161	2-fluoroethane	12	2903.39.90	
R-32	Difluoroethane	704	2903.39.90	
R-227ea	1,1,1,2,3,3,3- heptafluoropentane	3200	2903.39.90	
R-236cb	1,2,2,3,3,3- hexafluoropropane	1340	2903.39.90	
R-236ea	1,1,2,3,3,3- hexafluoropropane	1370	2903.39.90	
R-236fa	1,1,1,3,3,3- hexafluoropentane	9810	2903.39.90	
R-365mfc	1,1,1,3,3- pentafluorobutane	794	2903.39.90	
R-23	Trifluoromethane	14800	2903.39.90	
R-41	Fluoromethane	92	2903.39.90	
R-245fa	1,1,1,3,3-	1030	2903.39.90	

	pentafluoropropane			
R-245ca	1,2,2,3,3- pentafluoropropane	693	2903.39.90	
R-43- 10mee	1,1,1,2,2,3,4,5,5,5- decafluoropentane	1,640	2903.39.90	
R-404A	R-143a/R-125/R-134a	4200	3824.78.00	
R-507A	R-143a/R-125		3824.78.00	
R-407A	R-32/R-125/R-134a	1700	3824.78.00	
R-407B	R-32/R-125/R-134a	1700	3824.78.00	
R-407C	R-32/R-125/R-134a	1700	3824.78.00	
R-410A	R-32/R-125	2100	3824.78.00	
R-508A	R-23/R-116		3824.78.00	
R-508B	R-23/R116		3824.78.00	
R-744	Carbon dioxide	1	2811.21.00.	
R-600	Butane	4	2901.10.90	
R-600a	Iso-butane	4	2901.10.90	
R-290	Propane	3	2711.12.19	
R-1270	Propene	2	2711.12.19	

### FIFTH SCHEDULE (SECTION 3)

#### LIST OF GHG AND ODS DEPENDENT EQUIPMENT

Description	Tariff Heading
(a) Automobile and truck air-conditioning units, whether incorporated in vehicles or not	8701-8706, 8716
(b) Domestic and commercial refrigeration and air-conditioning/heat pump equipment, e.g.:	
Refrigerators,	8418.10-8418.29, 8418.50, 8418.61-8418.69
Freezers and ice machines	8418.10-8418.29 8418.30; 8418.40 8418.50; 8418.61 8418.69
Dehumidifiers	8415.10-8415.83

	8479.60;8479.89
Water coolers and gas liquefying units	8419.60; 8419.89
Air-conditioning and heat pump units	8415.10-8415.83 8418.61; 8418.69 8418.99
(c) Aerosol products except medical aerosols	0404.90; 3208; 3209; 3212.90; 3303.00; 3305; 3306; 3307; 3402.20; 3403; 3405 3606.10; 3808;3809 3814
(d) Portable fire extinguishers	3813
(e) Insulation boards, panels and pipe covers	3917.21-3917.40 3920.10-3920.99 3921.11-3921.90 3925.10-3925.90 3926.90
(e) Pre-polymers	3901.10-3911.99
(f) Household or laundry type washing machines	8450
(g) Dry Cleaning machines	8451