

## 18. MD 243/2005 regulation for the control & management of ozone depleting substances

### Ministry of Regional Municipalities, Environment And Water Resources Ministerial Decision No. (243/2005) Regulations For The Control & Management Of Ozone Depleting Substances

Based on Royal Decree No. (7398) concerning the ratification of the Sultanate of Oman to the Vienna Convention for the Protection of the Ozone Layer. And Montreal Protocol concerning the Ozone Depleting Substances And the Law for Conservation of the Environment and Prevention of Pollution issued by Royal Decree No. (114/2001) And the Ministerial Decision No. (37/2001) issuing the Regulations for the Control and Management of Ozone Depleting Substances. And the Ministry of Finance approval to in pose fees for the issue of permits to import ozone depleting substances according to its correspondence No. Finance -T (6688)/m t d/6702 dated 22/5/2005.

And according to the requirements of public interest.

IT IS DECIDED

Article (1): The provisions of the attached Regulations for the Control and Management of the Ozone Depleting Substances shall be effective.

Article (2): The mentioned Ministerial Decision No (37/2001) and all laws or regulations that violate or contradict with the provisions of this regulations shall be cancelled.

Article (4): This decision shall be published in the Official Gazette and shall be effective from the date of its publication.

Abdullah bin Salem bin Amer Al Rawas

Minister of Regional Municipalities, Environment and Water Resources

Issued on: 13/Ramadan/1426 C.T. : 17/October/ 2005

### Regulations For The Control And Management Of Ozone Depleting Substances (ODS)

**Article (1):** In compliance with the provisions of this regulation, the words and lerns used herein sha'l have the same meanings stated n the Law for Conservation of the Environment and Prevention of Pollution and the following expressions shall have the meanings slated against each of them unless otherwise stated

**The Department:** Environmental Inspection and Control Department.

**The Concerned Section :** An and Noise Pollution Section

**License:** An approval issued by the Ministry's concerned Section including conditions permitting agencies and companies to import and (distribute the controlled Substances (ODS) in The Sultanate of Oman)

**Montreal Protocol:** The protocol adopted in 1987 at Montreal city. Canada concerning the Ozone Depleting Substances

**Ozone Layer:** Situated in the stratosphere containing high density of Ozone gas molecules and protecting the earth from the exposure to the harmful ultraviolet rays

**ODS :** Substances having the characteristic of chemical stability in the lower atmosphere, comprising one or more chlorine or bromine atom or both and beginning a series of reactions in the "stratosphere\* Layer causing depletion of the ozone.

**Controlled Substances:** OOS listed in Append\* (1) {Annexes A, B, C. and E}to Montreal Protocol Montreal and its amendments and n Appendix (1) of this regulations whether existing alone or in a mixture in any proportion.

**Appliances and Equipment:** Appliances, equipment and products containing or depending in operation on ODS listed in Annex (D) of Appendix (1) of this Regulations

**Recovered Substances:** Controlled substances that have been collected from machinery, equipment and containment vessels during servicing or prior to disposal.

**Recycled Substances:** Controlled substances recovered from a certain unit for reuse after purification through filtration and drying

**Extracted Substances:** Controlled substances that have been processed to a certain level through filtering, drying, distillation or chemical treatment

**State Parties:** States, which ninety days have passed since they deposited their instrument of ratification, acceptance, approval or accession to the Vienna Convention for The Protection of the Ozone Layer of 1985 and Montreal Protocol on Substances that Deplete the Ozone Layer of 1987.

**Essential Uses:** Uses where the controlled substances are either necessary for health, safety or for the functioning of society and no acceptable alternative is available.

**Substances destroyed:** Controlled substances destroyed through approved destruction technologies

**Article (2):** All ministries, agencies and other concerned authorities shall coordinate with the Ministry in implementation of the provisions of this Regulation.

**Article (3):** The import or export of controlled substances including mixed, recovered, extracted or recycled substances is prohibited unless after obtaining a license from the Concerned Section.

**Article (4):** An application for a license shall be submitted by the concerned person including the following information:

- a) Substance (s) chemical commercial name
- b) Substance state.
- c) Quantity in kilogram.
- d) Production date
- e) Port of entry.

An original purchase invoice together with an authenticated certificate of the country of origin and a permit from the exporting State shall be attached

**Article (5):** Fee against the license as per Appendix No.(3) of this Regulations shall be collected and the license shall be valid for one time import only

**Article (6):** The import or export of controlled substances from and to non-parties to the Montreal Protocol and imports for re export is prohibited.

**Article (7):** Controlled substances listed in Montreal Protocol and its amendments shall be phased-out in accordance with the phase-out schedule in Appendix No (2) of this Regulations.

**Article (8):** The import of a I types of new or used equipment and appliances stated in Annex (D) of Appendix No (1) of this Regulations containing controlled substances are prohibited.

**Article (9):** A license shall be obtained from the Ministry's Concerned Section prior to release of any consignment containing domestic, commercial and industrial refrigeration and air conditioning equipment, vehicles and buses air conditioning including their compressors and condensation units, portable and stationary extinguishing equipment and systems and aerosols (except medical ones).

**Article (10):** The concerned person shall submit an application for release including the following information

- Type of gas used in the appliance
- Country of origin.
- Port of entry

The following documents shall be attached:

- a) Customs inspection report.
- b) Original purchase invoice
- c) Imported equipment and appliances catalogue
- d) Authenticated certificate of origin.

**Article (11):** The import of controlled substances to the establishments and agencies already registered with the Ministry is permissible

**Article (12):** Actions for customs clearance of controlled substances at all custom ports of entry shall be according to the format prepared by the Ministry for this purpose.

**Article (13):** Emissions of the controlled substances shall be controlled by regular maintenance of appliances and use of proper recovery system during service.

**Article (14):** Establishments for repair and maintenance of refrigerators contain controlled substances shall be bound to provide gas recovery and re-cycle equipment.

**Article (15):** Technicians dealing with servicing and maintenance of refrigerators, air conditioning and fire protect on equipment or those dealing with recovery/re-cycling of controlled substances shall take a technical test to be conducted by the concerned authority prior to practicing their profession.

**Article (16):** The recording unit used in import/export applications or for reporting controlled substances imported or exported quantities shall be the kilogram

**Article (17):** Reduction h importer's quotas of controlled substances shall be in accordance with the phase-out schedule in Appendix No (2) of this Regulations. Importers shall be informed regarding their quotas prior to the end of each year

**Article (18):** Transfer of controlled substance's quantities permitted for import from one importer to another is possible after the Ministry approval, however the transferred quantity shall be deducted from the quota of the original importer

**Article (19):** A report indicating the names, types, quantities and dales of imported substances together with information of end users during the previous year and all prove documents attached to the report shall be provided to the Ministry by each importer of controlled substances not later than the end of January each year

**Article (20):** Importers and distributors of controlled substances shall keep records of all their sales The Ministry's inspectors shall have the right to enter the premises of all establishments dealing with controlled substances any lime to inspect and review their records

**Article (21):** Establishments using controlled substances shall be bound by the percentage of phasing-out of such substances in accordance with the phase-out schedule attached to the Montreal Protocol

**Article (22):** Destruction or disposal of controlled substances or equipment, appliances and products containing such substances is prohibited unless obtaining prior approval from the Ministry.

**Article (23):** Importers of controlled substance's cylinders and containers shall label them with labels indicating clearly and accurately type, quantity, state and name of the substance country of origin, provided that each consignment shall be accompanied by all documents confirming such data labels and slickers shall also be placed on all imported refrigerants, aerosols and other imported products stating that they are free of controlled substances and contain ozone friendly substances.

**Article (24):** Standard specifications related to all imported equipment and appliances shall be identified in accordance with the provisions of these Regulations

**Article (25):** Controlled substances transport companies prior to passage of the Sultanate is entry ports and entry of its territory or territorial waters shall submit an application indicating type, quantity and state of transported substance together with the exporting agency and duration of stay within the territory of the Sultanate and its territorial and shall be attached to it a certificate of the country of origin and a permit to import from the importing country

**Article (26):** The Ministry and ROP Directorate General of Customs shall register controlled substances consumed quantities, and the Ministry, in coordination with the Directorate General of Customs, shall review and check periodically or utmost every six months the release data of these consignments

**Article (27):** All workers dealing with the controlled substances are prohibited from committing any of the following actions:

- Providing false or misleading information to the Ministry
- Smuggling or assist in smuggling of controlled substances or equipment, appliances and products harmful to the ozone layer.
- Replacing types of gases used in refrigerants and air conditioning with gases other than those designated by the manufacturing company.

**Article (28):** The importer shall return the imported consignment or quantity in access to the importing agency at his on expense in the event of importing without a prior license or importing quantities greater than those permitted to import

**Article (29):** Without prejudice to any severe penalty stipulated in the said Law on Conservation of the Environment and Prevention of Pollution issued by Royal Decree No.(114/2001) or any other law any offender to the provisions of this Regulations shall be fined an amount not exceeding R.O =/300

**Annex A: Controlled substances**

Group	Substance	Ozone-Depleting Potential*
<b>Group I</b>		
	CFCl <sub>3</sub> (CFC-11)	1.0
	CF <sub>2</sub> Cl <sub>2</sub> (CFC-12)	1.0
	C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> (CFC-113)	0.8
	C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> (CFC-114)	1.0
	C <sub>2</sub> F <sub>5</sub> Cl (CFC-115)	0.6

**Group II**

	CF <sub>2</sub> BrCl (halon-1211)	3.0
	CF <sub>3</sub> Br (halon-1301)	10.0
	C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> (halon-2402)	6.0

**\* These ozone depleting potentials are estimates based on existing knowledge and will be reviewed and revised periodically.**

**Annex B: Controlled substances**

Group	Substance	Ozone-Depleting Potential
<b>Group I</b>		
	CF <sub>3</sub> Cl (CFC-13)	1.0
	C <sub>2</sub> FCl <sub>5</sub> (CFC-111)	1.0
	C <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub> (CFC-112)	1.0
	C <sub>3</sub> FCl <sub>7</sub> (CFC-211)	1.0
	C <sub>3</sub> F <sub>2</sub> Cl <sub>6</sub> (CFC-212)	1.0
	C <sub>3</sub> F <sub>3</sub> Cl <sub>5</sub> (CFC-213)	1.0
	C <sub>3</sub> F <sub>4</sub> Cl <sub>4</sub> (CFC-214)	1.0
	C <sub>3</sub> F <sub>5</sub> Cl <sub>3</sub> (CFC-215)	1.0
	C <sub>3</sub> F <sub>6</sub> Cl <sub>2</sub> (CFC-216)	1.0
	C <sub>3</sub> F <sub>7</sub> Cl (CFC-217)	1.0

**Group II**

	CCl <sub>4</sub> carbon tetrachloride	1.1
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**Group III**

	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> * 1,1,1-trichloroethane* (methyl chloroform)	0.1
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**\* This formula does not refer to 1,1,2-trichloroethane.**

## Annex C: Controlled substances

Group	Substance	Number of isomers	Ozone-Depleting Potential*
<i>Group I</i>			
	CHFCI <sub>2</sub> (HCFC-21)**	1	0.04
	CHF <sub>2</sub> Cl (-22)**	1	0.055
	CH <sub>2</sub> FCl (HCFC-31)	1	0.02
	C <sub>2</sub> HFCI <sub>4</sub> (HCFC-121)	2	0.01-0.04
	C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub> (HCFC-122)	3	0.02-0.08
	C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub> (HCFC-123)	3	0.02-0.06
	CHCl <sub>2</sub> CF <sub>3</sub> (HCFC-123)**	-	0.02
	C <sub>2</sub> HF <sub>4</sub> Cl (HCFC-124)	2	0.02-0.04
	CHFClCF <sub>3</sub> (HCFC-124)**	-	0.022
	C <sub>2</sub> H <sub>2</sub> FCl <sub>3</sub> (HCFC-131)	3	0.007-0.05
	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub> (HCFC-132)	4	0.008-0.05
	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl (HCFC-133)	3	0.02-0.06
	C <sub>2</sub> H <sub>3</sub> FCl <sub>2</sub> (HCFC-141)	3	0.005-0.07
	CH <sub>3</sub> CFCl <sub>2</sub> (HCFC-141b)**	-	0.11
	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl (HCFC-142)	3	0.008-0.07
	CH <sub>3</sub> CF <sub>2</sub> Cl (HCFC-142b)**	-	0.065
	C <sub>2</sub> H <sub>4</sub> FCl (HCFC-151)	2	0.003-0.005
	C <sub>3</sub> HFCI <sub>6</sub> (HCFC-221)	5	0.015-0.07
	C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub> (HCFC-222)	9	0.01-0.09
	C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub> (HCFC-223)	12	0.01-0.08
	C <sub>3</sub> HF <sub>4</sub> Cl <sub>3</sub> (HCFC-224)	12	0.01-0.09
	C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> (HCFC-225)	9	0.02-0.07
	CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub> (HCFC-225ca)**	-	0.025
	CF <sub>2</sub> ClCF <sub>2</sub> CHClF (HCFC-225cb)**	-	0.033
	C <sub>3</sub> HF <sub>6</sub> Cl (HCFC-226)	5	0.02-0.10
	C <sub>3</sub> H <sub>2</sub> FCl <sub>5</sub> (HCFC-231)	9	0.05-0.09
	C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub> (HCFC-232)	16	0.008-0.10
	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> (HCFC-233)	18	0.007-0.23
	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> (HCFC-234)	16	0.01-0.28
	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Cl (HCFC-235)	9	0.03-0.52
	C <sub>3</sub> H <sub>3</sub> FCl <sub>4</sub> (HCFC-241)	12	0.004-0.09
	C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Cl <sub>3</sub> (HCFC-242)	18	0.005-0.13
	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Cl <sub>2</sub> (HCFC-243)	18	0.007-0.12
	C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Cl (HCFC-244)	12	0.009-0.14
	C <sub>3</sub> H <sub>4</sub> FCl <sub>3</sub> (HCFC-251)	12	0.001-0.01
	C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Cl <sub>2</sub> (HCFC-252)	16	0.005-0.04
	C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Cl (HCFC-253)	12	0.003-0.03

C <sub>3</sub> H <sub>5</sub> FCl <sub>2</sub>	(HCFC-261)	9	0.002-0.02
C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Cl	(HCFC-262)	9	0.002-0.02
C <sub>3</sub> H <sub>6</sub> FCI	(HCFC-271)	5	0.001-0.03
<b>Group II</b>			
CHFB <sub>2</sub>		1	1.00
CHF <sub>2</sub> Br	(HBFC-22B1)	1	0.74
CH <sub>3</sub> FBr		1	0.73
C <sub>2</sub> HFB <sub>4</sub>		2	0.3-0.8
C <sub>2</sub> HF <sub>2</sub> Br <sub>3</sub>		3	0.5-1.8
C <sub>2</sub> HF <sub>3</sub> Br <sub>2</sub>		3	0.4-1.6
C <sub>2</sub> HF <sub>4</sub> Br		2	0.7-1.2
C <sub>2</sub> H <sub>2</sub> FBr <sub>3</sub>		3	0.1-1.1
C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>2</sub>		4	0.2-1.5
C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Br		3	0.7-1.6
C <sub>2</sub> H <sub>3</sub> FBr <sub>2</sub>		3	0.1-1.7
C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Br		3	0.2-1.1
C <sub>2</sub> H <sub>4</sub> FBr		2	0.07-0.1
C <sub>3</sub> HFB <sub>6</sub>		5	0.3-1.5
C <sub>3</sub> HF <sub>2</sub> Br <sub>5</sub>		9	0.2-1.9
C <sub>3</sub> HF <sub>3</sub> Br <sub>4</sub>		12	0.3-1.8
C <sub>3</sub> HF <sub>4</sub> Br <sub>3</sub>		12	0.5-2.2
C <sub>3</sub> HF <sub>5</sub> Br <sub>2</sub>		9	0.9-2.0
C <sub>3</sub> HF <sub>6</sub> Br		5	0.7-3.3
C <sub>3</sub> H <sub>2</sub> FBr <sub>5</sub>		9	0.1-1.9
C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>4</sub>		16	0.2-2.1
C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Br <sub>3</sub>		18	0.2-5.6
C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>		16	0.3-7.5
C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Br		8	0.9-14.0
C <sub>3</sub> H <sub>3</sub> FBr <sub>4</sub>		12	0.08-1.9
C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Br <sub>3</sub>		18	0.1-3.1
C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Br <sub>2</sub>		18	0.1-2.5
C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Br		12	0.3-4.4
C <sub>3</sub> H <sub>4</sub> FBr <sub>3</sub>		12	0.03-0.3
C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Br <sub>2</sub>		16	0.1-1.0
C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Br		12	0.07-0.8
C <sub>3</sub> H <sub>5</sub> FBr <sub>2</sub>		9	0.04-0.4
C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Br		9	0.07-0.8
C <sub>3</sub> H <sub>6</sub> FBr		5	0.02-0.7

Where a range of ODPs is indicated, the highest value in that range shall be used for the purposes of the Protocol. The ODPs listed as a single value have been determined from calculations based on laboratory measurements. Those listed as a range are based on estimates and are less certain. The range pertains to an isomeric group. The upper value is the estimate of the ODP of the isomer with the highest ODP, and the lower value is the estimate of the ODP of the isomer with the lowest ODP. Identifies the most commercially viable substances with ODP values listed against them to be used for the purposes of the Protocol.

**Annex D\*: A list of products\*\* containing controlled substances specified in Annex A**

- | Customs code | Products number   |
|--------------|---|
|              | 1. Automobile and truck air conditioning units (whether incorporated in vehicles or not)  |
|              | 2. Domestic and commercial refrigeration and air conditioning pump equipment" e g Refrigerators, Freezers, Dehumidifiers, Water coolers Ice machines, air conditioning and heat pump units. |
|              | 3. Aerosol products, except medical aerosols  |
|              | 4. Portable fire extinguisher .   |
|              | 5 Insulation boards, panels and pipe covers   |
| 6            | Pre-polymers  |

This Annex was adopted by the Third Meeting of the Parties in Nairobi, 21 June 1991 as required by paragraph 3 of Article 4 of the Protocol

\*\* Though not when transported in consignments of personal or household effects or in similar noncommercial situations normally exempted from customs attention

\*\*\* When containing controlled substances in Annex A as a refrigerant and/or in insulating material of this product

**Annex E: Controlled substance**

Group	Substance	Ozone-Depleting Potential,
Group I		
CH <sub>3</sub> Br	Methyl bromide	0.6



Appendix (2)

PHASE –OUT SCHEDULE OF ODS UNDER MONTREAL  
PROTOCOL ARTICLE (5) COUNTRIES

Annex	ODS	Reduction Schedule
Annex A	CFC-11, CFC-12, CFC-113, CFC-114, CFC-115	a. Freeze: July 1999 (Note to exceed base level of 1995- 97) b. 50 Percent: January 01,2005 c. 85 Percent: January 01, 2007 d. 100 Percent : January 01, 2010
	Halones (Group-II): Halones 1211 Halones 1301 Halones 2402	a. Freeze: January 01, 2002 b. 50 Percent: January 01,2005 c. 100 Percent : January 01, 2010
Annex B	CFC's (Group-I): CFC13,CFC111, CFC112, CFC 211 CFC212, CFC213, CFC214, CFC215, CFC216 and CFC217	a. 20 Percent: January 01,2003 b. 85 Percent: January 01, 2007 c. 100 Percent : January 01, 2010
	Carbon Tetrachloride (Group-II):	a. 85 Percent: January 01, 2005 b. 100 Percent : January 01, 2010
	1,1,1 Trichloroethene : (Methyl Chloroform) Group- III):	a. Freeze: January 01, 2003 (Note to exceed base level of 1998- 2000) b. 30 Percent: January 01,2005 c. 70 Percent: January 01, 2010 d. 100 Percent : January 01, 2015
Annex C	HCFC's (Group-I):	a. Freeze: January 01, 2016 b. 100 Percent : January 01, 2040
	HBFC's (Group-II): Bromochloromethane (Group-III):	100 Percent : January 01, 1996 100 Percent : January 01, 2002
Annex E	Methyl Bromide	a. Freeze: January 01, 2002 b. 20 Percent : January 01, 2005 c. 100 Percent : January 01, 2015

Appendix (3)  
ODS Import License Fees

QUANTITY	OMANI RIAL
Up tot 500 kilograms	25
More than 500 kg – 1000 kg	50
More than 1000 kg – 5000 kg	100
More than 5000 kg – 10000 kg	150
More than 10000 kg	200