

NEWFOUNDLAND AND LABRADOR
REGULATION 41/05

Halocarbon Regulations
under the
Environmental Protection Act
(O.C. 2005-229)

(Filed May 24, 2005)

Under the authority of section 111 of the Environmental Protection Act , the Lieutenant-Governor in Council makes the following regulations.

Dated at St. John's , May 19, 2005 .

Robert C. Thompson
Clerk of the Executive Council

REGULATIONS

Analysis

1. Short title
2. Definitions
3. Application
4. Prohibition of release
5. Secure Equipment
6. Reporting releases
7. Disposal of Equipment
8. Registered wholesaler
9. Approved person
10. Sale and purchase of regulated substances

11. Seller take back - regulated substances
12. Containers
13. Seller take back - containers
14. Service - air conditioning or refrigeration equipment
15. Leak testing
16. Leak test - servicing
17. Notice
18. Motor vehicles
19. Chillers
20. Mobile refrigeration
21. Commercial air conditioning or refrigeration equipment
22. Extended non-operation
23. Labelling and record keeping
24. Halon prohibition
25. Fire extinguishing equipment
26. Servicing - fire extinguishing equipment
27. Extended non-operation
28. Offence
29. Repeal

Schedule A

Schedule B

Schedule C

Schedule D

Schedule E

Short title

1. These regulations may be cited as the Halocarbon Regulations .

Back to Top

Definitions

2. In these regulations

(a) "air conditioning or refrigeration equipment" means an air cooling, heating or dehumidifying unit or system, whether mobile or stationary, that contains a regulated substance;

(b) "approved container" means a container designed and manufactured to be refilled and to contain that specific type of regulated substance;

(c) "approved person" means a person who has satisfied the requirements of section 9;

(d) "certificate" means the certificate awarded for completing an accepted environmental awareness course under section 9;

(e) "CFC code of practice" means the most recent published version of the "Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems" being published by Environment Canada, EPS 1/RA/2 March 1996, and its successors;

(f) "chiller" means any air conditioning or refrigeration equipment that has a compressor, an evaporator, and a secondary refrigerant;

(g) "critical use" means a use that requires a regulated substance and for which there is no technically and economically feasible alternative;

(h) "decommission" means to take air conditioning or refrigeration equipment or fire extinguishing equipment out of service with the intent not to return it to its existing use;

(i) "department" means the department presided over by the minister;

(j) "disposal" means to sell or transfer in an operating condition or a non-operating condition as a solid waste to a waste disposal site or as scrap;

(k) "fire extinguishing equipment" means a fire extinguishing system or a portable fire extinguisher;

(l) "fire extinguishing system" means a fire suppression system or an explosion suppression system and includes related equipment other than a portable fire extinguisher;

(m) "halon" means a substance listed in Schedule D;

(n) "major overhaul" means a service that includes a procedure or repair to a chiller that

(i) requires the replacement or modification of an internal sealing device,

(ii) requires the replacement or modification of an internal mechanical part, other than an oil heater, an oil pump, a float assembly or a vane assembly for chillers with a single stage compressor, or

(iii) results from the failure of an evaporator or a condenser heat-exchanger tube;

(o) "mobile refrigeration system" means a refrigeration system that is installed in, or normally operates in or in conjunction with, or is attached to, a means of transportation;

(p) "minister" means the minister responsible for the Environmental Protection Act ;

(q) "motor vehicle air conditioner" means an air conditioning unit or system of a motor powered vehicle, including cars, trucks, buses, tractors and other similar applications, other than an aircraft, whether or not the motor powered vehicle would be a vehicle under the Highway Traffic Act , if that unit or system is driven by an engine and has a mechanical vapour compression refrigeration system that provides cooling for the vehicle operator or passenger;

(r) "owner", in respect of air conditioning or refrigeration equipment or fire extinguishing equipment, means

(i) a person who has a proprietary interest in the air conditioning or refrigeration equipment or fire extinguishing equipment, and

(ii) a person who has care, management or control of air conditioning or refrigeration equipment or fire extinguishing equipment except as part of a servicing activity;

(s) "portable fire extinguisher" means a fire extinguisher that is manually transportable;

(t) "reclaim" means to return a recovered substance to the supplier or manufacturer so that it may be restored to its original specifications as verified by laboratory analysis;

(u) "recover" means to remove and contain a regulated substance in an approved container outside the system from which it was removed;

(v) "recycle", with respect to a recovered regulated substance, means to purify the substance so that it may be reused and to restore it to air conditioning or refrigeration equipment or fire extinguishing equipment for reuse;

(w) "refrigerant" means a substance listed in Schedule A, B, C or E which is used in air conditioning or refrigeration equipment;

(x) "registration number" means the registration number issued to an approved person;

(y) "regulated substance" means a substance listed in Schedule A, B, C, D or E;

(z) "reuse" means to return a recovered regulated substance, without further cleaning, to the air conditioning or refrigeration equipment or fire extinguishing equipment from which it was recovered after completion of service;

(aa) "sell" includes a transfer of ownership or possession by mutual agreement; and

(bb) "service" includes construction, installation, testing, maintenance, adjusting, repairing, charging, recharging, relocation, moving, decommissioning, dismantling, removal and disposal.

Back to Top

Application

3. (1) These regulations apply to

(a) air conditioning or refrigeration equipment;

(b) fire extinguishing equipment; and

(c) containers and equipment designed for use with, or for the servicing of, air conditioning or refrigeration equipment and fire extinguishing equipment.

(2) If a conflict exists between these regulations and

(a) the CFC code of practice; or

(b) ULC/ORD-C1058.5 (Standard for the Recovery of Halon) or ULC/ORD-C1058.18 (Standard for the Servicing of Halon Equipment),

these regulations shall prevail.

(3) The requirements established by these regulations are in addition to the requirements established under other applicable municipal, provincial or federal enactments.

(4) A permit, certificate or approval issued by the province before the commencement of these regulations shall not be used as authority for a failure to comply with the terms of these regulations and shall not be a defence to any prosecution for breach of these regulations.

(5) The following attached schedules form part of these regulations:

Schedule
Contents

A
CFCs (Chlorofluorocarbons)

B
HCFCs (Hydrochlorofluorocarbons)

C

HFCs (Hydrofluorocarbons)

D

Halons (Bromofluorocarbons, Bromochlorofluorocarbons)

E

PFCs (Perfluorocarbons)

[Back to Top](#)

Prohibition of release

4. (1) Unless expressly permitted by these regulations, the CFC code of practice or the requirements of ULC/ORD-C1058.5 (Standard for the Recovery of Halon) or ULC/ORD-C1058.18 (Standard for Servicing of Halon Equipment), a person shall not directly or indirectly release a regulated substance or cause or allow a regulated substance to be released into the environment, including the release of a regulated substance from

(a) air conditioning or refrigeration equipment or fire extinguishing equipment; or

(b) an approved container or device employed in the use, reuse, recycling, reclaiming, supply, transport or storage of a regulated substance.

(2) A person shall not store or destroy a regulated substance in a manner which may allow it to be released into the environment.

[Back to Top](#)

Secure Equipment

5. (1) An owner, or person engaged in the servicing, of

(a) air conditioning or refrigeration equipment;

(b) fire extinguishing equipment; or

(c) any part of (a) or (b),

shall ensure that the equipment or part is secured from unauthorized access that could lead to the release of a regulated substance.

(2) Subsection (1) shall not apply to

(a) air conditioning or refrigeration equipment with a compressor power rating of less than 3 horsepower;

(b) motor vehicle air conditioners; or

(c) heat pumps used for domestic purposes.

[Back to Top](#)

Reporting releases

6. (1) A release of more than 10 kilograms of a regulated substance shall be reported to the department within one working day of the release and such report shall include the circumstances of the release and the actions taken.

(2) If the location of the release prevents compliance with subsection (1), the report shall be made as soon as practicable thereafter and such report shall include, in addition to the matters required under subsection (1), an explanation for the delay in reporting.

[Back to Top](#)

Disposal of Equipment

7. Prior to the decommission or disposal of air conditioning or refrigeration equipment or fire extinguishing equipment, the regulated substance shall first be recovered and the equipment shall be labelled "Halocarbon Free".

[Back to Top](#)

Registered wholesaler

8. (1) A person or company engaged in the sale of a regulated substance, except where the regulated substance is contained in air conditioning or refrigeration equipment or fire extinguishing equipment, shall register with the department as a wholesaler of that regulated substance.

(2) Wholesalers shall keep records for a period of 3 years stating the quantity and identity of all regulated substances sold, the date of sale and the registration number of the approved person to whom it was sold and shall make these records available to the department upon request.

[Back to Top](#)

Approved person

9. (1) For purposes of these regulations, an approved person is an individual

(a) who

(i) has successfully completed an environmental awareness course on regulated substances which has been accepted by the minister, and

(ii) has been awarded a certificate bearing a registration number and wallet card signifying successful completion of the environmental awareness course; and

(b) whose name and registration number has been recorded in a database accepted by the minister.

(2) A person shall not buy, borrow, lend or sell a certificate or use a certificate not issued to the bearer.

[Back to Top](#)

Sale and purchase of regulated substances

10. (1) No person shall sell a regulated substance unless that person is

- (a) an approved person; or
- (b) a registered wholesaler under section 8.

(2) Notwithstanding subsection (1), a person other than an approved person or a registered wholesaler may sell a regulated substance when that regulated substance is contained in air conditioning or refrigeration equipment or fire extinguishing equipment.

(3) No person shall purchase a regulated substance unless that person is

- (a) an approved person; or
- (b) a registered wholesaler who purchases a regulated substance from a supplier for resale to an approved person.

(4) Notwithstanding subsection (3), a person other than an approved person or a registered wholesaler may purchase a regulated substance when that regulated substance is contained in air conditioning or refrigeration equipment or fire extinguishing equipment or added to that equipment as part of a servicing activity.

(5) All regulated substances ordered, picked up or received shall bear on the shipping documents or bill of sale the name and registration number of the approved person receiving that regulated substance.

[Back to Top](#)

Seller take back - regulated substances

11. (1) Registered wholesalers shall accept the return of a regulated substance, whether used or unused, if the regulated substance is returned at the wholesaler's place of business during normal business hours.

(2) Registered wholesalers shall store a used regulated substance that has been returned under subsection (1) until that regulated substance is delivered to a person who is authorized to manufacture, reclaim, recycle or destroy the regulated substance.

(3) A registered wholesaler shall keep records for a period of 3 years stating the quantity and identity of all regulated substances, whether used or unused, which have been returned and the actions taken by the wholesaler in relation to the returned substances and shall make this information available to the department upon request.

[Back to Top](#)

Containers

12. (1) A person shall not sell a regulated substance to another person unless the regulated substance is in an approved container.

(2) Containers used to receive, contain or transport recovered or recycled regulated substances shall be approved containers and may only be disposed of

(a) at a facility that has been approved by the minister which recycles approved containers, where the approved container is evacuated to a minimum 20 inches of vacuum and the regulated substance is recovered; and

(b) where metal from containers is disposed of, to a scrap metal dealer licensed as a salvage dealer under the Salvage Dealers Licensing Act or at a waste disposal site established under the Environmental Protection Act .

(3) A wholesaler may charge a refundable deposit as a condition of sale of an approved container.

Back to Top

Seller take back - containers

13. (1) A wholesaler shall accept the return of approved containers that are suitable for reuse and recycling if the approved container is returned to the wholesaler's place of business during normal business hours.

(2) A wholesaler shall keep records for a period of 3 years stating the quantity of approved containers which are returned and shall make this information available to the department upon request.

Back to Top

Service - air conditioning or refrigeration equipment

14. (1) A person shall not service air conditioning or refrigeration equipment unless that person is an approved person.

(2) Air conditioning or refrigeration equipment shall be serviced in accordance with the CFC code of practice and these regulations.

(3) A person who services air conditioning or refrigeration equipment or does other work on air conditioning or refrigeration equipment that may result in the release of a refrigerant shall

(a) have available at the job site operational equipment that can recover and contain a refrigerant; and

(b) recover and reuse, recycle, reclaim or arrange for the destruction of a refrigerant that would otherwise be released during the servicing procedure.

(4) Devices used for the servicing of air conditioning or refrigeration equipment shall meet minimum standards specified by the CFC code of practice.

(5) A hazardous waste product, toxic substance or other foreign material, except gases used in testing or other material normally present in air conditioning or refrigeration equipment, shall not be intentionally mixed with recovered material.

(6) An owner of air conditioning or refrigeration equipment shall not cause the air conditioning or refrigeration equipment to be serviced by anyone who is not an approved person.

(7) The owner of a business that services air conditioning or refrigeration equipment shall ensure that each person employed in or by the business who services air conditioning or refrigeration equipment is an approved person.

[Back to Top](#)

Leak testing

15. (1) The owner of air conditioning or refrigeration equipment shall ensure that an approved person conducts a leak test once a year of all components of the equipment that are in contact with a refrigerant.

(2) Subsection (1) shall not apply to

(a) air conditioning or refrigeration equipment with a compressor power rating of less than 3 horsepower;

(b) motor vehicle air conditioners; or

(c) heat pumps used for domestic purposes.

(3) A person shall not add a refrigerant to a device, container or equipment for the purpose of leak testing in a manner that may cause the release of that refrigerant into the environment.

(4) Subsection (3) shall not apply to the servicing of a motor vehicle air conditioner where

(a) the refrigerant pressure in the motor vehicle air conditioner is too low to permit leak detection;

(b) the refrigerant added to the motor vehicle air conditioner is the same type as the residual refrigerant; and

(c) testing is carried out in accordance with the CFC code of practice.

(5) A person performing a leak test on air conditioning or refrigeration equipment shall inform the owner of that equipment of the results of the test.

(6) Where a leak test reveals that refrigerant is leaking from air conditioning or refrigeration equipment, the person conducting the test shall

(a) ensure that the equipment is immediately and effectively repaired so that further leaking cannot occur; or

(b) ensure that the refrigerant is immediately recovered from the equipment and handled in accordance with these regulations and the CFC code of practice, and attach a notice to the equipment indicating that the equipment is not in working order and that it would be an offence to recharge it with refrigerant unless it is first repaired; or

(c) notify the department within one working day of the particulars of the leak test where that person is prevented from complying with either paragraph (a) or (b).

[Back to Top](#)

Leak test - servicing

16. (1) A person who services air conditioning or refrigeration equipment shall conduct a leak test before adding a refrigerant to the equipment.

(2) A person shall not add a refrigerant to air conditioning or refrigeration equipment which is leaking.

(3) Subsections (1) and (2) do not apply where there is no reasonable alternative to the refilling of air conditioning or refrigeration equipment and there is

(a) an immediate danger to human life or health at a health care facility; or

(b) an immediate danger to crops, plant or animal life or foodstuffs on a farm or at a facility for the packing, processing or storage of food.

(4) Where, for a reason indicated in paragraph 3(a) or (b), a refrigerant has been added to air conditioning or refrigeration equipment without first performing a leak test, the owner shall

(a) have the equipment tested for leaks immediately after filling;

(b) have leaks in the equipment fixed immediately; and

(c) within 24 hours report to the department the circumstances and actions taken.

[Back to Top](#)

Notice

17. (1) A person completing a leak test on air conditioning or refrigeration equipment shall

(a) place a notice on the equipment indicating

(i) the date of the test,

(ii) the person's name,

(iii) the person's registration number, and

(iv) the results of the test; and

(b) provide a copy of the notice to the owner of the air conditioning or refrigeration equipment.

(2) Where a leak test is performed on a motor vehicle air conditioner, the required notice shall be affixed to the frame or edge of the door nearest to the driver's seat.

(3) A copy of the notice issued under subsection (1) shall be kept by the owner of the air conditioning or refrigeration equipment for a period of 3 years and shall be made available to the department upon request.

(4) This section does not apply to servicing or testing which takes place in the course of the manufacture of a product which is or which contains air conditioning or refrigeration equipment.

[Back to Top](#)

Motor vehicles

18. (1) A person shall not install in a motor vehicle an air conditioning unit that operates or is intended to operate using a refrigerant listed in Schedule A.

(2) Effective June 1, 2005, no person shall charge or permit the refill of a motor vehicle air conditioning system with a refrigerant listed in Schedule A.

(3) The refrigerant in a motor vehicle air conditioner shall not be refilled with a substance other than a refrigerant unless the motor vehicle air conditioner operates or is designed to operate using a substance other than a refrigerant.

[Back to Top](#)

Chillers

19. (1) The release of a refrigerant from chiller purges must be less than 0.1 kilograms of refrigerant per kilogram of air purged.

(2) Effective June 1, 2005 , an owner of a chiller containing a refrigerant listed in Schedule A must ensure that the chiller is either decommissioned or retrofitted to use a substance other than a refrigerant listed in Schedule A at the next major overhaul.

(3) Notwithstanding subsection (2), a person may charge a chiller with a refrigerant listed in Schedule A, but that person shall not operate that chiller more than one year after the day on which it is charged unless it no longer contains a refrigerant listed in Schedule A.

(4) If, pursuant to subsection (3), a chiller is charged with a refrigerant listed in Schedule A, the owner shall provide written notice to the department within 30 days after the chiller is charged.

(5) Effective January 1, 2015, no person shall charge or permit the charge of a chiller with a refrigerant listed in Schedule A.

[Back to Top](#)

Mobile refrigeration

20. Effective June 1, 2005, no person shall charge or permit the refill of a mobile refrigeration system with a refrigerant listed in Schedule A.

[Back to Top](#)

Commercial air conditioning or refrigeration equipment

21. Effective January 1, 2006, no person shall charge or permit the refill of commercial air conditioning or refrigeration equipment with a refrigerant listed in Schedule A.

[Back to Top](#)

Extended non-operation

22. (1) The owner of any air conditioning or refrigeration equipment which has not been or will not be operated for a period of more than 8 months shall ensure that all refrigerants are recovered from such non-operational equipment.

(2) Prior to startup for reuse, the owner of the air conditioning or refrigeration equipment referred to in subsection (1) shall ensure that the equipment is leak tested in accordance with these regulations.

(3) Subsection (1) shall not apply to

(a) air conditioning or refrigeration equipment with a compressor power rating of less than 3 horsepower; or

(b) heat pumps used for domestic purposes.

[Back to Top](#)

Labelling and record keeping

23. (1) A person shall not manufacture, bring into the province, sell, offer for sale or install new air conditioning or refrigeration equipment that does not have, in a location clearly visible to a person servicing the equipment, a securely affixed and permanent label or tag stating

(a) the equipment manufacturer;

(b) the quantity and type of refrigerant;

(c) the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Refrigerant Number;

(d) the ASHRAE Safety Designation; and

(e) the quantity and type of refrigerant oil.

(2) A person who services air conditioning or refrigeration equipment shall affix a permanent label to the equipment stating

(a) the type and amount of any refrigerant added to the equipment;

(b) the date the refrigerant was added;

(c) the name of the person that performed the service;

(d) that person's registration number; and

(e) if the person performing the servicing was employed in or by a business, the name of that business.

(3) A person who services air conditioning or refrigeration equipment shall keep records for a period of at least 3 years of all refrigerants received and all refrigerants used, the locations where any were used and the amount used or reused at each location and shall, upon request, make these records available to the department.

[Back to Top](#)

Halon prohibition

24. (1) Effective June 1, 2005, no person shall charge or permit the refill of portable fire extinguishers with halon.

(2) Between June 1, 2005 and December 31, 2009, a person may refill a fire extinguishing system once with halon but that system shall be decommissioned or retrofitted to use a substance other than halon within one year of the refill.

(3) Effective January 1, 2010, no person shall charge or permit the refill of a fire extinguishing system with halon.

(4) Subsections (1) and (2) do not apply to situations considered as a critical use.

[Back to Top](#)

Fire extinguishing equipment

25. (1) A person shall not release halon into the environment from fire extinguishing equipment except for the purpose of extinguishing a fire.

(2) Halon shall not be used to extinguish fires set for fire fighting training purposes.

(3) Fire extinguishing systems containing halon shall be tested for leakage according to ULC/ORD-C1058.18 (Standard for the Servicing of Halon Equipment) and ULC/ORD-C1058.5 (Standard for the Recovery of Halon) and these regulations.

(4) Records of leak tests shall be maintained by the owner of the fire extinguishing system and shall be made available to the department upon request.

(5) Owners of fire extinguishing systems shall have a written procedures manual for regular operation of the system.

[Back to Top](#)

Servicing - fire extinguishing equipment

26. (1) A person shall not service fire extinguishing equipment unless that person is an approved person.

(2) A person shall not service fire extinguishing equipment without first

(a) advising the person or persons responsible for the area in which the equipment is located and receiving permission to proceed;

(b) placing the equipment on manual operation and manually closing the appropriate valves to isolate the halon supply containers; and

(c) tagging the control panel of the equipment to indicate that it is out of operation during the period of service.

(3) During servicing of fire extinguishing equipment, halon shall not be released into the environment.

(4) Fire extinguishing equipment containing halon shall be serviced in accordance with ULC/ORD-C1058.18 (Standard for the Servicing of Halon Equipment) and ULC/ORD-C1058.5 (Standard for the Recovery of Halon) and these regulations.

(5) An owner of fire extinguishing equipment containing halon shall not cause the equipment to be serviced by anyone who is not an approved person.

(6) The owner of a business that services fire extinguishing equipment containing halon shall ensure that each person employed in or by the business who services such fire extinguishing equipment is an approved person.

[Back to Top](#)

Extended non-operation

27. (1) The owner of a fire extinguishing system which has not been or will not be operated for a period of more than 8 months shall ensure that all halon is recovered from the system.

(2) Prior to startup for reuse, the owner of a fire extinguishing system referred to in subsection (1) shall ensure that the system is leak tested in accordance with ULC/ORD-C1058.18 (Standard for the Servicing of Halon Equipment) and ULC/ORD-C1058.5 (Standard for the Recovery of Halon) and these regulations.

[Back to Top](#)

Offence

28. A person who violates any provision of these regulations or fails to comply with any condition or fulfil any obligation imposed on the person by these regulations is guilty of an offence.

[Back to Top](#)

Repeal

29. The Ozone Depleting Substance Regulations, 2003 , Newfoundland and Labrador Regulation 55/03, are repealed.

[Back to Top](#)

Schedule A

Chlorofluorocarbons (CFCs)

- (a) CFC-11, also known as fluorotrichloromethane
- (b) CFC-12, also known as dichlorodifluoromethane
- (c) CFC-113, also known as 1,1,2-trichloro-1,2,2-trifluoroethane
- (d) CFC-114, also known as 1,2-dichloro-1,1,2,2-tetrafluoroethane
- (e) CFC-115, also known as 1-chloro-1,1,2,2,2-pentafluoroethane
- (f) CFC-13, also known as chlorotrifluoromethane
- (g) CFC-111, also known as pentachlorofluoroethane
- (h) CFC-112, also known as tetrachlorofluoroethane
- (i) CFC-211, also known as heptachlorofluoropropane

- (j) CFC-212, also known as hexachlorodifluoropropane
- (k) CFC-213, also known as pentachlorotrifluoropropane
- (l) CFC-214, also known as tetrachlorotetrafluoropropane
- (m) CFC-215, also known as trichloropentafluoropropane
- (n) CFC-216, also known as dichlorohexafluoropropane
- (o) CFC-217, also known as chloroheptafluoropropane

All isomers of the above.

All mixtures of the above.

All azeotropes of the above including, but not limited to:

- (p) CFC-500 (CFC-12/HFC-152a, 73.8/26.2 wt. %)
- (q) CFC-501 (CFC-12/HCFC-22, 25.0/75.0 wt. %)
- (r) CFC-502 (HCFC-22/CFC-115, 48.8/51.2 wt. %)
- (s) CFC-503 (CFC-13/HCFC-23, 59.9/40.1 wt. %)
- (t) CFC-504 (HFC-32/CFC-115, 48.2/51.8 wt. %)
- (u) CFC-505 (CFC-12/HCFC-31 78/22 wt. %)
- (v) CFC-506 (HCFC-31/CFC-114 55.1/44.9 wt. %)

[Back to Top](#)

Schedule B

Hydrochlorofluorocarbons (HCFCs)

- (a) HCFC-21, also known as dichlorofluoromethane
- (b) HCFC-22, also known as chlorodifluoromethane
- (c) HCFC-31, also known as chlorofluoromethane
- (d) HCFC-121, also known as tetrachlorofluoroethane
- (e) HCFC-122, also known as trichlorodifluoroethane
- (f) HCFC-123, also known as dichlorotrifluoroethane
- (g) HCFC-124, also known as chlorotetrafluoroethane
- (h) HCFC-131, also known as trichlorofluoroethane

- (i) HCFC-132, also known as dichlorodifluoroethane
- (j) HCFC-133, also known as chlorotrifluoroethane
- (k) HCFC-141, also known as dichlorofluoroethane
- (l) HCFC-142, also known as chlorodifluoroethane
- (m) HCFC-221, also known as hexachlorofluoropropane
- (n) HCFC-222, also known as pentachlorodifluoropropane
- (o) HCFC-223, also known as tetrachlorotrifluoropropane
- (p) HCFC-224, also known as trichlorotetrafluoropropane
- (q) HCFC-225, also known as dichloropentafluoropropane
- (r) HCFC-226, also known as chlorohexafluoropropane
- (s) HCFC-231, also known as pentachlorofluoropropane
- (t) HCFC-232, also known as tetrachlorodifluoropropane
- (u) HCFC-233, also known as trichlorotrifluoropropane
- (v) HCFC-234, also known as dichlorotetrafluoropropane
- (w) HCFC-235, also known as chloropentafluoropropane
- (x) HCFC-241, also known as tetrachlorofluoropropane
- (y) HCFC-242, also known as trichlorodifluoropropane
- (z) HCFC-243, also known as dichlorotrifluoropropane
- (aa) HCFC-244, also known as chlorotetrafluoropropane
- (bb) HCFC-251, also known as trichlorofluoropropane
- (cc) HCFC-252, also known as dichlorodifluoropropane
- (dd) HCFC-253, also known as chlorotrifluoropropane
- (ee) HCFC-261, also known as dichlorofluoropropane
- (ff) HCFC-262, also known as chlorodifluoropropane
- (gg) HCFC-271, also known as chlorofluoropropane

All isomers of the above.

All mixtures of the above.

All azeotropes of the above.

[Back to Top](#)

Schedule C

Hydrofluorocarbons (HFCs)

- (a) HFC 23, also known as trifluoromethane
- (b) HFC 32, also known as difluoromethane
- (c) HFC 125, also known as pentafluoroethane
- (d) HFC 134, also known as tetrafluoroethane
- (e) HFC 143, also known as trifluoroethane
- (f) HFC 152, also known as difluoroethane
- (g) HFC 161, also known as monofluoroethane
- (h) HFC 281, also known as fluoropropane
- (i) HFC 272, also known as difluoropropane
- (j) HFC 263, also known as trifluoropropane
- (k) HFC 254, also known as tetrafluoropropane
- (l) HFC 245, also known as pentafluoropropane
- (m) HFC 236, also known as hexafluoropropane
- (n) HFC 227, also known as heptafluoropropane

All isomers of the above.

All mixtures of the above.

All azeotropes of the above.

Mixtures or azeotropes of the above with CFCs are part of Schedule A.

Mixtures or azeotropes of the above with HCFCs are part of Schedule B.

[Back to Top](#)

Schedule D

Halons

- (a) Halon-1202, also known as difluorodibromomethane

- (b) Halon-1211, also known as bromochlorodifluoromethane
- (c) Halon-1301, also known as bromotrifluoromethane
- (d) Halon-2402, also known as dibromotetrafluoroethane

All isomers of the above.

All mixtures of the above.

All azeotropes of the above.

Back to Top

Schedule E

Perfluorocarbons (PFCs)

- (a) PFC-14, also known as tetrafluoromethane
- (b) PFC-116, also known as hexafluoroethane
- (c) PFC-218, also known as octafluoropropane
- (d) PFC-3-1-10, also known as decafluorobutane
- (e) PFC-4-1-12, also known as dodecafluoropentane
- (f) PFC-5-1-14, also known as tetradecafluorohexane

All mixtures of the above.

All azeotropes of the above.

Mixtures or azeotropes of the above with CFCs are part of Schedule A.

Mixtures or azeotropes of the above with HCFCs are part of Schedule B.

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(Includes Feb. 10/06 correction)