



On Products Containing Ozone Depleting Substances

A Guide to Customs Officers and Inspectors
in the Nordic Countries

Ingrid Kökeritz

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Preface

This guidebook is funded by the Nordic Council of Ministers, as part of a project to strengthen the control on exportation and importation/placing on the market of products that are prohibited or restricted under the European Union (EU) regulation No 2037/2000 on Substances That Deplete the Ozone Layer.

The guidebook is intended to highlight the importance of controlling importation and sale of products containing ozone depleting substances (ODSs). It describes the EU and national regulations and gives some indications on how to plan priorities and strategies for control on importation and sales of such products. The expectations are that it could be used as a starting point for closer cooperation between the authorities involved - inspectors, customs officers, police and prosecutors at all levels. This should pave the ground for allocation of resources and collection of more experience and, eventually, also for specialized enforcement campaigns.

The guidebook focuses primarily on controls on importation and placing on the market of *products and equipment containing ODSs*. National restrictions on this subject are also covered. Hereby the Swedish restrictions on some foam products that are made with but do not contain ODSs at the time of importation are also touched upon.

The guidebook does *not* cover controls on importation of *pure ODSs and their mixtures*. Considerable work to enhance the control on pure substances and mixtures is already undertaken by the United Nations Environment Programme (UNEP) and the Green Customs Initiative (see e.g. <http://www.greencustoms.org/ozone/home.htm>).

Controls on *exportation* of products containing or relying on use of ODS are only briefly mentioned. It has been found, during the first phase of the project, that enforcement of the export restrictions, from a practical perspective, are closely connected to controls under the EU Regulation

No 259/93 on shipment of hazardous waste. Actions to control exportation of products containing or relying on ODSs should therefore be coordinated with actions to control exportation of hazardous waste.

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Executive Summary

CFCs, HCFCs and other related chemical substances have been extensively used worldwide in the production of refrigerators, aerosol sprays, foam products etc. Emissions of these substances deplete the ozone layer, which protects the planet from harmful ultraviolet radiation from the sun. The emissions contribute also significantly to climate change. The international community has, in the Montreal Protocol, agreed to phase out gradually the production and consumption of the ozone depleting substances. The developing countries have been allowed a longer phase-out time than the developed countries.

The Nordic countries and the EU as a whole have worked actively to accelerate this process. This is in particular the case with regard to the HCFCs. The EU regulation No 2037/2000 and the national Nordic regulations on ozone depleting substances therefore contain also stringent phase-out schedules, not only for production, importation and exportation of the pure substances and their mixtures, but also for the importation of finished products that contain CFCs, HCFCs and other ozone depleting substances.

It is important that these efforts do not merely result in transfer of the production of relevant products to the developing countries and other developed countries with less stringent rules, followed by illegal importation of finished products back the EU and the Nordic countries - a conceivable scenario in particular with regard to HCFC containing products. The globalization of international trading, including trade on internet, and expanding exports from major developing countries such as China and India increase the possibility that some importation violates the restrictions.

Limited efforts have so far been made to control importation of products that are prohibited under the EU Regulation No 2037/2000 and/or

corresponding national Nordic regulations. It is now important to assign resources to this task. A strategy for controls on importation of ODS products will initially have to rely on general risk analysis methodology, tips from competitors and experience from and collaboration with other countries. Experience gained can then be followed up through more specialized enforcement campaigns. Some examples of products groups of special interest to control are described in chapter 7.

1. The Montreal Protocol

Emissions of chemicals such as man-made chlorofluorocarbons (CFCs) and several other chemicals deplete the ozone layer in the atmosphere, which is critical for life on earth. Depletion of the ozone layer will lead to increased radiation from the sun and can cause serious health effects, such as cancer, blindness and suppression of the immune system, seriously damage plants and the marine ecosystems and degrade plastics and other materials. The ozone depleting substances (ODSs) are also very powerful greenhouse gasses and contribute to climate change. The effects of the ozone depleting substances and of the greenhouse gasses reinforce each other.

The international community agreed in 1987, in the Montreal Protocol, to phase out the use of the eight most dangerous ozone depleting substances (CFC 11, 12, 113, 114 and 115 and halon 1211, 1301 and 2402, collectively called “Annex A substances”). Other chemicals have later been added through amendments to the Protocol. This includes ten “other CFCs”, carbon tetrachloride, 1,1,1-trichloroethane (also called methyl chloroform), hydrobromofluorocarbons (HBFCs), hydrochlorofluorocarbons (HCFC), bromochloromethane and methyl bromide. The HCFCs are special in that they have a much lower ozone depleting potential than the CFCs and can be used as an alternative to the CFCs. The HCFCs have therefore been allowed a longer phase-out time than the other ODSs. The original Protocol is now ratified by almost all countries in the world (191 countries as of 13 March 2007). All the amendments are also gradually being ratified.

The Parties to the Protocol have set up a time table for percentage reductions and ultimate elimination of the ODSs. The agreed reductions relate to production and consumption of ODS, with “consumption” calculated as “import plus production minus export” of pure substances and

mixtures. The countries are then free to choose their own methods to reach the agreed reductions.

All ODSs, except the HCFCs, are now in principal phased out in the developed countries. Some exemptions can still be granted for certain “essential” or “critical” uses. The developing countries are generally allowed a 10 years longer phase-out time than the developed countries. Most ODSs, except 1,1,1-trichloroethane and the HCFCs, shall be phased out by 1 Jan. 2010. 1,1,1-trichloroethane shall be phased out by 1 Jan. 2014.

For HCFCs, until recently, the phase-out schedule for the *developed* countries included a gradual reduction of *consumption* ending 1 Jan. 2030 and no restrictions on *production* of HCFCs except a freeze at the production level of 2004. For the developing countries, the *consumption* was allowed to grow unlimited up to 2015 level; it should then be frozen at that level in 2016 and phased out by 1 January 2040, with no intermediate phase-out steps in-between. The HCFC *production* in developing countries would be frozen at its 2016 level, with no phase-out date stated. It has been estimated that, with no further restrictions in place, the use of HCFCs in developing countries would grow to some 600,000 - 700,000 metric tonnes by 2015, with HCFC-22 accounting for most of it (primarily used for refrigeration and air-conditioning equipment).

At the 2007 Meeting of the Parties to the Montreal Protocol in September 2007, the phase-out schedule for HCFCs was drastically changed. New scientific and technical assessments of the links between emission of ODS and climate change has considerably contributed to this decision¹. The developed countries shall now reduce both production and consumption by 75% by 2015, by 90% by 2015, and finally phase them out by 2020, with a small amount still allowed for servicing of existing equipment until 2030. The baseline for consumption and production in the developing countries is changed to the average of the consumption and production, respectively, during 2009 and 2010. Gradual reduction steps

¹ Recent estimates indicate that the reduced emissions of CFCs and other ODSs achieved so far and expected to be achieved in case of full compliance with the Montreal Protocol during 1990-2010 can be equivalent to as much as eight Giga tones of reduced greenhouse gasses per year, calculated as carbon dioxide equivalents - to be compared to the two Giga tones annually estimated to result from the Kyoto Protocol during the same period. Accelerated phase-out of HCFCs can further increase these positive effects. G.Velders et. al. "The Importance of the Montreal Protocol in Protecting Climate."

are introduced and the final phase-out date set to 2030, allowing a small servicing tail until 2040.

The Parties have set up a Multilateral Fund (MLF) to assist the developing countries to phase-out their use of ODS.

The Protocol does not primarily control products that contain or are made with ODSs, but the national regulations set up to achieve the required reductions often do so. This is e.g. the case in the Nordic countries and the EU as a whole. These regulations include also controls on importation and placing on the market of products containing ODS to speed up the elimination of the ODSs and prevent unfair competition.

2. Use of Ozone Depleting Substances (ODS)

The ODSs, and in particular the CFCs, have been used in high volumes and for a wide variety of applications, due to their excellent technical properties. They are not flammable and very stable – exactly the property that makes the substances reach the ozone layer. Most of them have also a relatively low toxicity.

CFCs and *HCFCs* are in particular used as propellant in aerosol spray cans, as refrigerant in refrigeration and air-conditioning equipment and as foaming agent for many types of foam products. CFCs and HCFCs have also been used as solvents for various applications. The *halons* are used as fire extinguishing agents, Halon-1301 in fixed flooding systems and Halon-1211 in portable fire extinguishers. Halon-2402, which is very toxic, is only used in a limited number of countries, including some Central and Eastern European countries. *Carbon tetrachloride* and *1,1,1-trichloroethane* are used as solvents. *Methyl bromide* is used as a pesticide for various applications. The use of “*other CFCs*”, *HBFCs* and *bromochloromethane* is very limited or non-existing – these substances are primarily covered by the Protocol to prevent them from becoming alternatives to the other more widely used ODSs.

This guidebook, as mentioned in the preface, deals only with the EU and national Nordic controls on importation and placing on the market/sale of *products containing ODSs* but *not with importation and sale of the pure and mixed ozone depleting substances* themselves. The ODSs of most relevance are therefore the CFCs and HCFCs, in particular when used in aerosols, as refrigerants and as blowing agent in rigid foam products, and the halons. Most ODSs used as solvents evaporate already during the manufacturing process (with the exception of solvents used in

aerosol products) and are generally considered too difficult to trace to justify regulations on importation and sale of the finished products. The same is the case with methyl bromide.

3. Restrictions on Importation and Sale of ODS Containing Products

The current EU restrictions on importation from a non-EU country and placing on the market of products containing ODS are included in the EU regulation No 2037/2000, which also contains the EU restrictions on production, importation and export of pure and mixed ODSs as well as the restrictions on use and on export of products containing or relying on the use of ODSs. The same type of restrictions can also be found in the Nordic national regulations. Note that the descriptions below cover, on the whole, only those restrictions that are applicable to importation and placing on the market of products containing ODS.

The EU term “placing on the market” includes “supplying or making available to third persons, against payment or free of charge”, of products containing the controlled substances. The Swedish, Finnish and Icelandic regulations contain similar wordings (“yrkesmässigt överlätas eller saluhållas”, “markkinoille luovutus” and “markaðssetning” respectively). The term “placing on the market” will therefore be used for all of them. The Danish regulation prohibits “commercial sale” and the Norwegian just “sale”. The relevant legal text should be consulted if the exact wording would become an issue in a specific case.

A review of the EU regulation is scheduled for 2008.

3.1 EU Restrictions

The EU regulation differentiates between products and equipment containing CFCs, “other CFCs”, halons, carbon tetrachloride, 1,1,1-tri-

chloroethane, HBFCs and bromochloromethane, on one hand, and those containing HCFCs, on the other hand.

3.1.1 Products containing ODSs other than HCFCs

Importation and placing on the market of products and equipment containing CFCs, “other CFCs”, halons, carbon tetrachloride, 1,1,1-trichloroethane, HBFCs and bromochloromethane are prohibited, No 2037/2000 Art. 4 (6).

The restrictions apply to virgin as well as recovered, recycled and reclaimed substances. Products containing recovered, recycled and reclaimed halons were earlier exempted but this exemption expired 1 Jan. 2003, Art. 4 (4) (iv) and Art. 4 (6).

Products and equipment for which the use of the controlled substance has been authorized by the Commission - primarily spray cans of a type called “metered dose inhalers (MDIs)” used for asthma sprays and other respiratory diseases and products intended for laboratory applications - are exempted. Products listed as a critical use of halon in Annex VII of the Regulation (see *Appendix 1*) are also exempted, Art. 4 (iv). The latter exemption includes for *Halon-1301* primarily certain types of fire protection on board aircrafts and in occupied spaces of military vehicles/vessels. For *Halon-1211* it includes certain types of fire protection on board aircrafts, in military vehicles/vessel, for use by fire brigades and for use by military and police forces. The halon exemptions are reviewed annually by the EU Commission and evaluated against the existence of technically and economically feasible alternatives.

Products and equipment *shown to be* manufactured before 1 October 2000 are also exempted, Art. 4 (6) last sentence and Art. 24.

3.1.2 Products containing HCFCs

The restrictions on importation and placing on the market of products and equipment containing HCFCs are differentiated depending on the type of application for which the HCFCs are used, No 2037/2000 Art. 5 (1) and (4). The restrictions have been introduced gradually and are now in force for all types of products and equipment with the exception of solvents for precision cleaning in aerospace/aeronautic applications and for air-

conditioning equipment for military use in motor vehicles, tractor, off-road vehicles and trailers. Some of the restrictions were introduced already in the previous EU regulation No 3093/94, which entered into force 1 Jan. 1995.

Products and equipment that are shown to be manufactured before the date when the restriction on use of HCFC was introduced are exempted. For information on relevant dates, see *Appendix 2*.

Products and equipment intended for laboratory use are exempted, Art 5 (2) and (4).

HCFCs as fire-protection agents are exempted if intended as replacement for halons in existing systems in any of the listed critical uses where halons are still allowed and provided that a number of specified conditions are fulfilled, Art. 5 (3) and (4).

The EU Commission may allow a time-limited exception for a particular use where no other alternatives are available, Art. 5 (7).

3.1.3 Importation from Non-Parties to the Montreal Protocol

The Montreal Protocol contains bans on imports of certain products from a country that is not a Party to the original Protocol (see Annex D to the Protocol). These restrictions apply only if the product contains any of the five main CFCs or the three halons that were included in the original Protocol. They are no longer of any great importance as almost all countries in the world now are Parties to the original Montreal Protocol.

The EU regulation prohibits also, as required by the Protocol, importation of the same products from countries that are not Parties to the Montreal Protocol, with reference to a guiding list in Annex V of the EU regulation. The EU restriction is applicable to a somewhat broader category of products: “products containing controlled substances” instead of only on products containing the main CFCs and the halons. Also the EU restriction is now of very limited importance, in particular as the restrictions are not considered to apply yet to HCFC containing products from developing countries, as the HCFC restrictions have not yet entered into force for these countries.

3.2 National Regulations

Denmark, Finland and Sweden are members of the European Union and therefore bound by the EU regulation. These countries have in addition some national restrictions that go further than the EU regulation. Many of them entered into force earlier than the EU regulation.

Most products that are covered by the national restrictions are now covered also by the EU restrictions. The differences will therefore primarily be of relevance in connection with placing on the market of products coming from another EU country and for importation or sales of old products. It should however be noted that the Swedish regulation applies also to flexible foam products, which are *made with but do not contain* ODS and which therefore are not covered by the EU regulation.

The *national regulations in Iceland and Norway* follow to a large extent the EU regulation. These countries are not members of the EU but are members of the Agreement on the European Economic Area (EEA), which extends the principles of the internal market of the European Community to Iceland, Liechtenstein and Norway.

3.2.1 Denmark

The Danish national restrictions are included in the Statutory Order No 243 of 19 April 2002 on Certain Ozone-depleting Substances (Prohibition and Restrictions on Use).

This regulation states that, in addition to any EU Regulation in force, commercial sale of products that contain non-recovered controlled substances is prohibited, § 6-(2). This covers for instance sale of products coming from another EU country. Resale of products which complied with the Danish requirements at the time of the first sale or, in the case of first sale in the EU with requirements that ensured the same level of protection with regard to ozone-depleting substances, is permitted, § 6-(3). The controlled substances include all CFCs, carbon tetrachloride, 1,1,1-trichloroethane, all halons, all HBFCs, all HCFCs and methyl bromide.

The regulation does not apply to metered dose inhalers (MDIs) and medication pumps containing controlled substances, § 3-(1).

The Environment Protection Agency can allow exemptions in very special cases, including granting use of halons for critical uses in line with the EU regulation (§ 9-(2).

3.2.2 Finland

The Council of State Decree on Ozone Depleting Substances No: 262/1998 contains the national restrictions. The ban on placing on the Finnish market of new equipment containing HCFCs as refrigerants, as well as the ban for new products and equipment containing HCFCs in foams, entered into force 1 Jan. 2000. This ban is also valid for importation from another EU-country. The ban does not cover equipment which can be shown to be manufactured before that date - such old equipment may still be resold, used and serviced (unless prohibited by the EU regulation).

The placing on the market and use of halons and halon containing products is prohibited with following exempted areas: use in aeroplanes, use by fire brigades, use by defence forces and in manned communication centres critical for functioning of the society. The list of critical uses is thus more restricted than in EU-regulation. Existing halon products can be resold to these uses and they can be serviced.

The placing on the market of products containing CFCs, carbon tetrachloride and 1,1,1-trichloroethane has been banned since 1994. Used products may not be placed on the market or resold. The ban does not cover essential uses, like asthma treatment aerosols and laboratory uses.

There is no possibility to apply for exemptions.

3.2.3 Sweden

The Swedish restrictions on importation and placing on the market of ODS products, additional to the EU restrictions, are to be found in the Ordinance (2002:187) on Substances That Deplete the Ozone Layer, which replaced the Ordinance (1995:636) on Substances That Deplete the Ozone Layer. These restrictions generally entered into force earlier than the EU restrictions and may therefore apply to more old products than the corresponding EU restrictions.

Art. 5 of this ordinance prohibits placing on the market of foam products, listed in Annex 1 of the ordinance, if the product is part of a product

or contains foam that has been produced with CFCs or HCFCs. Note that the restrictions therefore apply not only to products containing CFCs or HCFCs but also to some products that are made with these substances, e.g. furniture and mattresses, but no longer contain them at the time of importation.

The description of the foam products is linked to customs code numbers (see *Appendix 3*). The restrictions entered into force 1 July 1995, with implementation delayed for certain products to 1 Jan. 1997 or 1 Jan. 1998. Products produced before those dates are exempted.

The ordinance contains also a ban on placing on the market of products that contain *CFC* refrigerants, if the product has been produced or imported to Sweden after 31 December 1994 (Art.6). In addition, there are general bans on placing on the market of aerosols that contain *CFCs* or *HCFCs* (Art.7) and of hand-held fire extinguishers containing *halons* (Art. 8 p. 1). These restrictions apply even if the goods come from another EU country. Importation of the same type of products from countries outside the EU is prohibited in Art. 12. In this case no exemption is made as to the date when the products were manufactured.

The National Environmental Protection Agency can grant exemptions from the regulation, by general regulations or individual decisions. Some other authorities have also been given such authorities with regard to certain types of products: the National Rescue Services Board with regard to halons in general, the National Maritime Administration with regard to halon facilities on board ships and the Medical Products Agency with regard to aerosols intended for medical purposes, all of them in consultation with the National Environmental Protection Agency.

3.2.4 Iceland

The Icelandic regulations on import and placing on the market of products containing ODS are included in Regulation No 586/2002 on Ozone Depleting Substances. Art. 4 of this regulation prohibits importation and placing on the market of products containing CFCs, halons, carbon tetrachloride, 1,1,1-trichloroethane, methyl bromide, bromochloromethane, HCFCs and HBFCs.

Importation of insulation/sandwich panels with foam containing HCFCs were exempted up to 1 Jan. 2003 and placing on the market of the same products up to 1 Jan. 2005 (Art. 5).

Importation and placing on the market of *reclaimed, recovered and recycled halons* for critical uses are exempted (Art. 6). Critical uses include use of Halon-1301 on board aircrafts to protect the crew compartment and on cargo ships to protect engine compartments that transport flammable liquids and/or gas. Critical use of Halon-1211 includes use in hand-held fire extinguishers on board aircrafts and by fire brigades in initial fire prevention when critical for the safety of persons (Art. 7).

Importation and placing on the market of reclaimed and recycled HCFC is allowed up to 1 Jan. 2015 (Art. 6). The importer must inform the Icelandic Environment Agency (IEA) on where the substances were reclaimed and present a certificate confirming conformity with the recognised standards of the IEA. The containers must be clearly labelled "Reclaimed". It is prohibited to import and place on the market reclaimed and recovered substances in disposable containers.

Importers and sellers shall register all imports and placing on the market of products and equipment containing ODS and send this information yearly to the IEA (Art.9).

Importation of products containing HCFC from states that are not parties to the Montreal Protocol is prohibited (Art. 12).

The Minister for the Environment can allow temporary dispensations, after consultation with the IEA. The Icelandic Medicines Control Agency should be consulted in cases concerning importation of drugs and medicines (Art. 12).

3.2.5 Norway

The Norwegian restrictions on importation of products containing ODSs are to be found in Chapter 6 of the Norwegian Product Regulations, FOR-2004-06-01 nr 922.

Products containing ODS other than HCFCs

Chapter 6, Sec. 6–7 and 6–8 contain general bans on importation and sale of products and equipment that contain CFCs, halons, carbon

tetrachloride, 1,1,1-trichloroethane, methyl bromide, HBFCs and bromochloromethane.

Importation and sale of the following products and equipment are exempted:

- products and equipment containing *halons* for critical applications, as defined in Appendix IV to the regulation, Sec. 6–11; the Norwegian Appendix IV corresponds largely to the EU Annex VII but is somewhat more restrictive – it does e.g. not exempt use by the police and the fire brigades (see Appendix 1);
- inhaler-type medications with a measured dose (MDI) containing CFCs (Sec. 6–14); and
- vehicles containing CFCs, if manufactured before 1 October 2000, imported as household goods when with the owner moved to Norway, or considered worthy of preservation under the Norwegian Motor Vehicle Regulations (Sec. 6–12, 2nd paragraph).

Sales of used refrigeration units containing CFCs as refrigerant are also exempted if the filling is less than 1 kg/unit and if the refrigerant units were manufactured before 1 July 1991 or with a dispensation under Regulation No 55 of 21 Jan. 1991 (repealed 1 Jan. 2003). Similar exemptions exist also for vehicle air conditioning units containing CFCs imported or installed before certain dates in the early 1990's or with dispensation under Regulation No 55 (Sec. 6–12).

Products containing HCFCs

The Norwegian regulation contains a general ban on importation and sale of products and equipment containing HCFCs (Chapter 6, Sec. 6–15). This ban has been in force since 1 January 2003 for most HCFC containing products, except for equipment for reversible air-conditioning/heat pump systems and some rigid insulating foam, in which cases the restrictions entered into force 1 January 2004. Products and equipment for military use of vehicles, tractors, off-road vehicles and trailers are exempted until 31 December 2008.

Products and equipment that are produced before the restrictions entered into force are exempted.

The regulation contains some general exceptions on use of HCFCs (Chapter 6, Sec. 6–18).

3.3 Correlation between the Restrictions and Customs Codes

The customs coding system is, in most countries, based on the international convention on the Harmonised Commodity Description and Coding System (HS). This is a hierarchic system which divides all goods in 97 chapters starting from the simplest and proceeding towards more complex products. The international convention assigns the first six digits. The two first digits describe the chapter, the third and fourth digits the heading under that chapter and the fifth and sixth digits the subheading. Each country can then build further on this system by adding further subdivisions under the relevant subheading, as considered appropriate for its control and statistic needs. The EU has first added a seventh and eighth digit to create the Combined Nomenclature (CN), which contains the legal customs tariff. The EU has then further subdivided the CN by adding a ninth and tenth digits, the TARIC system, as a working instrument to allow subdivisions depending on trade restrictions, etc. The customs codes databases can be used to flag up the need for a licence or the existence of other restrictions, such as bans on importation of certain products.

Most ODS restrictions, however, describe the controlled products in fairly general terms, supplemented by more or less detailed wording on the material or function of the product but not linked to specific customs code numbers (see e.g. Appendix 2). One exception is the Swedish restrictions on foam products. This can make it difficult to incorporate controls on importation of ODS products in the routine controls at customs offices. Products covered by a few sentences in the ODS regulations can appear under many different customs codes (see examples in the notes to Appendix 2). Controls on importation of ODS products will instead have to be based on special campaigns against suspected products or groups of products.

The customs codes listed in Annex V of the EU regulation can be of some help to customs officers (see Appendix 4). It should be noticed that these customs codes are intended to assist in the implementation of the

ban on importation of products from Non-Parties to the Protocol (see 3.1.3) – a more limited restriction than the general EU and national restrictions. The customs codes on foam products used in the Annexes to the Swedish regulation can be of further assistance (see 3.2.3 and Appendix 3). As for the Swedish code numbers, it should be kept in mind that these cover also foams that are made with but no longer contain CFCs or HCFCs (see e.g. the HS heading 94.01, 94.03 and 94.04) – categories that are not covered by the EU regulation.

Some examples are given in Chapter 7 on products of specific interest to control. Customs codes for these products are indicated only at the HS level (four to six digits) as the more detailed subdivision at the CN or TARIC level normally is of no specific relevance with regard to the ODS regulations.

3.4 Short on Exports of ODS Products

The EU regulation No 2037/2000 also prohibits export from the Community of ODS products and equipment (Art. 11). This ban is broader than the ban on importation in that it includes also products that do not contain CFCs etc. but rely on supply of these substances for their function (e.g. CFC refrigerators), but more narrow in that the ban does not include export of products that contain HCFCs. There is a market, in particular in Africa, for all kind of refrigeration and air-conditioning equipment. Discarded equipment containing or relying on CFC refrigerants is therefore attractive to export from the Nordic countries, especially as the legal requirements at least in some countries make it costly to dispose of them at home. There is also a market for CFC compressors and mobile air-conditioning systems (separately or installed in vehicles). Other products that might be illegally exported in violation of the EU's Regulation No 2037/2000 could perhaps be insulation building material blown with CFCs and halon fire extinguishers, although the export market for these products probably is less apparent.

Exports of these products are also covered by the restrictions in the EU regulation No 1013/2006 on shipments of waste (which has replaced regulation No 259/93 on Supervision and Control of Shipments of Waste Within, Into and Out of the European Community). There are legal dif-

ferences in details between the controls on export of ODS products in these two regulations but, from a practical perspective, exports that are prohibited under the export ban in Art. 11 of the EU Regulation No 2037/2000 are likely to also violate the EU Regulation No 1013/2006 on shipment of waste. There are benefits in being able to choose the most effective regulation when controlling exports of ODS products. There are also substantial ongoing activities to enhance the control on exports of waste that contain dangerous substances. As an example, the EU Network for Implementation and Enforcement of Environmental Law (IMPEL) has initiated cooperation between major ports in Europe within the framework of a project called the TFS-Seaport Project to catch illegal exports of waste, including refrigerators containing CFCs. Ozone officers and officers in charge of controls on transboundary shipment of waste should therefore establish effective cooperation on enforcement of the regulations in this field. Controls on export of ODS products is therefore not dealt with any further in this guidebook.

4. Importance of Controlling Importation of ODS Products

The Montreal Protocol reflects the level of control on which all countries at a given point in time have been able to agree. In other words, it reflects the lowest common denominator. The requirements are, as mentioned, from time to time being made more stringent as a result of the regularly ongoing negotiations between the Parties to the Protocol. The latest example is the sharpening of the phase-out requirements on HCFCs at the 2007 Meeting of Parties, partly triggered by the growing awareness of the HCFC emissions' importance for climate change.

The Nordic countries and the EU as a whole have worked actively to achieve effective reductions on the production, use and emissions of ODSs. This has in particular been the case with regard to control on the HCFCs. This is why the regulations in the EU and Nordic countries contain stringent phase-out schedules, not only for production and importation of the pure and mixed substances as such, but also for the importation of finished products that contain CFCs, HCFCs and other ozone depleting substances and in the manufacturing of products containing HCFCs, as described in chapter 3. Some other developed countries, e.g. the US, have still less stringent rules, in particular for the use of HCFCs in the manufacturing of finished products.

The Multilateral Fund, set up to assist the developing countries to phase-out the ODSs, was initially used primarily to convert factories that used CFCs in their production to other alternatives. This has unfortunately also led to an extensive use of HCFCs as a transitional solution, in particular in the foam section - allowed under an understanding that the factory owner would have to pay the final transition to non-ozone-depleting alternatives on his own. Many factories in the developing coun-

tries therefore now use HCFCs in their production. This will gradually change due to the new agreement on HCFCs. Criteria for assistance from the Multilateral Fund will now give priority to projects that i.a. focus on substitutes and alternatives that minimize the impact on the environment, including impact on the climate. But it will take many years before these new criteria will notably change the total production of relevant products in the developing countries.

It is important to ensure that the active work conducted by the Nordic countries and the EU does not just result in that the manufacturing of products containing ODS is replaced by manufacturing in other countries, e.g. in the developing countries, followed by illegal importation of the finished products back to the EU/Nordic countries, which is a conceivable scenario for instance with regard to HCFC products.

Export to Europe is of great importance to many companies in developing countries such as India and China. It is important to secure that the risk of violating the European restrictions is not perceived as very low by these companies. Effective controls on imports containing ODS will also indirectly support the environmental authorities in the developing countries in their efforts to phase out the consumption of HCFCs.

5. Supervising authorities

5.1 Denmark

The Danish Environmental Protection Agency (MST) is responsible for supervision and control of compliance with the provisions in the Danish regulation (the Statutory Order 243/2002, § 9–1). The Central Customs and Tax Administration shall assist the MST in the control.

5.2 Finland

The import requirements are controlled by Customs Finland. The placing on the market requirement is controlled by the chemical supervision authorities in the municipalities. The Finnish Environment Institute (Suomen Ympäristökeskus, SYKE) provides guidance for the supervision.

5.3 Iceland

The local authorities, distributed in 10 local areas, are responsible for inspection and enforcement of the Icelandic Regulation on Ozone Depleting Substances, under supervision of the Icelandic Environment Agency, IEA (Regulation 586/2002, Art. 13).

5.4 Norway

The Norwegian Pollution Control Authority (SFT) has the primary responsibility to control compliance with the ODS regulations (FOR-2004-06-01 nr 922, Sec.7–2). The Norwegian Ministry of Environment can

delegate the responsibility to control compliance with the regulations to other agencies but this possibility has not been used so far.

5.5 Sweden

The local authorities have the operative responsibility to supervise compliance with the EU and Swedish restrictions on ozone depleting goods within their districts (Ordinance 1998:900 on Supervision According to the Environment Act, §§ 3, 4 p.2 and the Annex).

The Swedish Environmental Protection Agency (SNV) has the central responsibility to evaluate, follow-up and coordinate the operative supervision and to give the operative authorities support and advice. The county administrations have a similar responsibility for coordination and support to the operative authorities within their counties (§§ 13 and 14 of the same Ordinance).

The customs authorities have no explicit responsibility to supervise compliance with the regulations on ozone depleting products but have a general responsibility to prevent violation of import and export restrictions.

6. Priorities and Strategies

Very limited efforts have so far been made to control importation of products that are prohibited under the EU Regulation 2037/2000 or corresponding national Nordic regulations. As a consequence, little is known on the extent of illegal importation in this field. A few cases are known from Sweden, as described below in Section 7.4.1 and 7.4.2. They are all based on tips from competitors. The history of these cases indicates that even well established importers might find the risks connected with violation of the restrictions very low.

A strategy for controls on importation of ODS products will initially have to rely on general risk analysis methodology, tips from competitors and experience from and collaboration with other countries.

The risk analysis can be based on general knowledge on differences in the regulations between Nordic countries and countries outside the EU. Products most likely to be illegally imported to the Nordic countries include for instance HCFC containing products that can still be produced in the US but are prohibited in the EU and products produced in the developing countries, in particular in Asia. The globalization of international trading, including trade on internet, and expanding exports from developing countries such as China and India increase the possibility that certain imported products violate the restrictions.

A search on the national customs' database could help in identifying the extent of trade in relevant types of products with countries that allow relevant types of ODSs in their products.

Search on internet can also give indicative information on the trade in general in products that would not fulfil the EU/Nordic requirements if imported to the Nordic countries.

The risk analysis should include gathering information on products and countries of origin with regard to cases of illegal importation that has been discovered in any other developed country.

Some examples on products of special interest are given in Chapter 7.

Information on importers that have been found to import products containing ODS illegally in one Nordic country should be collected and shared with colleagues in the other Nordic countries. It is likely that companies that are active in one Nordic country are also active in another.

Collection of information on reasons why an enterprise suspects that its competitors are importing unlawful products could help in building up an experience on illegal importation.

Collaboration between customs authorities and the agencies with a direct supervising responsibility and also with colleagues in the other Nordic countries should be a first priority.

Interpol has a well organized international cooperation on environmental crime. Interpol has identified environmental crime as one of the most profitable and fastest growing areas of international criminal activities, motivated by high profits and low risks. Interpol has therefore established a system of structured international information reporting system, called Ecomessage, which is operated through Interpol's local office in each country, the National Central Bureau (NCB), normally located in the central police authority. An [Ecomessage](#) should be prepared every time an environmental crime of international consequence is discovered, see <http://www.interpol.int/Public/EnvironmentalCrime/Default.asp>. It might be possible to use this system also to ask other countries for experience on potential illegal trade in certain ODS products.

The Chemical Legislation European Enforcement Network (CLEEN) – a network for cooperation between national chemicals inspectorates – is currently conducting a project to strengthen the enforcement of EU's regulations on internet trade, called "E-Commerce". The main focus is on classification, packaging and labelling of dangerous substances and preparations, but now and then products containing ODS are also caught. The activities include locating and inspecting companies and persons that offer chemicals on the internet and taking follow-up actions against the vendors such as demanding cancelling of the offer, informing customs authorities, the police and other competent authorities and taking steps to withdraw the market/internet place, in accordance with applicable na-

tional legislation. Contacts should be established with officers involved in the E-Commerce project to make best possible use of their experience and ensure mutual exchange of information on existing illegal trade in ODS products.

It is important that the supervising authorities and/or the police have resources and possibilities to take samples and conduct laboratory tests on suspected products on their own after random sampling so that they do not have to rely only on information presented by the suspected enterprise. It is also important that investigations on suspected cases are followed through and not closed just because the suspected enterprise declares that the “mistake” has now been corrected.

7. Some Products of Specific Interest

This chapter describes some of the products that might be of special interest when planning controls on importation and placing on the market of ODS products and the reasons why these products could be of specific relevance. The EU and national restrictions of relevance for each type of product are summarized. The summaries are general and apply to new products. For exemptions and other details, e.g. with regard to products manufactured before a certain date, see Chapter 3. Remember that it is up to the person importing or selling a product to show that the product is manufactured before the relevant date.

References to articles and paragraphs under the EU and national regulations refer to the regulations described in Chapter 3 for the country in question.

Pictures below are aimed at illustrating the product types only and do not allege anything about the possible content of ODS in the product on the picture.

Note also that the internet addresses given may no longer be valid as some of them change rapidly.

7.1 Aerosol cans (non-MDIs)

CFCs in aerosol cans are primarily used as propellant to expel the active ingredient but can also be used as a solvent or even be the active ingredient. *Carbon tetrachloride* and *1,1,1-trichloroethane* are also used in spray cans as solvents.

CFCs have been extensively used because they are non-flammable, evaporate rapidly, have a high density, low viscosity and surface tension

and have been available at a relatively low cost. CFCs have historically been used in a wide variety of aerosol spray cans, including for instance

- hair sprays, deodorants and other toilet preparations
- paints
- some food preparations, e.g. cream substitutes
- mould releases, solvents and other industrial or technical preparations,
- insecticides and other pesticides
- pain reliever, bandage adhesive removers, asthma inhalers and other drugs
- toys and party products

and also

- to remove dust from photos, computer boards etc,
- to identify faults in electronic equipment and facilitate piping repairs,
- to remove chewing gums, etc.
- to create noise in alarm horns, football supporter air horns and toys.

CFCs used in medical inhaler preparations for asthma and other respiratory diseases ("metered dosed inhalers, MDIs") are considered as the most difficult to replace and are therefore discussed separately in section 7.2 below.

The MLF has assisted the developing countries in converting aerosol factories to non-ODS technologies, primarily to use of hydrocarbons. Hydrocarbon is a cheaper ingredient but highly flammable and requires therefore more sophisticated production facilities. The developing countries have however many small aerosol fillers that cannot be safely converted to hydrocarbons. CFC aerosol cans are simple to produce - they can virtually be produced in a garage. Small factories are therefore difficult to localize.

HCFCs, primarily HCFC-22 and HCFC-141b - as well as HFCs (hydrofluorocarbons) which do not deplete the ozone layer but are green-

house gasses contributing to climate change - are mentioned as alternatives that require minimum plant investment.

The latest *reported* use of CFCs (related to 2003/2004) was around 2000 tonnes, all of it in the developing countries (TEAP 2006 Assessment)

The main remaining uses of CFCs and HCFCs are considered to be for

- medical products such as local anaesthetics, wound sprays and traditional Chinese medicines,
- industrial and technical aerosols such as dusters, electronics cleaners, freeze sprays, anti-spatter sprays, tire inflators, fluorinated greases deposition etc.
- insecticides and disinfectants for aircrafts etc

An aerosol can that contains hydrocarbons should have a warning sign for flammable content.



Figure 1 Aerosol cans.

HS codes:	Depending on type of product, see examples in Appendix 4. See also HS codes 9505 and 9616.
EU Restrictions:	Importation from a non-EU country and placing on the market of products containing all controlled ODSs, including HCFCs, are prohibited (on essential use in MDIs see 7.2).
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale prohibited, including for products from another EU country
Finland:	Placing on the market of aerosol products containing HCFC and CFC prohibited, including products from another EU-country.
Sweden:	Importation from a non-EU country and placing on the market of aerosol cans containing CFCs or HCFCs prohibited, from any country. Exemptions allowed only under specially compelling reasons.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing all controlled ODSs, including HCFCs, prohibited.
Norway:	Importation and sale of products and equipment containing all controlled ODSs, including HCFCs prohibited.

Discovered illegal import:

Environment Canada discovered in 2002, based on tips, an imported Chinese product called “Party Crazy String” containing CFC-12. Further inspections revealed similar products in several “dollar stores”. This included “Carnival Fun Streamer” made in Taiwan and containing HCFC-22, “Party Streamer” made in China and containing CFC-12, and “Silly String” containing HCFCs. Some CFC products were marked “CFC free”. Some of the Chinese exporters had links to organized crime in other areas.



Figure 2 Party Streamers (the products on the picture are not the ones tested by Environment Canada - it is not known if just these products contain ODS).

A search on internet (Nov. 2006) shows that "Silly String" and "Party Crazy String" and "Party Crazy String" are still on the market, at least in the US. The internet sites do not reveal anything about the current content in the products, the producers or whether they are exported to any of the Nordic countries. Wikipedia notes (Nov. 2006) that the CFCs in "Silly String" were recently replaced with HFCs - whether this applies to production in all countries and for all markets is an open question.

Party streamers and air horns can be found in local shops in the Nordic countries, e.g. in Stockholm - whether they contain ODS is not known. These types of products are also readily available on internet, for instance on www.alibaba.com.

7.2 MDIs (Meter-dosed-inhalers)

The Parties to the Protocol determine each year how much CFC each developed country may authorize its producers and importers to use for production of aerosol sprays to treat asthma and other respiratory diseases (MDIs) - as an exemption to the general ban on production and consumption of CFCs in developed countries. The EU Commission will then issue specified, quantified licences for production and importation of CFCs to be used in the manufacturing of CFC-MDIs within the community.

The final phase-out date for CFCs in developing countries is 1 Jan. 2010. These countries can therefore continue to use CFCs in MDIs up to that date without any special authorization from the Parties.

The authorization from the EU Commission does not directly deal with the importation and placing on the market of the finished products. But the general ban in Art. 3 (6) of the EU regulation prevents importation and placing on the market of CFC-MDIs except for MDIs where the use of CFCs has been considered essential. The national authorities inform the EU Commission each year on the therapeutic categories for which they no longer consider CFC essential. A list specifying these non-essential uses and the countries where such products no longer may be placed on the market is published by the Commission (see <http://ec.europa.eu/environment/ozone/uses.htm>).

In Iceland and Norway, the national regulations regulate importation and placing on the market of the MDI products. Placing on the market,

including from another EU country, is also covered in the Swedish regulation.



Fig. 3 Asthma inhaler

HS codes:	30.04
EU Restrictions:	Importation and placing on the market of MDIs containing CFCs are only allowed for products in therapeutic categories where the use of CFCs has not been declared as non-essential.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Only the EU restrictions.
Finland:	No additional restrictions to EU regulation.
Sweden:	Importation from a non-EU country and placing on the market of products from any country are in principal prohibited, but an exemption can be allowed by the Swedish Medical Products Agency under especially compelling reasons.
National Regulations in Iceland and Norway:	
Iceland:	Importation and sale prohibited. The Minister of Environment can allow temporary exemptions, after consulting the IEA and, through the IEA, the Icelandic Medicines Control Agency. The applicant must explain why substances with less ozone depleting impact cannot be used and submit a schedule to minimize emissions.
Norway:	Inhaler-type medications with MDIs containing CFCs are exempted from the general restrictions on importation and sale (Sec. 6-14).

7.3 Refrigeration and Air-conditioning Equipment - the refrigerant

CFCs and HCFCs have been used as refrigerant in a wide variety of refrigeration and air-conditioning equipment. This includes products such as refrigerators and freezers, cooling boxes, ice machines, industrial refrigeration units, stationary and mobile air-conditioning units (AC/MAC), heat pumps and dehumifiers. CFCs and HCFCs are also used in the foam insulation in some of these products, see Sec. 7.4.1-2 below.

Traditionally, the most common CFC refrigerant was CFC-12, generally called R-12 ("R" for refrigerant). The most common HCFC refrigerant is HCFC-22 (R-22). A new alternative is HFC-134a (R-134a), not ozone-depleting but unfortunately a greenhouse gas. Various HCFCs and HFC blends are also now replacing the CFCs. The HCFC blends include e.g. R-401A (MP 39) and R-401B (MP 66), both containing HCFC-22, HFC-152a and HCFC-124. Halon-1211 and Halon-1301 have occasionally been used as refrigerants to a very limited extent - then called R-12B1 and R-13B1.

Refrigeration and air-conditioning systems must be serviced with the type of refrigerant for which they have been designed unless they are retrofitted for a different refrigerant. Importation and placing on the market of equipment designed for ODS refrigerants increase therefore also the need for the same type of pure or mixed ODS for servicing and have consequently a long term impact.

7.3.1 Domestic refrigerators and freezers

The refrigerant in domestic refrigerators and freezers, which traditionally contained CFC-12/R-12, has generally been replaced by HFC-134a or hydrocarbon (HC-600a) in developed countries. Conversion of the domestic refrigerator production in developing countries to HFC-134a, HC-600a or blends of HC-600a and HC-290 is ongoing with assistance from the MLF.

Refrigerators and freezers containing R-12 and R-22 refrigerants are, however, marketed on internet sites, see e.g. www.alibaba.com. Whether any such products are exported to Europe cannot be determined from the internet sites.

The refrigerant is normally specified on the plate with manufacturing data on the compressor at the back of the refrigerator or inside the refrigerator.



Figure 4 Plate on a compressor at the back of a refrigerator, showing the type of refrigerant used in the system. Note the text R-12.

HS codes:	HS 8418.10 – 8418.69
EU Restrictions:	Importation from a non-EU country and placing on the market of equipment containing CFC or HCFC refrigerant are prohibited.
Additional national Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale of products containing non-recovered ODS refrigerants is prohibited - in practice applicable only to importation from another EU country as the more strict EU rules cover importation from non-EU countries.
Finland:	Products and equipment containing CFCs and HCFCs as refrigerants may not be placed on the Finnish market, including equipment from another EU-country.
Sweden:	Importation from a non-EU country and placing on the market of equipment containing CFC refrigerants from any country are prohibited. No specific rules on equipment containing HCFC refrigerants in addition to the EU regulation.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing a CFC or HCFC refrigerant are prohibited.
Norway:	Importation and sale of equipment containing a CFC or HCFC refrigerant are prohibited.

7.3.2 Air-cooled stationary air-conditioners

Air-cooled air-conditioners for domestic and smaller commercial use (small shops and offices) contain by tradition HCFC-22 as refrigerant. This sector is a large and fast growing consumer of HCFC-22 (R-22), triggered in particular by rising standards of living in countries like China and India. Some estimates suggest that the demand for HCFC-22 in developing countries could perhaps reach 500,000–600,000 metric tonnes

by 2010, which is already higher than earlier market predictions for 2015 (UNEP TEAP 2006 Assessment).

China is now the world's dominant producer of window air-conditioners. Many Chinese producers and sellers of air-conditioners can be found on internet, e.g. on www.alibaba.com. Only some of the product descriptions indicate on the website what kind of refrigerant the system contains. This should however in any case be possible to see on the product itself, as it is an important piece of information to the service technician. It is reported that China is stepping up its exports of R-22 air-conditioners to the US after the European closure of the import market for such air-conditioners. This indicates that there have been exports also to Europe and provides reasons to ensure that imports of such items are not continuing illegally.



Figure 5 Split air-conditioning unit

HS codes:	HS 8415.10
EU Restrictions:	Importation from a non-EU country and placing on the market of AC systems are prohibited if the system contains CFCs or HCFC refrigerant.
Additional national Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale of products containing non-recovered ODS refrigerants is prohibited - in practice applicable only to importation from other EU countries as the more strict EU rules cover importation from non-EU countries.
Finland:	Products and equipment containing CFCs and HCFCs as refrigerants may not be placed on the Finnish market, including equipment from another EU country.
Sweden:	Importation from a non-EU country and placing on the market of equipment that contains CFC refrigerants, from any country, are prohibited. No specific rules on equipment containing HCFC refrigerants in addition to the EU regulation.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of equipment containing CFC or HCFC refrigerants prohibited.
Norway:	Importation and sale of equipment containing CFC or HCFC refrigerants prohibited.

7.4 Foam products

Historically, foam plastics have relied heavily on CFCs, primarily CFC-11, as a blowing agent. The CFCs have been used in a wide variety of foam products. Of special interest with regard to import controls are the *rigid insulation foams* in products such as

- appliances,
- cooling boxes,
- panels and boards,
- pipes,
- insulation foam sprays and
- other building/construction material.

These products have closed cells where the blowing agent remains in the foam, in contrast to flexible foam products with open cells such as mattresses and furniture where the blowing agent is released in the factory or very soon after. Restrictions on importation and placing on the market of products *containing* ODSs, as in the EU and most of the national Nordic regulations, apply therefore to rigid foam products but not to most flexible foam products.

Some integral skin foams (used e.g. for computer cabinets, skis and tennis rackets) and floatation foams have also closed cells with the ODSs retained in the foam. But most of the integral foam products have open cells (e.g. when used for steering wheels, armrests, shoe soles, bumpers, packaging or floral foams).

In Europe, the CFCs in foams products have generally been replaced by hydrocarbons and other non-ODS technology, while in the US the CFCs initially have been replaced by HCFCs, as a transitional substance. A transition away from HCFCs is ongoing also in the US although at a slower pace than in Europe. Importation of HCFC-141b – an HCFC with as high an ozone depleting potential as 1,1,1-trichloroethane - is now prohibited in the US since 1 Jan. 2003 and production allowed only for export to other countries, with certain limitations. Existing users are allowed to continue using HCFC-22 and HCFC-142b in rigid polyurethane foams up to 1 March 2008 except for in marine application where the deadline is 1 September 2009. Existing users of HCFC-22 and HCFC-

142b in extruded polystyrene (XPS) is allowed to continue up 1 Jan. 2010 (<http://www.epa.gov/EPA-AIR/2007/March/Day-28/a5491.htm>).

The developing countries have to a large extent replaced CFCs with HCFCs, primarily HCFC-141b but also HCFC-22 and blends of HCFC-142b/HCFC-22. CFC-11 is still used in some developing countries, in particular by smaller producers. It is expected that HCFCs will continue to be used in the developing countries for many years.

ODSs used in the foam can only be identified by laboratory testing. The supplier has no specific reason to reveal the foam blowing agent except when he wants to underline that it is not an ODS. This is contrary to the situation with regard to ODS refrigerants and fire extinguishing agents, where the customer can have a more direct need to know the content.

Strategies for import controls on foam products will therefore have to build on an assessment of the potential risk, for instance that a type of product is allowed on the US market or produced in a developing country.

7.4.1 Appliances (domestic refrigerators/freezers etc) – the foam

HS codes:	8418
EU Restrictions:	Importation from a non-EU country and placing on the market of products containing CFCs or HCFCs are prohibited.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale of products containing CFC or HCFC is prohibited including products from another EU country.
Finland:	Placing on the market of products containing CFCs or HCFCs prohibited, including products from another EU country.
Sweden:	Importation from a non-EU country and placing on the market of appliances from any country are prohibited if the insulation contains CFCs or HCFCs and the product falls under the HS codes listed in Appendix 3.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing CFC or HCFC prohibited (from any country).
Norway:	Importation, from any country, and sale of equipment containing CFC or HCFC prohibited.



Figure 6 Inside detail of domestic refrigerator during manufacturing, showing the foam insulation.

Discovered Illegal Import:

The Swedish prosecutor in the Malmö district has charged Inventum Skandinavia AB for intentionally or by negligence importing a great number of refrigerators and freezers with the American brand name Amana during 2000-2001. The products contained HCFC-141b in the insulation foam, which at that time was still allowed in refrigerators and freezers under the EU Regulation but prohibited according to the Swedish regulation. The refrigerators had build-in ice machines, by the importers considered as “high-end-refrigerators”. The company accepted a fine set by the prosecutor. The company had for several years persistently and successfully requested time-limited dispensations from the Swedish import ban, referring to its difficulties in changing the production just for the Swedish market. The last dispensation expired in 1997. The company claimed, when appealing unsuccessfully the denied further dispensation, that the imported products were now only intended for storage, waiting for further export to countries outside Sweden. The company’s decision to accept the fine shows that the company continued to import its products despite the denied dispensation.

Another company reported in 2002 that a competitor imported refrigerators and freezers containing HCFC-141b in the foam from the American company General Electric. Also this company had persistently requested and repeatedly received exemptions from the Swedish legislation, the last one expiring by the end of 1997. Also this case was reported by the Swedish EPA to the prosecutor. The prosecutor closed the case without prosecution in February 2006, with a statement that there was no longer a need to pursue the investigation. General Electric had finally stopped using HCFC-141b in 2003 when production of HCFC-141b be-

came prohibited in the US. Only limited investigations seem to have been made by this prosecutor on imports during 2001–2002.

It is reasonable to assume that production of appliances using HCFC-141b has stopped now in the US but some production might still take place in some developing countries. It is also possible that HCFC-141b has been replaced by other types of HCFCs.

7.4.2 Cooling boxes

Cooling boxes of various types and sizes are available on internet sites, e.g. on www.alibaba.com. It is not possible to know from the internet sites what kind of blowing agent is used in the foam. Some descriptions specify that they are CFC free, without saying anything about a potential HCFC content.



Figure 7 Cooling box.

HS codes:	3923.10 or 84.18
EU Restrictions:	Importation from a non-EU country and placing on the market of product containing CFCs or HCFCs are prohibited.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale of products containing CFC or HCFC is prohibited, including products from another EU country.
Finland:	Placing on the market of products containing CFCs or HCFCs prohibited, including products from another EU-country.
Sweden:	Importation from a non-EU country and placing on the market of products from any country are prohibited, if the foam contains CFCs or HCFCs and provided that the product falls under any of the HS codes listed in Appendix 3.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing CFC or HCFC prohibited, from any country.
Norway:	Importation and sale of equipment containing CFC or HCFC prohibited, from any country.

Discovered Illegal Import:

A competitor to Agenturfirman Asko AB has revealed importation of cooling boxes containing HCFC-141b. The boxes lacked all information on producer and country of origin. The case is forwarded to the local supervising authority in Gothenburg. Asko AB has claimed that the “freon” content only applied to a limited number of boxes and was due to a mistake by a sub-contractor, a mistake that should now be corrected.

7.4.3 Insulation panels, boards, pipes etc.

The CFCs have been used in particular in polyurethane (PUR) foams and extruded polystyrene (XPS) foams for insulation panels, boards, pipes and other building construction material. CFC blown foams can achieve high values of energy efficiency (λ -value 0.018-0.022 W/mK) with thin layers of foam insulation and a compressive strength, a property that can be important e.g. for areas that should bear heavy traffic or buildings. Pentane, widely used to replace CFCs in Europe, increases the thermal conductivity with 15–20 %. HCFC-141b, which has been the preferred option in the US until prohibited internally, provides the same thermal conductivity and physical properties as CFC-11. HCFC-22, HCFC-123 and blends of HCFC-22 and HCFC-142b have also been accepted options in the US. New HFC chemicals (not ozone-depleting but greenhouse gasses) have been developed to replace HCFC-141b but are more costly. In developing countries, HCFC-141b is predominant.

CFCs are also used in sprayed polyurethane foams for rigid thermal insulation. The foam is sprayed directly from the mixing head on the surfaces by a hand-held pressurized spray gun. This facilitates coverage of large and complex surfaces and adjustment to the specific environment. The most commonly used replacement for CFCs is HCFC-141b.

An assessment of the potential risk for illegal importation and sales of insulation panels and other building construction material containing CFCs or HCFCs will have to combine considerations on the country of origin and the way the products are marketed. Thermal conductivity with a low λ -value (W/mK, around 0.020) can be an indication.



Figure 8 Insulation boards.

HS codes:	See examples in Appendix 3
EU Restrictions:	Importation from a non-EU country and placing on the market of product containing CFCs or HCFCs are prohibited.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale containing CFC or HCFC prohibited, including for equipment from another EU country.
Finland:	Placing on the market of products containing CFCs or HCFCs prohibited, including products from another EU-country.
Sweden:	Importation from a non-EU country and placing on the market of products from any country are prohibited, if the insulation contains CFCs or HCFCs and the product falls under the HS codes listed in Appendix 3.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing CFC or HCFC prohibited, from any country.
Norway:	Importation and sale of equipment containing CFC or HCFC prohibited, from any country.

7.4.4. One-component foams

One-component foams are used both by the building industry and the do-it-yourself market for various applications, such as draught-proofing around pipes, doors and windows, sealing doors and window frames, joining insulating panels and pipe insulation. They are portable and easy to apply. They consist of pre-polymer compositions traditionally dissolved in CFC-12, supplied in pressurized cylinders and aerosol cans fitted with a nozzle, which expands after application.

CFC-12 has been replaced by HCFCs, HFC-134a and HFC-152a, hydrocarbons, propane and butane plus dimethylether (DME), frequently in blends.



Figure 9 One-component polyurethane foams (the product shown does not contain ODS).

HS codes:	3909
EU Restrictions:	Importation from a non-EU country and placing on the market of products containing CFCs or HCFCs are prohibited.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale containing CFC or HCFC prohibited, including for equipment from another EU country.
Finland:	Placing on the market of products containing HCFC and CFC prohibited, including products from another EU-country.
Sweden:	Importation from a non-EU country and placing on the market of products from any country are prohibited, if the insulation contains CFCs or HCFCs and the product falls under the HS codes listed in Appendix 3.
National Regulations in Iceland and Norway:	
Iceland:	Importation and placing on the market of products containing CFC or HCFC prohibited, from any country.
Norway:	Importation and sale of equipment containing CFC or HCFC prohibited, from any country.

7.5 Portable Fire Extinguishers

Portable *halon-1211* fire extinguishers have been extensively marketed as excellent fire extinguishers for a wide range of applications, including in cars, boat, homes and offices.

The same is now the case with new HCFC products in countries where they are allowed. *HCFC-123* and *HCFCs-124* and *blends of HCFCs* are introduced by some producers as alternatives to the halons. Some trade names for HCFC products are FE-232 (HCFC-123), FE-241 (HCFC-124) and the HCFC blend products NAP P-III, Blitz III, NAP IV and HalotronTM I (to be distinguished from HalotronTM II, which does not contain HCFCs). All these HCFC products are approved by the US Environment Protection Agency (USEPA) for non-residential uses. The use of recycled halons is allowed in many countries outside the EU, including in the US.

Many such products can be found on the internet, generally without reservation regarding the markets to which they may be sold. For instance, an Italian company, Safety Hi-Tech Srl, recommends NAF P IV to all the five Nordic countries without mentioning any reservation for its use (<http://www.safetyhitech.com/safety/safety/welcome.html>).



Figure 10 Fire extinguisher.

HS codes:	84.24.10
EU Restrictions:	Importation from a non-EU country and placing on the market of product containing halons from any country are prohibited, unless intended for one of the listed critical uses (see Appendix 1). This applies to both virgin and recycled substances, see Reg. 2037/2000 Art. 4 (4)(iv). Importation and placing on the market of products containing <i>HCFCs</i> are prohibited, unless intended to replace halons in such a critical use and provided that the conditions specified in Reg. 2037/2000 Art. 5 (3) are fulfilled.
Additional National Restrictions in Denmark, Finland and Sweden:	
Denmark:	Commercial sale of products containing non-recovered halons or HCFCs is prohibited (§6 para 2) - in practice applicable only to imports from another EU country as the more strict EU rules cover importation from non-EU countries. The possession of mobile and stationary fire extinguishers containing halons is prohibited, unless the equipment is permanently installed in an aircraft or in a vehicle or ship registered abroad. The Danish Environmental Protection Agency may allow exemptions for critical uses.
Finland:	Placing on the market of halon portable extinguishers is prohibited. Resale of existing extinguisher is allowed to critical uses, as for use in aeroplanes, by fire brigades, by defence forces and in manned communication centres critical for the functioning of the society.
Sweden:	Importation from a non-EU country and placing on the market of portable fire extinguishers containing halons from any country are prohibited. The Swedish National Rescue Board can allow exemptions.
National Regulations in Iceland and Norway:	
Iceland:	Importation and sale of products containing halons or HCFC are prohibited. Critical uses of recovered and recycled halons are exempted (see 3.2.4).
Norway:	Fire extinguishing equipment containing halons is in principal prohibited. This applies also to recovered and recycled halons. Halons for critical uses are exempted (see Appendix 1). Equipment containing HCFCs are prohibited but exempted when intended to replace halons for critical uses under certain conditions (Sec. 6-18).

8. Whom to Contact in Case of Uncertainty

8.1 Denmark

Danish Environmental Protection Agency (Miljøstyrelsen, MST)
Att. Pia Petersen
DK-1401 Denmark
Telephone: +45 72 54 40 00; direct +45 72 54 41 34
Email: ppe@mst.dk; mst@mst.dk
Internet: www.mst.dk

8.2 Finland

Finnish Environment Institute
(Suomen Ympäristökeskus, SYKE)
Chemicals Unit (Kemikaaliyksikkö)
P.O. Box 140
FIN-00251 Helsinki
Telephone: +358 (0)20 490 123
Email: Tuulia.toikka@ymparisto.fi
Internet: www.ymparisto.fi

8.3 Iceland

Icelandic Environment Agency, IEA (Umhverfisstofnun)
IS-108 Reykjavik, Iceland.
Telephone: + 354-591-2000,
Telefax: +354-5912010
E-mail: ust@ust.is
Internet: www.ust.is

8.4 Norway

Norwegian Pollution Control Authority
(Statens forurensningstilsyn, SFT)
Section for Climate and Energy
P.O.Box 8100 Dep
NO-0032 Oslo, Norway
Telephone: + 47 22 57 34 00;
Telefax: + 47 22 67 67 06
E-mail: postmottak@sft.no
Internet: www.sft.no

8.5 Sweden

Swedish Environmental Protection Agency
(Naturvårdsverket, SNV)
Att. Maria Ujfalusi
S-106 48 Stockholm, Sweden
Telephone: +46 (0)8-698 11 40
Telefax: +46 (0)8-202925
E-mail: maria.ujfalusi@naturvardsverket.se
Internet: www.naturvardsverket.se

Sammanfattning

CFCs, HCFCs och andra liknande kemiska ämnen har använts i stor skala världen över vid tillverkning av kylskåp, sprayförpackningar, skumplast m m. Utsläpp av dessa ämnen bryter ner ozonskiktet som skyddar jorden från skadlig ultraviolett strålning från solen och bidrar också kraftigt till klimatförändringarna. Världens länder har, i det sk Montrealprotokollet, enats om att successivt fasa ut produktion och användning av de ozonnedbrytande ämnena. U-länderna har beviljats en längre tid för utfasningen än i-länderna.

De nordiska länderna och EU i sin helhet har aktivt verkat för att påskynda avvecklingen. Särskilt gäller det avvecklingen av användningen av HCFC som i u-länderna med nu gällande regler kan användas fram till 2040. Gällande EU-regler (2037/2000) och nationella nordiska föreskrifter förbjuder därför import och överlåtelse ("placing on the market") av produkter som innehåller CFCs, HCFC och andra ozonnedbrytande ämnen.

Det är väsentligt att detta aktiva arbete inte enbart resulterar i att tillverkning av relevanta produkter flyttar till u-länderna eller till andra i-länder med mindre restriktiva regler och sedan importeras illegalt till EU och de nordiska länderna som färdiga produkter – ett scenario som är särskilt relevant i fråga om produkter som innehåller HCFC.

Denna publikation är avsedd att belysa vikten av att kontrollera import och försäljning av produkter som innehåller ozonnedbrytande ämnen. Den beskriver gällande föreskrifter och ger viss hjälp att planera strategier och prioritering. Förhoppningen är att den skall kunna utnyttjas som utgångspunkt för närmare samarbete mellan berörda myndigheter (tillsynsmyndigheter, tull, polis och åklagare på olika nivåer) och leda till anvisande av erforderliga resurser, utbyte av erfarenheter och, i sinom tid, specialiserade tillsynskampanjer.

Publikationen täcker inte kontroll av import och överlåtelse av de kemiska ämnena som sådana utan endast importen av färdiga produkter. Den berör också bara mycket kortfattat kontroll av exporten av produkter som innehåller eller är beroende av användning av ozonnedbrytande ämnen, eftersom kontrollen av sådan export bör samordnas med den generella kontrollen av export av farligt avfall.

Abbreviations and Acronyms

AC	Air-Conditioning
CN	Combined Nomenclature
CFC	Chlorofluorocarbons
DME	Dimethyl ether
EU	European Union
EEA	Agreement on the European Economic Area
IEA	Icelandic Environment Agency
GWP	Global Warming Potential relative to CO ₂ (counted as carbon dioxide equivalents)
HC	Hydrocarbons
HBFC	Hydrobromofluorocarbon
HCFC	Hydrochlorofluorocarbon
HS	Harmonised Commodity Description and Coding System
HFC	Hydrofluorocarbons
MAC	Mobile Air Conditioning
MDI	Metered dose inhaler
MLF	Multilateral Fund
MP	Montreal Protocol
MST	Danish Environmental Protection Agency
MT	Metric tons
NCB	National Central Bureau
ODS	Ozone Depleting Substances
ODP	Ozone Depleting Potential
PUR	Polyurethane (foam)
R	Refrigerant
SFT	Norwegian Pollution Control Agency
SNV	Swedish Environmental Protection Agency
SYKE	Finnish Environment Institute (Suomen Ympäristökeskus)
USEPA	US Environment Protection Agency
TEAP	UNEP's Technical and Economic Assessment Panel
UNEP	United Nations Environment Programme
US	United States of America
XPS	Extruded polystyrene (foam)

Appendices

Appendix 1 Exempted uses of halons under the EU and Norwegian Regulations (as of May 2007)²

EU Regulation 2037/2000, Annex VII	Norwegian Product Regulations, Chapter 6, Appendix IV
Critical use of halon-1301: - in aircraft for protection of crew compartments, engine nacelles, cargo bays and dry bays, and fuel inerting - in military land vehicles and naval vessels for the protection of spaces occupied by personnel and engine compartments - for making inert of occupied spaces where flammable liquid and/or gas release could occur in the military and oil, gas and petrochemical sector, and in existing cargo ships - for the making inert of existing manned communication and command centres of the armed forces or others, essential for national security - for the making inert of spaces where there may be a risk of dispersion of radioactive matter - in the Channel Tunnel and associated installations and rolling stock.	Critical use of halon-1301: - in aircraft for protection of crew compartments, engine nacelles, cargo bays and dry bays, and fuel inerting - in military vehicles for the protection of spaces occupied by personnel and engine compartments - for making inert of occupied spaces where flammable liquid and/or gas release could occur in the following areas: - movable installations in the oil, gas and petrochemical sector - existing cargo ships
Critical use of halon-1211: - in military land vehicles and naval vessels for the protection of spaces occupied by personnel and engine compartments - in hand-held fire extinguishers and fixed extinguisher equipment for engines for use on board aircraft - in aircraft for the protection of crew compartments, engine nacelles, cargo bays and dry bays - in fire extinguishers essential to personal safety used for initial extinguishing by fire brigades - in military and police fire extinguishers for use on persons.	Critical use of halon-1211: - in military land vehicles for the protection of spaces occupied by personnel and engine compartments - in hand-held fire extinguishers and fixed extinguisher equipment for engines for use on board aircraft - in aircraft for the protection of crew compartments, engine nacelles, cargo bays and dry bays

² Exempted uses of halons in the other Nordic countries are less detailed and therefore described only in the main text, see chapter 3.2.1 – 3.2.4. Critical use of halon-2402 (applicable only in Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) omitted here.

Appendix 2 EU Restrictions on Importation of Products Containing HCFCs

Type of product	Entered into force	Not yet into force	Exemption expires
Aerosols except as solvents³	1/7 1995		
Solvents:			
- non-contained uses, adhesives, mould-release agents except in closed equipment, drain cleaning where HCFCs are not recovered, in aerosols except finger print and laser printer made before 1/1-96	1/1 1996	Precision cleaning of electrical and other comp. in aerospace/ aeronautic applications	1 Jan 2009
- all other solvents except precision cleaning in aerospace/ aeronautic applications	1/1 2002		
Refrigeration/Air-conditioning (AC) equipment/products:⁴			
- domestic refrigerators / freezers made after 31/12 -95	1/1 1996		
- non-confined direct evaporation systems made after 31/12 -95	1/1 1996		
- AC in motor vehicles, tractor, off-road vehicles, trailers, road public transport made after 31/12-95	1/1 1996	in vehicles for military use	1 Jan 2009
- rail transport AC made after 31/12 -97	1/1 1998		
- in public and distribution cold stores and warehouses made after 31/12 1999	1/1 2000		
- equipment ≥150 kW, shaft input, made after 31/12 1999	1/1 2000		
- fixed AC systems <100 kW	1/7 2002		
- reversible air-conditioning/heat pump systems made after 31/12 2003	1/1 2004		
- all other refrigeration and AC equipment made after 31/12 2000	1/1 2001		
Integral skin foams in safety applications & rigid insulation foams:⁵			
- integral skin foams in safety applications	1/10 2000		
- polyethylene rigid insulating foams	1/10 2000		
- extruded polystyrene (XPS) insulation foam except when used in insulated transport	1/1 2002		
- polyurethane (PUR) for appliances	1/1 2003		
- PUR flexible faced laminate foams except when used in insulated transport	1/1 2003		
- PUR sandwich panels except when used in insulated transport	1/1 2003		
- All other rigid insulation foams (incl. PUR spray and block foams)	1/1 2004		
Sterilisation equipment to closed systems made after 31/12 1997	1/1 1998		
All other products	1/7 1995		

³ For examples on applicable customs codes see Appendix 4⁴ Can belong to sub-headings of HS headings 8411, 8418, 8419, 8479, 8701-88 o. 8716⁵ Can belong to sub-headings of HS headings 3901-3903, 3909, 3917, 3920-3926, 4418, 6809, 6810, 7303-7306, 7308, 7311, 7610, 8418, 8419, 8516, 8603, 8605, 8606, 8609, 8701-8708, 8716, 8901-8903, 8707

Appendix 3 Products that Must Not Be Imported, Transferred or Offered for Sales in Sweden, If They Contain Foam Produced With CFCs or HCFCs (Ordinance (2002:187), Art. 5 and 12, and its Annex 1)

CN Code	Description
ex 3903 or 3909	Polystyrene and polyurethane, in primary form
ex 3921	Plates, sheets, film, foil and strips of polyurethane, polyvinyl-chloride, polyurethane and phenolic resins
ex 3923, 3924 or 3926	Articles for the conveyance or packing of goods, single-use articles and piping insulation made by flexible foam
ex 3925, 4418, 7308 or 7610	Panels, walls, door-frames and doors
ex 6809 or 6810	Goods for construction purposes
ex 7303, 7304, 7305 or 7306	Iron or steel pipes
ex 7411	Copper pipes
ex 8418	Refrigerators, freezers and other refrigerating or freezing equipment, electrical and other types; heat pumps other than air-conditioning machines belonging to heading 8415
ex 8419	Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilizing or cooling; other than machinery or a plant of a kind used for domestic purposes; instantaneous or storage water heaters, non-electrical
ex 8516	Electrical instantaneous or storage water heaters
ex 8603, 8605 or 8606	Railway and tram cars
ex 8609	Containers (including containers for the transport of fluids) specially designed and equipped for carriage by one or more modes of transport
ex 8702, 8703 or 8704	Motor cars and other motor vehicles principally designed for transport of persons or goods
ex 8707	Bodies (including cabs) for the motor vehicles of headings 87.01-87.04
ex 8708	Parts and accessories of the motor vehicles of headings 87.02 - 87.04
ex 8716	Trailers and semi-trailers; other vehicles not mechanically propelled; parts for vehicles thereof
ex 8901	Tankers, refrigerated vessels with insulation made of rigid foam
ex 8902	Fishing vessels with insulation made of rigid foam
ex 8903	Yachts and other vessels for pleasure or sports
ex 8907	Other floating structures (e.g. rafts, tanks, cofferdams, landing stages, buoys, and beacons)
ex 9401 or 9403	Seats and reclining furniture and parts for such furniture
ex 9404	Mattresses, cushions and pillows

Appendix 4 EU Regulation 2037/2000, Annex V – Guiding List on CN Codes for Products that Must Not Be Imported from Non-Parties If They Contain Controlled Substances

Aerosol products (excl. medical aerosols):	CN Codes	Aerosol products, cont.:	CN Codes
Food products	0404 90 21 - 0404 90 89 1517 90 10 - 1517 90 99 2106 90 92, 2106 90 98	Insecticides, rodenticides, fungicides, herbicides, etc.	3808 10 10 - 3808 10 90 3808 20 10 - 3808 20 80 3808 30 11 - 3808 30 90 3808 40 10 - 3808 40 90 3808 90 10 - 3808 90 90
Paints, varnishes, prepared water pigments and dyes	3208 10 10 - 3208 10 90 3208 20 10 - 3208 20 90 3208 90 11 - 3208 90 99 3209 10 00 - 3209 90 00 3210 00 10 - 3210 00 90 3212 90 90	Finishing agents, etc. Preparations/charges for fire extinguishers charged fire extinguishing grenades	3809 10 10 - 3809 10 90 3809 91 00 - 3809 93 00 3813 00 00
Perfumery, cosmetic or toilet preparations	3303 00 10 - 3303 00 90 3304 30 00, 3304 99 00 3305 10 00 - 3305 90 90 3306 10 00 - 3306 90 00 3307 10 00 - 3307 30 00 3307 49 00 3307 90 00	Organic composite solvents, etc. Prepared de-icing fluids	3814 00 10 - 3814 00 90 3820 00 00
Surface-active preparations	3402 20 10 - 3402 20 90	Products of the chemical or allied industries	3824 90 10 3824 90 35 3824 90 40
Lubricating preparations	2710 00 81 2710 00 97 3403 11 00 3403 19 10 - 3403 19 99 3403 91 00 3403 99 10 - 3403 99 90	Silicones in primary forms Arms	3824 90 45 - 3824 90 95 3910 00 00 9304 00 00
Household preparations	3405 10 00 3405 20 00 3405 30 00 3405 40 00 3405 90 10 - 3405 90 90		
Articles of combustible materials	3606 10 00		

Refrigeration/air-conditioning:	CN Codes	Refrigeration/air-conditioning, cont.:	CN Codes
<i>Automobiles and trucks with AC units:</i>		Dehumidifiers	8415 10 00 - 8415 83 90
	8701 20 10 - 8701 90 90		8479 60 00
	8702 10 11 - 8702 90 90		8479 89 10
	8703 10 11 - 8703 90 90		8479 89 98
	8704 10 11 - 8704 90 00		
	8705 10 00 - 8705 90 90	Water coolers/gas	8419 60 00
	8706 00 11 - 8706 00 99	liquefying units	8419 89 98
<i>Domestic and commercial refrigeration and AC/heat-pump equipment:</i>		Ice machines	8418 10 10 - 8418 29 00
Refrigerators	8418 10 10 - 8418 29 00		8418 30 10 - 8418 30 99
	8418 50 11 - 8418 50 99		8418 40 10 - 8418 40 99
	8418 61 10 - 8418 69 99		8418 50 11 - 8418 50 99
			8418 61 10 - 8418 61 90
			8418 69 10 - 8418 69 99
Freezers	8418 10 10 - 8418 29 00		
	8418 30 10 - 8418 30 99	Air-conditioning/	8415 10 00 - 8415 83 90
	8418 40 10 - 8418 40 99	heat-pump units	8418 61 10 - 8418 61 90
	8418 50 11 - 8418 50 99		8418 69 10 - 8418 69 99
	8418 61 10 - 8418 61 90		8418 99 10 - 8418 99 90
	8418 69 10 - 8418 69 99		
Insulation boards, panels and pipe covers:	CN Codes	Portable fire extinguishers	CN Codes
	3917 21 10 - 3917 40 90		8424 10 10 - 8424 10 99
	3920 10 23 - 3920 99 90		
	3925 10 00 - 3925 90 80	Pre-polymers	CN Codes
	3921 11 00 - 3921 90 90		3901 10 10 - 3911 90 99
	3926 90 10 - 3926 90 99		