

**FRENCH REPUBLIC**

**Ministry of Ecology, Energy,  
Sustainable Development and Spatial  
Planning**

NOR:

**Order of**

on the general provisions applicable to facilities classified for the protection of the environment subject to declaration under Section 2345 on the use of solvents for dry cleaning and the treatment of textiles or clothes

**The Minister of State, Minister of Ecology, Energy, Sustainable Development and Spatial Planning,**

Regarding the French Environmental Code, in particular Articles L. 512-10, L. 512-11, R. 512-52 and R 512-55 to R. 512-60 thereof;

Regarding Council Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and facilities, in particular Article 5 thereof and Annex II A thereto;

Regarding Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and rules relating to information society services, in particular notification No .....

Regarding Decree No 88-1056 of 14 November 1988 on the fulfilment of the requirements of Book II of the French Labour Code (Title III: Health, Safety and Working Conditions) with regard to the protection of workers in establishments which implement electrical currents;

Regarding the Order of 23 January 1997 on the reduction of environmental noise created by facilities classified for the protection of the environment;

Regarding the Order of 10 October 2000 laying down the frequency, the purpose and the extent of inspection of electrical facilities for the purpose of protecting workers and the content of reports relating to these checks;

Regarding Circular No 23 of 23 July 1986 on the mechanical vibrations given off by facilities classified for the protection of the environment;

Regarding the opinion of the High Council for classified facilities of 17 March 2009,

## **Hereby rules as follows:**

### **Article 1**

The classified facilities subject to declaration under Section 2345 on the use of solvents for dry cleaning and the treatment of textiles or clothes, the machinery of which has a total maximum rated capacity<sup>1</sup> greater than 0.5 kg and less than or equal to 50 kg, are subject to the provisions of Annexes I and IV<sup>2</sup>.

These provisions apply without prejudice to other legislation.

### **Article 2**

The provisions of Annex I apply to facilities declared more than four months after the date of publication of this Order in the Official Journal.

The provisions of Annex I apply to existing facilities, declared within four months of the date of publication of this Order in the Official Journal, under the conditions stipulated in Annex V.

The provisions of Annex I apply to existing facilities declared within four months of the date of publication of this Order in the Official Journal.

For facilities declared more than four months after the date of publication of this Order in the Official Journal but within two years of the date of publication of this Order in the Official Journal, and with a dry-cleaning machine that uses a flammable solvent, the provisions of Article 6.3 of Annex I to this Order do not apply. The dry-cleaning machines in these facilities are fitted with a drying controller.

For existing facilities with a dry-cleaning machine replaced more than four months after the date of publication of this Order in the Official Journal, the provisions of Points 1 “Installation rules” and 5 “Monitoring by the operator of the pollution discharged” of Annex IV to this Order become null and void and the provisions of Points 2.1 “Installation rules” and 6.3 “Monitoring by the operator of the pollution discharged” of Annex I apply to the dry-cleaning machine replaced more than four months after the date of publication of this Order in the Official Journal.

For existing facilities with a dry-cleaning machine or dry-cleaning machines that have not been replaced, the provisions of Points 1 “Installation rules” and 5 “Monitoring by the operator of the pollution discharged” of Annex IV apply while Points 2.1 “Installation rules” and 6.3 “Monitoring by the operator of the pollution discharged” of Annex I are not applied until 1 January 2021 at the latest.

For existing facilities that have reported a change of operator more than four months after the date of publication of this Order in the Official Journal, the provisions of Article 2.3.2 of Annex I to this Order apply.

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<sup>1</sup> The rated capacity is calculated in accordance with standard NF G 45-010 of February 1982 on equipment for the textile industry and related equipment “Dry cleaning equipment - Definitions and inspection of the consumption capacity characteristics of a machine”

<sup>2</sup> The Order and its Annexes will be published in the Official Gazette of the Ministry of Ecology, Energy, Sustainable Development and Spatial Planning.

The provisions of Annexes I and IV also apply to classified facilities subject to declaration under section 2345 that are in an establishment which has at least one facility subject to the authorisation system as long as these facilities in section 2345 are not governed by the administrative authorisation directive.

### **Article 3**

The provisions of this Order replace, on their date of entry into force, the provisions of the Order of 2 May 2002 on general requirements applicable to classified facilities subject to declaration under Section 2345, which are now repealed.

### **Article 4**

The Prefect may, for a given facility, adapt by Order the provisions of the Annexes to this Order under the conditions laid down in Articles L. 512-12 and R. 512-52 of the French Environmental Code.

### **Article 5**

The Director General of Risk Prevention is responsible for implementation of this Order, which will be published in the *Official Journal* of the French Republic.

In Paris, on

For the Minister and by delegation:  
The Director General of  
Risk Prevention,

Laurent MICHEL

## **ANNEX 1**

### **General provisions applicable to facilities classified for the protection of the environment subject to declaration under Section 2345**

#### **1. General provisions**

##### 1.1. Compliance of the facility with the declaration

The facility is located, constructed and operated in accordance with the plans and other documents attached to the declaration, subject to meeting the requirements below.

##### 1.2. Amendments

Any amendment made by the declarant to the facility, its operating method or its surrounding area, which results in a significant change to the elements of the preliminary declaration file, is, prior to being carried out, brought to the attention of the Prefect who may call for a new declaration.

##### 1.3. Content of the declaration

The declaration specifies the measurements taken by the operator relating to the conditions of use, purification and removal of residual water and emanations of any kind and the disposal of waste and residue in order to comply with the provisions of this Order.

##### 1.4. Classified facility file

The operator draws up and keeps up to date a file containing the following documents:

- the declaration file,
- the up-to-date plans,
- the receipt for declaration and the general requirements,
- where appropriate, the administrative directives relating to the facility in question, created pursuant to legislation on facilities classified for the protection of the environment,
- where appropriate, the results of the latest effluent and noise measurements,
- the documents provided for in Points 3.5, 3.6, 3.7, 4.3, 4.7 and 7.5 of this Order,
- any useful elements relating to risk.

This file is made available to the inspectorate of classified facilities.

##### 1.5. Declaration of accidents or accidental contamination

The operator of a facility is required to declare as quickly as possible to the inspectorate of classified facilities any accidents or incidents resulting from the operation of this facility which are such that they may damage the interests referred to in Article L. 511-1 of the French Environmental Code.

##### 1.6. Change of operator

When there is a change of operator at the facility, the new operator or its representative notifies the Prefect of this within one month of taking over the operation. This declaration mentions, if the new operator is a natural person, the names, forenames and address of this new operator and,

if the new operator is a legal entity, the company name, its legal form, the address of its registered office and the position of the declaration signatory.

### 1.7. Termination of activity

When a facility ceases the activity for which it was declared, the operator notifies the Prefect of this within three months of final stoppage. The operator's notice indicates the restorative measures that are planned or that have been carried out.

### 1.8. Regular inspections

The facility is subject to regular inspections by approved bodies under the conditions laid down in Articles R. 512-55 to R. 512-60 of the French Environmental Code.

The purpose of these checks is to check the facility's compliance with the requirements listed in Annex III, potentially modified by administrative directive where such modifications apply.

The operator keeps the inspection report sent to it by the approved body in the "classified facilities" file referred to in Point 1.4.

If the report reveals non-compliance with the provisions relating to the inspection, the operator takes the necessary corrective action to remedy this. These actions and their implementation dates are documented and kept in the aforementioned file.

### 1.9. Definition

For implementation of this Order, the following definition is used:

**Workshop:** Any place where the organic solvent is stored, handled or used.

## 2. Installation and layout

### 2.1. Installation rules

Dry-cleaning machines using halogenated solvents:

- are installed in a workshop where confinement is managed according to the terms and conditions in Point 2.6 of Annex I to this Order;
- are installed in a fully closed circuit, fitted with cooled condensers and integral and regenerative active carbon purifiers and an automatic drainage system for distillation residues together with a sealed device which is to operate at the end of drainage and designed to encourage complete drainage of the distiller, such as hermetic scraping or a closed circuit rinsing system;
- are fitted with a drying controller;
- comply with the provisions of standard NF EN ISO 8230-1 and NF EN ISO 8230-2.

Dry-cleaning machines using flammable solvents:

- are installed in a workshop where confinement is controlled according to the terms and conditions in Point 2.6 of Annex I to this Order;
- are installed in a fully closed circuit, fitted with cooled condensers and an automatic drainage system for distillation residues together with a hermetically sealed device which is to operate at

- the end of drainage and designed to encourage complete drainage of the distiller, such as hermetic scraping or a closed circuit rinsing system;
- are fitted with a drying controller;
  - comply with the provisions of standard NF EN ISO 8230-1 and NF EN ISO 8230-2.

## 2.2. Integration into the environment

Not applicable

## 2.3. Premises inhabited or occupied by third parties or inhabited above and below the facility

2.3.1. When an operator wishes to install a workshop in a room with premises above which are occupied by third parties, inhabited or adjacent to such premises, it notifies the owners and/or tenants of the premises and the local emergency services of this in advance.

The walls, floor and ceiling must not have any cracks or visible daylight. The workshop may not be connected to premises occupied by third parties by ducts and pipes.

2.3.2. Prior to starting operation, the operator has the integrity of the walls, floor and ceiling of the premises checked by a third party expert who visually checks that there are no cracks or communication by ducts and pipes.

## 2.4. Fire behaviour of the premises

### 2.4.1 Fire behaviour

The walls of the premises where the facility is housed have the following minimum fire behaviour characteristics: category A1 materials in accordance with the requirements of standard NF EN 13 501-1 (non-combustible).

### 2.4.2 Fire resistance

The premises where the facility is housed have the following minimum fire resistance characteristics:

- outside walls and separating walls: REI 120 (fire break with 2-hour rating),
- floors REI 120: (fire break with 2-hour rating),
- fire-resistant doors and windows (including those that are glazed or with ironwork) and closure devices: EI 120 (fire break with 2-hour rating).

R: bearing capacity

E: fire integrity

I: thermal insulation.

Classifications are expressed in minutes (120: 2 hours).

### 2.4.3 Roofs and roof coverings

When the facility is located on the top floor (under the roof), the roofs and roof coverings comply with Category B<sub>ROOF</sub> (t3), for a fire spread time through the upper roof of thirty minutes

(Category T 30) and for a fire propagation time on the surface of the upper roof of thirty minutes (rating 1).

In all other cases, the roof of the facility has fire resistance characteristics REI 120 and Category A1 materials in accordance with the requirements of standard NF EN 13 501-1.

#### 2.4.4 Smoke extraction

The premises where the facilities are housed are fitted with natural smoke and heat extraction systems at the top, compliant with standards in force, enabling the extraction of smoke, combustion gases, heat and unburned products released in the event of fire into the open air.

These systems have automatic and manual controls. Their useful opening area is no less than:

- 1% if the surface area from which smoke is to be extracted is less than 1 600 m<sup>2</sup>,
- to be determined according to the nature of the risk if the surface area from which smoke is to be extracted is greater than 1 600 m<sup>2</sup> without being less than 1% of the surface area of the premises.

In normal operation, resetting (closure) can be done from the floor of the premises or from the smoke extraction area or the cell from which smoke is to be extracted in the case of premises divided into several areas or cells.

Manual controls are positioned near to access points.

The natural smoke and heat extraction systems are appropriate to the specific risks of the facility.

All systems installed after 31 December 2006, the date of the end of the transition period for CE marking and French standards for these materials, have the following characteristics in reference to standard NF EN 12 101-2:

- reliability: category RE 300 (300 shutdown cycles). Dual-function outlets are subjected to 10 000 opening cycles in aeration position.
- the snow load classification when open is SL 250 (25 daN/m<sup>2</sup>) for altitudes no greater than 400 m and SL 500 (50 daN/m<sup>2</sup>) for altitudes greater than 400 m and no greater than 800 m. Category SL0 can be used if the region of installation is not likely to get snow or if the construction prevents accumulation of snow. Above 800 m, the outlets are category SL 500 and installed with a construction that prevents the accumulation of snow.
- ambient temperature category T0 (0 °C).
- heat exposure category HE 300 (300 °C).

Fresh air inlets with a free surface area equal to the geometric surface area of all the extraction systems of the largest area are on a cell by cell basis.

#### 2.5. Accessibility

The facility is accessible to enable intervention by the fire and emergency services. It has, on at least one side, emergency vehicle access or emergency ladder access if the floor of the highest level of this facility is more than 8 m higher than this access.

One of the sides has openings for access by equipped rescue personnel.

## 2.6. Ventilation

Mechanical ventilation, continuously operating even when the dry-cleaning facility is not running, is used to adequately refresh the air in the workshop, without prejudice to labour regulations, so as to prevent:

- any secondary solvent fumes spreading outside the workshop,
- any risk to the health of workers and the public, including in the event of a leak on the cleaning machine or on a product storage receptacle,
- any risk of an explosive atmosphere being created or of toxic or harmful fumes accumulating.

The operator defines the minimum workshop air renewal rate required for compliance with these objectives, demonstrating the rated flow of the fan installed. It will make this data available to the inspectorate of classified facilities.

For facilities using a hydrocarbon solvent or a silicon solvent, as the fumes of these solvents are heavier than air, the ventilation system also has an extraction system at the bottom of the premises.

This ventilation system, serviced and checked regularly by the operator, is designed to:

- ensure as little polluted gas as possible is discharged into the outside environment,
- avoid any pipes passing through inhabited or occupied premises,
- be independent of any other ventilation system,
- avoid any risk of corrosion associated with the use of organic solvents,
- provide one or more discharge points compliant with the provisions of Point 6.1 of Annex I to this Order.

## 2.7. Electrical facilities

Electrical facilities are made in accordance with Decree No 88-1056 of 14 November 1988 on the implementation of the provisions of Book II of the French Labour Code (Title III: Health, safety and working conditions) in relation to the protection of workers in establishments which implement electrical currents.

## 2.8. Equipment earthing

Metal equipment (tanks, vessels, pipes) are earthed in accordance with applicable regulations and standards, in particular taking into account the explosive or flammable nature of the products.

## 2.9. Retention of workplaces

The floor of solvent storage or handling sites is leakproof, A1 (non-combustible) and equipped so that it can collect any accidental spillages. For this, a sill raised above the level of the floor, or an equivalent system, separates it from outside or from other premises. Any spillage of solvents must be notified to the emergency services (fire department) and the inspectorate of classified facilities if it is likely to have negative consequences for human health or for the environment (contamination of water, soil or premises surrounding the workshop). The flow is immediately mopped up by the authorised person, closely following the instructions in Point 4.2 of Annex I to this Order. Contaminated items are placed in a sealed container. They are disposed of under the conditions laid down in Point 7 of Annex I to this Order.

## 2.10. Retention ponds

Any storage of liquids likely to contaminate the water or soil is associated with a retention capacity with a volume of at least equal to the higher of the following two values:

- 100% of the capacity of the largest tank,
- 50% of the total capacity of the tanks combined.

The retention capacity is sealed for the solvents it may contain and withstands the physical and chemical action of the fluids. The same applies for the plugging device which is kept closed in normal conditions.

The floor of the workshop is impermeable, particularly to organic solvents (e.g. tiled floor).

## 2.11. Isolation of the collection system

Not applicable

# 3. Operation and maintenance

## 3.1. Operation monitoring

3.1.1 Operation is the responsibility of and directly and continuously monitored by the operator or by a person named by the operator. In particular:

- self-service facilities are forbidden;
- the operation of a facility or of a machine without anybody present is forbidden.

In any case, the person responsible for operation of the machine, and in general any person likely to be in contact with it, has good knowledge of how the facility operates and the hazards and disadvantages of the products used or stored in the facility.

3.1.2 This manager or person likely to be in contact with the machine has been given appropriate training by a training organisation that offers a course lasting at least two days that complies with the reference system established by the profession, which will have been sent to the Environment Ministry where such a reference system exists. This training course should have been held after 5 May 2002. The training certificate issued by the organisation is made available to the inspectorate of classified facilities. It gives the following information as a minimum: name of the training organisation and its registration number. The “Maintenance of Textiles (dry cleaning option)” Professional Diploma (*Brevet Professionnel "Maintenance des articles textiles (option pressing)"*), provided for by the Order of 29 July 1998 of the Ministry of National Education, the Master’s Certificate (*Brevet de maîtrise*), the Higher Master’s Certificate (*Brevet de maîtrise supérieur*) and the Professional Aptitude Certificate in Dry Cleaning (*Certificat d’Aptitude Professionnel “Métiers du pressing”*) are considered as meeting the criteria for appropriate training when awarded after 5 May 2002.

Every 5 years, this manager or any person likely to be in contact with the machine attends a refresher course with a training organisation that offers a course lasting at least one day that complies with the reference system established by the profession, which will have been sent to the Environment Ministry where such a reference system exists.

### 3.2. Access control

Unauthorised persons may not freely access areas of the facility likely to contain solvents. A physical barrier is used to ensure compliance with this provision.

### 3.3. Product knowledge and labelling

The person responsible for operation of the cleaning machine has at his disposal the documents informing him of the nature and the risks of the hazardous products present in the facility, in particular the safety data sheets.

Drums, tanks and other packaging must bear the name of the products in lettering that can be easily read and, where appropriate, the hazard symbols in accordance with regulations on labelling of hazardous chemical substances and preparations.

For facilities that use a flammable solvent, this has the following characteristics:

- an aromatic compound content of less than 1% by mass;
- a benzene and polycyclic aromatic compound content of less than 0.01% by mass;
- a halogenated compound content of less than 0.01% by mass;
- a flash point greater than 55 °C;
- thermal stability in operating conditions;
- a boiling point between 180 °C and 210 °C under a pressure of 1.013 mbar and must not break down during use;
- the additives used do not change the properties above;
- the additives used are not classified as Category 1 or 2 carcinogenic substances, mutagens or reprotoxins.

### 3.4. Cleanliness

The premises are kept clean and cleaned on a regular basis. Cleaning equipment is suitable for the risks presented by the solvents that are likely to be used.

### 3.5. Entry/exit log

The operator keeps an up-to-date inventory of the nature and quantity of hazardous products held, such as solvents, to which is appended a general storage plan. This inventory is made available to the inspectorate of classified facilities and the fire and emergency services.

The presence in the facility of hazardous or combustible material is restricted to what is necessary for operation.

### 3.6. Regular checking of electrical facilities

All electrical facilities are kept in good condition and are inspected, after installation or modification, by a competent person. The frequency, purpose and scope of the electrical installation checks and the content of the reports on the said checks are laid down by the Order of 10 October 2000 establishing the frequency, purpose and scope of electrical installation checks for the purposes of protection of workers and the content of reports relating to the said checks.

The operator makes the report showing that its electrical facilities are kept in good condition and inspected after installation or modification available to the inspectorate of classified facilities for a period of 5 years.

### 3.7. Operating regulations

Operations involving hazardous handling and operation of the facilities (start-up and shutdown, normal operation, maintenance, etc.) are covered by written operating regulations. In particular, these regulations give:

- procedures;
- the frequency of checks on safety systems and pollution control;
- maintenance and cleaning instructions;
- the presence in the workshop of only those quantities required for operation of the facility;
- the ban on overloading cleaning machines;
- the conditions for keeping and storing products.

These regulations specify, in particular, compliance with the following provisions:

- the machine is not overloaded;
- the drying time recommended by the manufacturer is strictly adhered to;
- opening of drums or any other receptacle containing an organic solvent is strictly limited to operational and maintenance requirements;
- any manual pre-treatment or stain removal of laundry using organic solvents for use in a dry-cleaning machine is forbidden;
- all normal operations, including organic solvent handling, are done in such a way as to avoid solvent leaks in the workshop;
- the use of solvents not explicitly approved by the machine manufacturer is forbidden;
- solvents are handled in such a way as to prevent the product from coming into contact with the skin and from being inhaled;
- the solvent is not exposed to a heat source. More specifically, it is not to be stored in direct sunlight.

Finally, any person who comes into contact with an organic solvent is warned about the risks involved and informed of the appropriate safety measures.

### 3.8. Servicing and maintenance

The dry-cleaning machines are inspected each year by a competent authority who certifies the general good condition of the equipment. The results of these checks are made available to the inspectorate of classified facilities and logged.

It vouches for:

- the integrity of the machine and the condition of door seals;
- the correct operation of the double separator;
- the correct operation of the door safety devices;
- the correct operation of the drying controller;
- the drying quality (cleanliness of the tunnel and batteries, condition and cleanliness of the filters, the heat pump and the active carbon purifier);

The organisation is also involved with checking the correct operation and the cleanliness of the establishment's ventilation system and certifies it in the same way.

## 4. Risk

### 4.1. Location of risk

Without prejudice to the provisions of the French Labour Code, the operator is responsible for listing the parts of the facility which, due to the qualitative and quantitative characteristics of the equipment implemented, stored, used or produced, are likely to be the source of an incident which may directly or indirectly affect the environment, public safety or the security of the facility.

For each of these parts of the facility, the operator determines the nature of the risk (fire, explosive atmosphere or toxic fumes). This risk is reported. The workshops and the areas where these products are handled are included in this inventory. In particular, risks associated with the use of solvents are clearly displayed.

The operator has a general workshop and storage facility plan showing the different hazard areas corresponding to these risks.

### 4.2. Personal protection

If there is a risk of organic solvents being inhaled during maintenance work or in the event of intervention following a solvent leak, the following must be worn:

- respiratory protection appropriate to the risks;
- gloves;
- protective goggles.

This personal protective equipment (PPE) complies with the applicable technical regulations defined in the French Labour Code. New PPE is subject to the compliance certification procedures provided for by the French Labour Code.

This equipment is to be kept in good condition and checked regularly. Staff is to be trained in the use of this equipment.

### 4.3. Fire-fighting resources

The facility has the appropriate fire-fighting resources for the risks, in particular:

- public or private fire appliances (hydrant system, etc.) within 200 m of the risk;
- extinguishers distributed throughout the premises according to the risks, near to passageways, clearly visible and easily accessible. The extinguishing agents are appropriate to the risks to be combated and compatible with the products stored;
- a method for alerting the fire and emergency services;
- site plans making intervention easier for the fire and emergency services with a description of the hazards in each room.

Depending on the hazard represented, and in particular for facilities using flammable solvents, the facility is fitted with an automatic fire detection system. This equipment is kept in good working order and checked at least once a year.

#### 4.4. Equipment for use in explosive atmospheres

Not applicable, without prejudice to the provisions of the French Labour Code.

#### 4.5. Fire ban

In the parts of the facility referred to in Point 4.1 of Annex I to this Order where there is a risk of fire or explosion, particularly in rooms containing solvents, including in the workshop being cleaned, it is forbidden to have a naked flame of any kind, except where it is used for carrying out work covered by a “fire permit”. This ban is clearly displayed.

#### 4.6. “Intervention permit” and “Fire permit” in the parts of the facility referred to in Point 4.1

In the parts of the facility referred to in Point 4.1 of Annex I to this Order, any repair or installation work that involves increased risk (use of a flame or heat source, system drainage, etc.) may not be carried out until an “intervention permit” and, if required, a “fire permit” have been issued and in accordance with specific rules.

The “intervention permit” and, if required, the “fire permit”, as well as the specific instructions are drawn up and signed off by the operator or by the person named by the operator. When the work is carried out by an external company, the “intervention permit” and, if required, the “fire permit” and the specific instructions relating to installation safety are countersigned by the operator and the external company or the persons named by it.

On completion of the work and before activity is resumed, the facilities are checked by the operator or its representative.

#### 4.7. Safety regulations

Without prejudice to the provisions of the French Labour Code, regulations laying down the terms and conditions for application of the provisions of this Order are established, updated and brought to the attention of staff in those places frequented by staff. In particular, these regulations indicate:

- the ban on having a naked flame of any kind in the parts of the facility referred to in Point 4.1 of Annex I to this Order, “fire” and “explosive atmospheres”;
- the obligation to obtain an “intervention permit” or a “fire permit” for the parts of the facility referred to in Point 4.1 of Annex I to this Order;
- the facility’s emergency stoppage and shutdown procedures (electricity, fluid systems);
- the steps to be taken in the event of a leak from a receptacle or a pipe containing a solvent and in particular the disposal conditions laid down in Point 5.7 of Annex I to this Order;
- the precautions to take for the use and storage of incompatible products;
- the fire-extinguishing resources to be used in the event of fire;
- the alarm procedure with the telephone numbers of the establishment’s intervention manager, the fire and emergency services, etc.;
- the duty to inform the inspectorate of classified facilities in the event of an accident.

## **5. Water**

### 5.1. Samples

A disconnection tool, or any other equivalent procedure, is installed on the water inlet channels.

### 5.2. Consumption

All measures are taken to limit water consumption.

### 5.3. Collection system

The collection system is separate thus allowing polluted residual water to be isolated from rainwater which is unlikely to be polluted. The number of points of discharge for residual water is as low as possible.

These are arranged to allow easy sampling and the installation of a flow measuring system.

### 5.4. Measurement of discharged volumes

Not applicable

### 5.5. Discharge limit values

No solvent is discharged into the natural surroundings or into the public system.

### 5.6. Ban on groundwater discharge

The direct or indirect discharge of residual waters into underground water is strictly prohibited even after purification.

### 5.7. Preventing accidental pollution

Measures are taken to prevent any accidental discharge of hazardous materials into public sewers or the natural surroundings; in particular, the machine is fitted with a double separator to prevent any solvents entering into the discharged water. Collected effluents are either discharged in accordance with the conditions stipulated in Point 5.5 or discharged as waste in accordance with the conditions stipulated in Point 7 of Annex I of the present Order.

### 5.8. Land application

Water and sludge must not be applied to land.

### 5.9. Monitoring by the operator of the pollution discharged

Not applicable

## 6. Air and odours

### 6.1. Catchment and purification of waste emitted into the atmosphere

The facility does not create odours that may disturb the surrounding area.

All facilities have a point of discharge that extends at least 3 m past any buildings located within an area of 15 m. The point of discharge is located at least 8 m from any clean air intake or opening. If using organic solvents, the operator may abstain from this latter provision if all of the gas effluents from the workshop are channelled and trapped using an appropriate system, for example an active carbon filter placed on the ventilation duct for the workshop set out in Point 2.6 of Annex I of the present Order. The filter is regenerated every year except if the manufacturer's requirements stipulate a more frequent replacement.

The operator shall prepare:

- A maintenance programme for the facility, in particular, in order to guarantee the permanence of the machine's impermeability and to guarantee the correct operation of the drying controller set out in Point 2.1 of Annex I of the present Order if necessary, in agreement with the supplier's recommendations.
- A solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges, according to the terms and conditions set out in Point 7.5 of Annex I of the present Order.

### 6.2. Limit values and waste conditions

All VOC (Volatile Organic Compound) emissions must not exceed 20 grams of organic solvent per kilogram of clean and dry linen. This emissions limit value does not include solvents contained in the sludge and the filters if the operator certifies their destruction or recycling by an authorised body in accordance with the methods set out in Point 7.5 of Annex I of the present Order.

### 6.3. Monitoring by the operator of the pollution discharged

The results of VOC emission measurements are available for 12 months following commissioning.

The measurements are carried out on each machine, by an authorised body, within a specific test facility in accordance with the test protocol laid down in Annex VI of the present Order and certified by a compliance certificate issued by the body performing the measurements and a test report. The compliance certificate and the test report must state the date on which the tests were performed, the serial number of the machine tested, the company name and address of the using facility, must be signed by the legal representative of the competent authorities and must also bear its header. These documents are originals.

If the operator can show that the dry-cleaning machines in its facility have the NF mark "closed-circuit dry-cleaning machine" or any other equivalent European certification, it shall be exempt from these measures.

## **7. Waste**

### **7.1. Recovery, recycling, disposal**

The operator disposes of or arranges for the disposal of waste produced in accordance with the relevant conditions to safeguard the interests set out in Article L. 511-1 of the Environmental Code. This guarantees that the facilities used for this disposal are correctly authorised for this purpose.

### **7.2. Circuit checks**

The operator is bound to abide by the obligations for registration, waste disposal declaration and tracking sheet in accordance with the conditions laid down in the regulation.

### **7.3. Storage of waste**

The waste produced by the facility is stored in conditions to prevent any risks of pollution (prevention of take-off, runoff, seepage into the ground, odours, etc.).

The quantity of waste stored on the site does not exceed the monthly capacity produced or, in case of external treatment, a normal shipping lot to the disposal facility.

### **7.4. Non-hazardous waste**

Non-hazardous waste (wood, paper, glass, textiles, plastic, rubber, etc.) and waste that is not contaminated by toxic or pollutant products can be recovered, recycled or disposed of at authorised facilities.

The only disposal methods authorised for packaging waste are recycling by re-use, recycling or any other method that aims to obtain useable materials or energy. This provision does not apply to packaging waste holders that produce a weekly volume of less than 1 100 litres and that supply this to the municipal waste collection and treatment service.

### **7.5. Hazardous waste**

Hazardous waste and in particular sludge, filter cartridges and packaging products contaminated with toxic or pollutant products are disposed of at facilities authorised for this purpose under the Environmental Code, in accordance with the respective conditions in order to ensure environmental protection. A list of the hazardous waste produced (type, tonnage, disposal process, etc.) is updated on a regular basis. The operator or the collector issues a tracking sheet. This provides evidence of the disposal or recycling then disposal. Supporting documents are kept for 3 years.

### **7.6. Incineration**

It is prohibited to incinerate waste in the open air.

## 8. Noise and vibration

### 8.1. Noise limit values

Definition of terms within the meaning of the present Order:

- Emergence: The difference between the weighted equivalent continuous pressure levels A for the ambient noise (operating facility) and for the residual noise (in the absence of noise generated by the facility);
- Noise aggravation zones:
  - The interior of buildings that are inhabited or occupied by third parties, existing on the date of declaration, and any surrounding external areas (courtyard, garden, terrace),
  - The building land defined by urban development documents prevailing on third parties and published on the date of declaration,
  - The interior of buildings inhabited or occupied by third parties installed after the date of declaration on building land defined above, and any surrounding external areas (courtyard, garden, terrace), excluding areas around buildings installed in areas set aside for trade or industrial activities.

*If the scope of application continues to apply to existing facilities:*

For existing facilities declared no more than four months before the date of publication of the present Order in the Official Journal, the date of declaration is replaced in the definition above of noise aggravation zones with the date of the present Order.

The facility is constructed, equipped and operated in such a way that its operation cannot create noise transmitted by airways or vibrations that is likely to compromise the health or safety of the surrounding area or to cause a nuisance.

In noise aggravation zones noise emissions emitted by the facility are not caused by an emergence greater than the permissible values defined in the following table:

Level of ambient noise existing in noise aggravation zones (including noise from the facility)	Emergence admissible for the period from 7 am to 10 pm excluding Sundays and public holidays	Emergence admissible for the period from 10 pm to 7 am including Sundays and public holidays
Greater than 35 and less than or equal to 45 dB(A)	6 dB(A)	4 dB(A)
Greater than 45 dB(A)	5 dB(A)	3 dB(A)

In addition, the noise level at the boundary of the facility does not exceed 70 dB (A) for the daytime period and 60 dB (A) for the night-time period when in operation, except if the residual noise for the period in question is greater than this limit.

If the specific noise of the facility is tonal, within the meaning of Point 1.9 of the Annex to the Order of 23 January 1997 on the reduction of environmental noise created by facilities classified for the protection of the environment, in a regular or cyclical manner, its appearance must not

exceed 30 per cent of the duration of the establishment in each of the daytime or night-time periods defined in the table above.

If several classified facilities, subject to a declaration under different headings, are located within the same establishment, the level of global noise emitted by these facilities observes the limit values above.

### 8.2. Vehicles and construction plant

Transportation vehicles, handling equipment and construction plant used within the facility comply with the provisions in force in relation to reducing noise emissions. In particular, construction plant complies with an approved type.

The use of all acoustic communication equipment (sirens, alarms, loudspeakers, etc.) that can cause a nuisance for the surrounding area is prohibited, except if their use is exceptional and reserved strictly for the prevention and warning of serious incidents or accidents.

### 8.3. Vibrations

The technical regulations that apply are laid down in Annex II of the present order.

### 8.4. Monitoring of noise emissions by the operator

Noise levels and emergence must be measured by an approved person or an approved body at cost to the operator when requested by the inspectorate for classified facilities.

## **9. Restoration at the end of operation**

In addition to the provisions laid down in Point 1.7 of Annex I of the present order, the operator must restore the site to prevent any future risk or inconvenience. In particular:

- All hazardous products and all waste is recycled or disposed of in duly authorised facilities;
  - Tanks containing any product that is likely to cause water pollution or to cause a fire or explosion are emptied, cleaned, degassed and decontaminated if necessary. These must be removed if possible. Otherwise they are neutralised by filling with an inert solid. The product used for neutralisation covers the entire surface of the internal wall and is resistant for an adequate period of time to prevent the collapse of the surface soil.
-

## ANNEX II

### Technical regulations applicable to vibrations

The facility is constructed, equipped and operated in such a way that its operation cannot create vibrations in neighbouring buildings that are likely to compromise the health or safety of the surrounding area or to cause a nuisance.

The particular speed of the vibrations emitted, measured using the method defined in the present Annex, does not exceed the values defined below.

#### 1. Limit values for the particular speed

##### 1.1. Continuous sources or similar

Continuous sources or similar are classed as:

- All machines emitting vibrations in a continuous manner,
- Sources emitting pulses at relatively short intervals without any limit on the number of emissions.

The limit values applicable to each of the three components in the vibratory motion are as follows:

Frequencies	4 Hz – 8 Hz	8 Hz – 30 Hz	30 Hz – 100 Hz
Resistant buildings	5 mm/s	6 mm/s	8 mm/s
Sensitive buildings	3 mm/s	5 mm/s	6 mm/s
Very sensitive buildings	2 mm/s	3 mm/s	4 mm/s

##### 1.2. Pulse sources with repeated pulses

Sources pulses with repeated pulses are classed as all sources emitting a limited number of pulses at relatively short intervals but greater than 1 second and for which the duration of emissions is less than 500 ms.

The limit values applicable to each of the three components in the vibratory motion are as follows:

Frequencies	4 Hz – 8 Hz	8 Hz – 30 Hz	30 Hz – 100 Hz
Resistant buildings	8 mm/s	12 mm/s	15 mm/s
Sensitive buildings	6 mm/s	9 mm/s	12 mm/s
Very sensitive buildings	4 mm/s	6 mm/s	9 mm/s

Irrespective of the nature of the source, when the frequencies corresponding to the particular speeds currently observed during the measurement period are within 0.5 Hz of the frequencies of 8, 30 and 100 Hz, the limit value to be used is the value corresponding to the immediately lower frequency band. If the vibrations consist of frequencies outside of the 4-100 Hz interval, a certified body approved by the Environment Minister must be called in.

## 2. Classification of buildings

In order to apply the particular speed limits, the buildings are classified into three categories according to their resistance level:

- Resistant buildings: Buildings of Classes 1 to 4 defined by Circular No 23 of 23 July 1986 on the mechanical vibrations given off by facilities classified for the protection of the environment;
- Sensitive buildings: Buildings of Classes 5 to 8 defined by Circular No 23 of 23 July 1986 mentioned above;
- Very sensitive buildings: Buildings of Classes 9 to 13 defined by Circular No 23 of 23 July 1986 mentioned above;

The following buildings are excluded from this classification:

- Nuclear reactors and their adjoining facilities;
  - Facilities linked to general safety excluding the buildings housing them;
  - Dams, bridges;
  - Water towers;
  - Long-distance transport facilities for gas or liquids other than water and pressurised water lines with a diameter of greater than 1 m;
  - Storage tanks for gas, liquid hydrocarbons or cereals;
  - Railroad or road tunnels and other underground openings of similar importance;
  - Port facilities such as jetties, quays and facilities out at sea, particularly drilling platforms;
- for which research into the effects of the vibrations is outsourced to a certified body. The choice of body is approved by the inspectorate of classified facilities.

## 3. Measurement method

### 1.1. Basic elements

The movement at a given point in a building is recorded in three rectangular directions including vertical; the two other directions are defined in relation to the horizontal axes of the facility being tested without taking account of the azimuth angle.

Sensors are placed on the main element of the building (window sill on a load-bearing wall, point of support on the steel or concrete frame if a modern building).

### 1.2. Measuring equipment

The measuring chain used allows the recording of the particular speed over time in the frequency band from 4 Hz to 150 Hz for amplitudes of this speed between 0.1 mm/s and 50 mm/s. The dynamic of the chain is at least equal to 54 dB.

### 1.3. Operating precautions

The sensor must be fixed firmly on the support. It should be assured that the sensors are not installed on coatings (zinc, plaster, tiles, etc.) which can act as vibration filters or cause parasite vibrations if these coatings are not fixed firmly onto the main element of the construction. If possible, it is sufficient to measure the existing motions outside of the operation of the source.

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## ANNEX III

### Guidelines subject to regular review

The audit stipulated in Point 1.8 of Annex I of the present Order relates to the following provisions (the points mentioned refer to Annex I of the present Order):

#### 1. General provisions

##### 1.4. Classified facility file

*"The operator prepares and updates a file containing the following documents:*

- declaration file,*
- updated plans,*
- acknowledgement of receipt of the declaration and general guidelines,*
- if applicable, the prefectural orders relating to the facility in question in accordance with the legislation on facilities classified for environmental protection,*
- if applicable, the results of the last measurements on effluents and noise,*
- documentary evidence for Points 3.5, 3.6, 3.7, 4.3, 4.7, 7.5 of the present Order,*
- any useful documents relating to risks."*

Object of the audit:

- Presence of an acknowledgement of receipt for the declaration,
- Presence of general guidelines,
- Presentation of prefectural orders relating to the facility, if any.

#### 2. Installation and development

##### 2.1 Installation rules

- A. For facilities declared for more than four months after the date of publication of the present Order in the Official Journal, for facilities declared more than four months before the date of publication of the present Order in the Official Journal, for which the machine was replaced, and for all facilities as of 1 January 2021:**

*"Dry-cleaning machines using halogenated solvents:*

- are installed in a workshop with an area of confinement controlled in accordance with the terms and conditions under Point 2.6 of Annex I of the present Order.*
- have a fully-closed circuit, fitted with cooled condensers and built-in and renewable active carbon filters as well as an automatic distillation residue drainage system fitted with a sealed*
- are fitted with a drying controller;*
- comply with the provisions of standard NF EN ISO 8230-1 and NF EN ISO 8230-2.*

*Dry-cleaning machines using flammable solvents:*

- are installed in a workshop where confinement is controlled according to the terms and conditions in Point 2.6 of Annex I to this Order;*
- are installed in a fully closed circuit, fitted with cooled condensers and an automatic drainage system for distillation residues together with a hermetically sealed device which is to operate*

*at the end of drainage and designed to encourage complete drainage of the distiller, such as hermetic scraping or a closed circuit rinsing system;*

- *are fitted with a drying controller;*
- *comply with the provisions of standard NF EN ISO 8230-1 and NF EN ISO 8230-3."*

Object of the audit:

- Machine type (closed circuit, fitted with cooled condensers and an automatic drainage system for distillation residues together with a hermetically sealed device which is to operate at the end of drainage and designed to encourage complete drainage of the distiller, such as hermetic scraping or a closed circuit rinsing system)
- Presence of built-in and renewable active carbon filters on the machines using a halogenated solvent
- Presence of a drying controller
- Verification of the correct operation of the drying controller (by testing during a cycle)
- Presence of the compliance certificate for the machine in accordance with standards NF EN ISO 8230-1 and NF EN ISO 8230-2 for machines using a halogenated solvent
- Presence of the compliance certificate for the machine in accordance with standards NF EN ISO 8230-1 and NF EN ISO 8230-3 for machines using a flammable solvent

**B. For other facilities:**

*"Dry-cleaning machines using organic solvents are:*

- *Installed in a workshop with an area of confinement controlled in accordance with the terms and conditions under Point 2.6 of Annex I of the present Order.*
- *Installed with an entirely closed circuit."*

Object of the audit:

- Machine type (closed circuit)

2.3. Premises inhabited or occupied by third parties or inhabited above and below the facility

*" 2.3.1. When an operator wishes to install a workshop in a room with premises above which are occupied by third parties, inhabited or adjacent to such premises, it notifies the owners and/or tenants of the premises and the local emergency services of this in advance.*

*The walls, floor and ceiling must not have any cracks or visible daylight. The workshop may not be connected to premises occupied by third parties by ducts and pipes.*

*2.3.2. Prior to starting operation, the operator has the integrity of the walls, floor and ceiling of the premises checked by a third party expert who visually checks that there are no cracks or communication by ducts and pipes."*

Object of the audit for facilities declared or having declared a change in operator after 5 May 2002:

- Presence of a report verifying the good condition of the roof and the floor by an expert third-party.

## 2.4 Fire behaviour of the premises

### **A. For facilities declared more than four months after the date of publication of the present Order in the Official Journal:**

*"The premises where the facilities are housed are fitted with natural smoke and heat extraction systems at the top, compliant with standards in force, enabling the extraction of smoke, combustion gases, heat and unburned products released in the event of fire into the open air.*

*These systems have automatic and manual controls. Their useful opening area is no less than:*

- 1% if the surface area from which smoke is to be extracted is less than 1 600 m<sup>2</sup>,*
- to be determined according to the nature of the risk if the surface area from which smoke is to be extracted is greater than 1 600 m<sup>2</sup> without being less than 1% of the surface area of the premises.*

*In normal operation, resetting (closure) can be done from the floor of the premises or from the smoke extraction area or the cell from which smoke is to be extracted in the case of premises divided into several areas or cells.*

*Manual controls are positioned near to access points.*

*The natural smoke and heat extraction systems are appropriate to the specific risks of the facility.*

*All systems installed after 31 December 2006, the date of the end of the transition period for CE marking and French standards for these materials, have the following characteristics in reference to standard NF EN 12 101-2:*

- reliability: Category RE 300 (300 shutdown cycles). Dual-function outlets are subjected to 10 000 opening cycles in aeration position.*
- the snow load classification when open is SL 250 (25 daN/m<sup>2</sup>) for altitudes no greater than 400 m and SL 500 (50 daN/m<sup>2</sup>) for altitudes greater than 400 m and no greater than 800 m. Category SL0 can be used if the region of installation is not likely to get snow or if the construction prevents accumulation of snow. Above 800 m, the outlets are Category SL 500 and installed with a construction that prevents the accumulation of snow.*
- ambient temperature category T0 (0 °C).*
- heat exposure category HE 300 (300 °C).*

*Fresh air inlets with a free surface area equal to the geometric surface area of all the extraction systems of the largest area are on a cell by cell basis."*

Object of the audit:

- Presence of smoke extraction and gas combustion systems
- Type of control (manual and automatic) for extraction systems
- Option for resetting the systems from the ground
- Positioning of manual opening controls near to access points
- EC declaration of conformity for smoke extraction systems
- Free surface area of fresh air inlets

### **B. For facilities whose declaration date is between 5 May 2002 and the date of publication of the present Order in the Official Journal, plus 4 months:**

*"The upper part of the premises is equipped with systems that allow any fumes and combustion gas that are released in the event of fire to be evacuated (skylights in the roof, openings in the*

*façade or any other similar system). Manual controls are positioned near to access points. The smoke extraction system is adapted to the specific hazards of the facility."*

Object of the audit:

Presence of smoke extraction and gas combustion systems,  
Positioning of manual opening controls near to access points

### **C. For facilities whose declaration date is before 5 May 2002**

No audit

#### 2.6. Ventilation

*"Mechanical ventilation, continuously operating even when the dry-cleaning facility is not running, is used to adequately refresh the air in the workshop, without prejudice to labour regulations, so as to prevent:*

- any secondary solvent fumes spreading outside the workshop,*
- any risk to the health of workers and the public, including in the event of a leak on the cleaning machine or on a product storage receptacle,*
- any risk of an explosive atmosphere being created or of toxic or harmful fumes accumulating.*

*The operator defines the minimum workshop air renewal rate required for compliance with these objectives, demonstrating the rated flow of the fan installed. It will make this data available to the inspectorate of classified facilities.*

*For facilities using a hydrocarbon solvent or a silicon solvent, as the fumes of these solvents are heavier than air, the ventilation system also has an extraction system at the bottom of the premises.*

*This ventilation system, serviced and checked regularly by the operator, is designed to:*

- ensure as little polluted gas as possible is discharged into the outside environment,*
- avoid any pipes passing through inhabited or occupied premises,*
- be independent of any other ventilation system,*
- avoid any risk of corrosion associated with the use of organic solvents,*
- provide one or more discharge points compliant with the provisions of Point 6.1 of Annex I to this Order.*

Object of the audit:

Presence of mechanical ventilation systems

Presence of a document defining the minimum air renewal rate for the workshop

Coherence between the defined renewal rate and the nominal flow rate for the installed ventilator

Presence of an extraction unit in the lower section of the premises for facilities operating with a hydrocarbon solvent or a silicon solvent

Permanent operation of the ventilation system

Presence of as little polluted gas as possible discharged into the outside environment

Independence of any other system from the ventilation system

Resistance of the ventilation facility to corrosion

## 2.9 Retention of workplaces

### **A. For facilities declared more than four months after the date of publication of the present Order in the Official Journal:**

*"The floor of solvent storage or handling sites is leakproof, A1 (non-combustible) and equipped so that it can collect any wash waters and accidental spillages. For this, a sill raised above the level of the floor, or an equivalent system, separates it from outside or from other premises. Any spillage of solvents must be notified to the emergency services (fire department) and the inspectorate of classified facilities if it is likely to have negative consequences for human health or for the environment (contamination of water, soil or premises surrounding the workshop). The flow is immediately mopped up by the authorised person, closely following the instructions in Point 4.2 of Annex I to this Order. The contaminated elements are placed in a sealed container. These are disposed of in accordance with the conditions set out in Point 7 of Annex I of the present Order.*

Object of the audit:

Presence of a raised sill raised or an equivalent system separating the storage sites from outside or from other premises.

Presence of a sealed container.

### **B. For facilities declared more than four months before the date of publication of the present Order in the Official Journal:**

*"Any discharge of organic solvents must be notified to the emergency services (fire service) and to the inspectorate for classified facilities. The discharge is mopped up immediately by an authorised person. The contaminated elements are placed in a sealed container. These are disposed of in accordance with the conditions set out in Point 7 of Annex I of the present Order.*

Object of the audit:

Presence of a sealed container.

## 2.10 Holding tanks

### **A. For facilities declared after 5 May 2002:**

*"Any storage of liquids likely to contaminate the water or soil is associated with a retention capacity with a volume of at least equal to the higher of the following two values:*

- 100% of the capacity of the largest tank,*
- 50% of the total capacity of the tanks combined.*

*The retention capacity is sealed for the solvents it may contain and withstands the physical and chemical action of the fluids. The same applies for the plugging device which is kept closed in normal conditions.*

*The floor of the workshop is impermeable, particularly to organic solvents (e.g. tiled floor)."*

Object of the audit:

Presence of holding tanks,  
Volume of holding capacity,

Impermeability of the holding tanks (by visual inspection: nature and absence of cracks),  
Closed position of the plugging device,  
Impermeability of the floor, particularly to organic solvents.

**B. For facilities declared before 5 May 2002:**

*"Dry-cleaning machines and all stocks of any liquid that is likely to create water or ground pollution must have a holding capacity whose volume is at least equal to the largest of the two values below:*

- 100% of the capacity of the largest tank
- 50% of the global capacity of the related tanks

*The holding capacity must be impermeable to the products that it may contain and resistant to fluid pressure.*

*Absolute impermeability and the correct upkeep of all equipment, tanks and pipes for organic solvents will be checked regularly.*

*The floor of the workshop shall be impermeable; it shall be fitted with a tank or any other similar installation so that in the event of an accident, all of the liquid containing organic solvents can be retained within the workshop."*

Object of the audit:

- Presence of holding tanks,
- Volume of holding capacity,
- Impermeability of the holding tanks (by visual inspection: nature and absence of cracks),
- Impermeability of the floor, particularly to organic solvents.

### **3. Operation and maintenance**

#### **3.1 Operation monitoring**

*"3.1.1 Operation is the responsibility of and directly and continuously monitored by the operator or by a person named by the operator. In particular:*

- *self-service facilities are forbidden*
- *the operation of a facility or of a machine without anybody present is forbidden*

*In any case, the person responsible for operation of the machine, and in general any person likely to be in contact with it, has good knowledge of how the facility operates and the hazards and disadvantages of the products used or stored in the facility.*

*3.1.2 This manager or person likely to be in contact with the machine has been given appropriate training by a training organisation that offers a course lasting at least two days that complies with the reference system established by the profession, which will have been sent to the Environment Ministry where such a reference system exists. This training course should have been held after 5 May 2002. The training certificate issued by the organisation is made available to the inspectorate of classified facilities. It gives the following information as a minimum: name of the training organisation and its registration number. The "Maintenance of Textiles (dry cleaning option)" Professional Diploma (Brevet Professionnel "Maintenance des articles textiles (option pressing)"), provided for by the Order of 29 July 1998 of the Ministry of National Education, the Higher Master's Certificate (Brevet de maîtrise supérieur) and the Professional Aptitude Certificate in Dry Cleaning (Certificat d'Aptitude Professionnel "Métiers du pressing") are considered as meeting the criteria for appropriate training when awarded after 5 May 2002.*

*Every 5 years, this manager or any person likely to be in contact with the machine attends a refresher course with a training organisation that offers a course lasting at least one day that complies with the reference system established by the profession, which will have been sent to the Environment Ministry where such a reference system exists."*

Object of the audit:

Permanence of monitoring at the facility,

Training certificate for the facility manager or any other person likely to be in contact with the machine dated after 5 May 2002.

Reassessment certificate for the facility manager or any other person likely to be in contact with the machine.

### 3.2 Access control

*"Unauthorised persons may not freely access areas of the facility likely to contain solvents. A physical barrier is used to ensure compliance with this provision."*

Object of the audit:

Existence of a physical barrier (counter, etc.) or any other equivalent method preventing free access to areas of the facility likely to contain solvents.

### 3.3 Product knowledge and labelling

*"The person responsible for operation of the cleaning machine has at his disposal the documents informing him of the nature and the risks of the hazardous products present in the facility, in particular the safety data sheets."*

*Drums, tanks and other packaging bear the name of the products in lettering that can be easily read and, where appropriate, the hazard symbols in accordance with regulations on labelling of hazardous chemical substances and preparations."*

*For facilities that use a flammable solvent, this has the following characteristics:*

- *an aromatic compound content of less than 1% by mass;*
- *a benzene and polycyclic aromatic compound content of less than 0.01% by mass;*
- *a halogenated compound content of less than 0.01% by mass;*
- *a flash point greater than 55 °C;*
- *thermal stability in operating conditions;*
- *a boiling point between 180 °C and 210 °C under a pressure of 1.013 mbar and must not break down during use;*
- *the additives used do not change the properties above;*
- *the additives used are not classified as Category 1 or 2 carcinogenic substances, mutagens or reprotoxins."*

Object of the audit:

Presence of safety data sheets,

Presence and legibility of product names and hazard symbols on drums, tanks and packaging.

For facilities that use a flammable solvent, verification on the safety data sheets of:

- compliance with the flash point
- compliance with the boiling temperature

For facilities using a flammable solvent, if using additive products, verification on the safety data sheets that the additives are not classified as Category 1 or 2 carcinogenic substances, mutagens or reprotoxins.

### 3.5 Entry/exit log

*"The operator keeps an up-to-date inventory of the nature and quantity of hazardous products held, such as solvents, to which is appended a general storage plan. This inventory is made available to the inspectorate of classified facilities and the fire and emergency services.*

*The presence in the facility of hazardous or combustible material is restricted to what is necessary for operation."*

Object of the audit:

- Presence of an inventory listing (nature and quantity) of hazardous products,
- Compliance of stocks of hazardous products present on the day of the audit with the inventory listing indicated on the register,
- Presence of the storage plan for hazardous products,
- Absence of any hazardous substances not required for operation in the workshop.

### 3.6. Regular checking of electrical facilities

*"All electrical facilities are kept in good condition and are inspected, after installation or modification, by a competent person. The frequency, purpose and scope of the electrical installation checks and the content of the reports on the said checks are laid down by the Order of 10 October 2000 establishing the frequency, purpose and scope of electrical installation checks for the purposes of protection of workers and the content of reports relating to the said checks.*

*The operator makes the report showing that its electrical facilities are kept in good condition and inspected after installation or modification available to the inspectorate of classified facilities for a period of 5 years."*

Object of the audit:

- Presence of a period audit report every year or every two years if the previous report had no comments or if, before the deadline, the facility manager has carried out compliance work in response to the comments contained in the audit report.

### 3.7. Operating regulations

*"Operations involving hazardous handling and operation of the facilities (start-up and shutdown, normal operation, maintenance, etc.) are covered by written operating regulations. In particular, these regulations give:*

- procedures;
- the frequency of checks on safety systems and pollution control;
- maintenance and cleaning instructions;
- the presence in the workshop of only those quantities required for operation of the facility;
- the ban on overloading cleaning machines;
- urgent measures to be taken if after spinning and drying, solvent residue is present in the linen or there is a suspicious odour, particularly of solvent
- the conditions for keeping and storing products.

*These regulations specify, in particular, compliance with the following provisions:*

- the machine is not overloaded;

- *the drying time recommended by the manufacturer is strictly adhered to;*
- *opening of drums or any other receptacle containing an organic solvent is strictly limited to operational and maintenance requirements;*
- *any manual pre-treatment or stain removal of laundry using organic solvents for use in a dry-cleaning machine is forbidden;*
- *all normal operations, including organic solvent handling, are done in such a way as to avoid solvent leaks in the workshop;*
- *the use of solvents not explicitly approved by the machine manufacturer is forbidden;*
- *solvents are handled in such a way as to prevent the product from coming into contact with the skin and from being inhaled;*
- *the solvent is not exposed to a heat source. More specifically, it is not to be stored in direct sunlight."*

**Object of the audit:**

Presence of operating regulations detailing:

- procedures,
- the frequency of checks on safety systems,
- maintenance and cleaning instructions,
- the presence in the workshop of only those quantities required for operation of the facility,
- the ban on overloading cleaning machines,
- the conditions for keeping and storing products,
- urgent measures to be taken if solvent residue is present in the linen or there is a suspicious odour, particularly of solvent, after spinning and drying,
- the ban on overloading the machines and the nominal capacity of the machines,
- the drying time recommended by the manufacturer,
- the strict limit on the opening of drums or any other receptacle containing an organic solvent to operational and maintenance requirements,
- the ban on any manual pre-treatment or stain removal of laundry using organic solvents for use in a dry-cleaning machine,
- the obligation for all normal operations, including organic solvent handling, to be done in such a way as to avoid solvent leaks in the workshop,
- the ban on the use of solvents not explicitly approved by the machine manufacturer,
- the obligation to prevent the product from coming into contact with the skin and from being inhaled when handling solvents,
- the ban on exposing solvents to a heat source.

### 3.8 Servicing and maintenance

*"The dry-cleaning machines are inspected each year by a competent authority who certifies the general good condition of the equipment. The results of these checks are made available to the inspectorate of classified facilities and logged.*

*It vouches for:*

- *the integrity of the machine and the condition of door seals;*
- *the correct operation of the double separator;*
- *the correct operation of the door safety devices;*
- *the correct operation of the drying controller;*
- *the drying quality (cleanliness of the tunnel and batteries, condition and cleanliness of the filters, the heat pump and the active carbon purifier);*

*The organisation is also involved with checking the correct operation and the cleanliness of the establishment's ventilation system and certifies it in the same way."*

Object of the audit:

Presence of the inspection certificate

Verification of the contents of the inspection certificate:

- the integrity of the machine and the condition of door seals
- the correct operation of the double separator
- the correct operation of the door safety devices
- the correct operation of the drying controller
- the drying quality (cleanliness of the tunnel and batteries, condition and cleanliness of the filters, the heat pump and the active carbon purifier)
- the correct operation and cleanliness of the facility's ventilation system

## 4. Risks

### 4.1 Location of risk

*"The operator is responsible for listing the parts of the facility which, due to the qualitative and quantitative characteristics of the equipment implemented, stored, used or produced, are likely to be the source of an incident which may directly or indirectly affect the environment, public safety or the security of the facility.*

*For each of these parts of the facility, the operator determines the nature of the risk (fire, explosive atmosphere or toxic fumes). This risk is reported. The workshops and the areas where these products are handled are included in this inventory. In particular, risks associated with the use of solvents are clearly displayed.*

*The operator has a general workshop and storage facility plan showing the different hazard areas corresponding to these risks."*

Object of the audit:

Presence of an assessment of hazard areas and associated risks

Presence of a display of the risks in each hazard area (in particular concerning the risks associated with the use of solvents)

Presence of a general workshop and storage facility plan showing the different hazard areas

### 4.2 Personal protection

*"If there is a risk of organic solvents being inhaled during maintenance work or in the event of intervention following a solvent leak, the following must be worn:*

- *respiratory protection appropriate to the risks,*
- *gloves,*
- *protective goggles."*

Object of the audit:

Presence of personal protection equipment (respiratory protection, gloves, protective goggles).

### 4.3 Fire-fighting methods

*"The facility has the appropriate fire-fighting resources for the risks, in particular:*  
*- public or private fire appliances (hydrant system, etc.) within 200 m of the risk;*

- extinguishers distributed throughout the premises according to the risks, near to passageways, clearly visible and easily accessible. The extinguishing agents are appropriate to the risks to be combated and compatible with the products stored;
- a method for alerting the fire and emergency services;
- site plans making intervention easier for the fire and emergency services with a description of the hazards in each room.

*Depending on the hazard represented, and in particular for facilities using flammable solvents, the facility is fitted with an automatic fire detection system;*

*This equipment is kept in good working order and checked at least once a year."*

Object of the audit:

- Presence and installation of a fire appliance (hydrant system, etc)
- Presence of appropriate fire extinguishers for the risks encountered, inspected every year
- Presence of a method for alerting the fire and emergency services (telephone, etc.),
- Presence of site plans,
- Presence of a fire detection system for facilities using flammable solvents.

#### 4.5 Fire ban

*"In the parts of the facility referred to in Point 4.1 of Annex I to this Order where there is a risk of fire or explosion, particularly in rooms containing solvents, including in the workshop being cleaned, it is forbidden to have a naked flame of any kind, except where this is used for carrying out work covered by a "fire permit". This ban is clearly displayed."*

Object of the audit:

- Presence of a display showing the ban on fires within the premises that pose a risk of fire or explosion, particularly in rooms containing solvents, including in a workshop being cleaned.

#### 4.6. "Intervention permit" and "Fire permit" in the parts of the facility referred to in Point 4.1

*"In the parts of the facility referred to in Point 4.1 of Annex I to this Order, any repair or installation work that involves increased risk (use of a flame or heat source, system drainage, etc.) may not be carried out until an "intervention permit" and, if required, a "fire permit" have been issued and in accordance with specific rules.*

*The "intervention permit" and, if required, the "fire permit", as well as the specific instructions are drawn up and signed off by the operator or by the person named by the operator. When the work is carried out by an external company, the "intervention permit" and, if required, the "fire permit" and the specific instructions relating to installation safety are countersigned by the operator and the external company or the persons named by it.*

*On completion of the work and before activity is resumed, the facilities are checked by the operator or its representative."*

Object of the audit:

- For facilities operating with a flammable solvent, presence of a "fire permit"

#### 4.7. Safety regulations

*"Without prejudice to the provisions of the French Labour Code, regulations laying down the terms and conditions for application of the provisions of this Order are established, updated and brought to the attention of staff in those places frequented by staff. In particular, these regulations indicate:*

- the ban on having a naked flame of any kind in the parts of the facility referred to in Point 4.1 of Annex I to this Order, “fire” and “explosive atmospheres”;*
- the obligation to obtain an “intervention permit” or a “fire permit” for the parts of the facility referred to in Point 4.1 of Annex I to this Order;*
- the facility’s emergency stoppage and shutdown procedures (electricity, fluid systems);*
- the steps to be taken in the event of a leak from a receptacle or a pipe containing a solvent and in particular the disposal conditions laid down in Point 5.7 of Annex I to this Order;*
- the precautions to take for the use and storage of incompatible products;*
- the fire-extinguishing resources to be used in the event of fire;*
- the alarm procedure with the telephone numbers of the establishment’s intervention manager, the fire and emergency services, etc.;*
- the duty to inform the inspectorate of classified facilities in the event of an accident."*

Object of the audit:

Presence of regulations detailing:

- the ban on having a naked flame in the parts of the facility referred to in Point 4.1 of Annex I to this Order, “fire” and “explosive atmospheres”,
- the obligation to obtain an “intervention permit” or a “fire permit” for the parts of the facility referred to in Point 4.1 of Annex I to this Order,
- the facility’s emergency stoppage and shutdown procedures,
- the steps to be taken in the event of a leak from a receptacle or a pipe containing a solvent
- the precautions to take for the use and storage of incompatible products,
- the fire-extinguishing resources,
- the alert procedure,
- the duty to inform the inspectorate of classified facilities in the event of an accident.

### **5. Water**

#### 5.1 Samples

*"A disconnection tool, or any other equivalent procedure, is installed on the water inlet channels."*

Object of the audit:

Presence of a disconnection tool on the water inlet channels.

#### 5.7 Preventing accidental pollution

*"Measures are taken to prevent any accidental discharge of hazardous materials into public sewers or the natural surroundings; in particular, the machine is fitted with a double separator to prevent any solvents entering into the discharged water. Collected effluents are either discharged in accordance with the conditions stipulated in Point 5.5 above or discharged as waste in accordance with the conditions stipulated in Point 7 of Annex I of the present Order."*

Object of the audit:

Presence of a double separator on the machine.

## 6. Air and odours

### 6.1 Catchment and purification of waste emitted into the atmosphere

#### **A. For facilities declared more than four months after the date of publication of the present Order in the Official Journal:**

*"The facility does not create odours that may disturb the surrounding area.*

*All facilities have a point of discharge that extends at least 3 m past any buildings located within an area of 15 m. The point of discharge is located at least 8 m from any clean air intake or opening. If using organic solvents, the operator may abstain from this latter provision if all of the gas effluents from the workshop are channelled and trapped using an appropriate system, for example an active carbon filter placed on the ventilation duct for the workshop set out in Point 2.6 of Annex I of the present Order. The filter is regenerated every year except if the manufacturer's requirements stipulate a more frequent replacement.*

*The operator shall prepare:*

- A maintenance programme for the facility, in particular, in order to guarantee the permanence of the machine's impermeability and to guarantee the correct operation of the drying controller set out in Point 2.1 of Annex I of the present Order if necessary, in agreement with the supplier's recommendations,*
- A solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges, according to the terms and conditions set out in Point 7.5 of Annex I of the present Order."*

Object of the audit:

Presence of a point of discharge that extends at least 3 m past the buildings located within an area of 15 m, or, if using organic solvents, presence of an appropriate system, for example an active carbon filter, allowing all of the gas effluents from the workshop to be trapped, positioned on the ventilation duct for the workshop.

Presence of a point of discharge located at least 8 m from any clean air intake or opening.

Certification of the regeneration of the active carbon filter every year, if applicable

Presence of a maintenance programme for the facility for the machine and the drying controller in particular

Presence of a solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges

#### **B. For facilities declared more than four months before the date of publication of the present Order in the Official Journal:**

*"The facility does not create odours that may disturb the surrounding area.*

*All facilities have a point of discharge that extends at least 3 m past any buildings located within an area of 15 m. If using organic solvents, the operator may abstain from this latter provision if all of the gas effluents from the workshop are channelled and trapped using an appropriate system, for example an active carbon filter placed on the ventilation duct for the workshop set out in Point 2.6 of Annex I of the present Order. The filter is regenerated every year except if the manufacturer's requirements stipulate a more frequent replacement.*

*The operator shall prepare:*

- *A maintenance programme for the facility, in particular, in order to guarantee the permanence of the machine's impermeability and to guarantee the correct operation of the continuous measurement system set out in Point 5 of Annex IV of the present Order, in agreement with the supplier's recommendations.*
- *A solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges, according to the terms and conditions set out in Point 7.5 of Annex I of the present Order."*

Object of the audit:

Presence of a point of discharge that extends at least 3 m past the buildings located within an area of 15 m, or, if using organic solvents, presence of an appropriate system, for example an active carbon filter, allowing all of the gas effluents from the workshop to be trapped, positioned on the ventilation duct for the workshop.

Presence of a maintenance programme for the facility for the machine and the system of measures in particular if applicable.

Presence of a solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges.

### 6.3 Monitoring by the operator of the pollution discharged

- A. For facilities declared more than four months after the date of publication of this Order in the Official Journal but within two years of the date of publication of this Order in the Official Journal, and with a dry-cleaning machine that uses a flammable solvent**

*"For facilities declared more than four months after the date of publication of this Order in the Official Journal but within two years of the date of publication of this Order in the Official Journal, and with a dry-cleaning machine that uses a flammable solvent, the latter is fitted with a drying controller."*

Object of the audit:

Machine fitted with a drying controller

- B. For facilities declared more than four months after the date of publication of the present Order in the Official Journal if the dry-cleaning machine uses a halogenated solvent, for facilities declared more than two years after the date of publication of the present Order in the Official Journal if the dry-cleaning machine uses a flammable solvent, for facilities declared more than four months before the date of publication of the present Order in the Official Journal if the machine has been replaced and for all facilities as of 1 January 2021:**

*"The results of VOC emission measurements are available for 12 months following commissioning.*

*The measurements are carried out on each machine, by an authorised body, within a specific test facility in accordance with the test protocol laid down in Annex VI of the present Order and certified by a compliance certificate issued by the body performing the measurements and a test report. The compliance certificate and the test report must state the date on which the tests were performed, the serial number of the machine tested, the company name and address of the using facility, must be signed by the legal representative of the competent authorities and must also bear its header. These documents are originals.*

*If the operator can show that the dry-cleaning machines in its facility have the NF mark "closed-circuit dry-cleaning machine" or any other equivalent European certification, it shall be exempt from these measures."*

Object of the audit:

NF certification "closed-circuit dry-cleaning machine" for the machine

or

- Presence of the certificate of measurement stating the date on which the tests were performed, the serial number of the machine tested, the company name and address of the using facility, the signature of the legal representative of the competent body and its header;
- Presence of the test report in accordance with the test protocol detailed in Annex VI of the present Order and stating the date on which the tests were performed, the serial number of the machine tested, the company name and address of the using facility, the signature of the legal representative of the competent body and its header;
- Measured result less than 20 g VOC per kilogram of clean linen.

**C. For facilities declared more than four months before the date of publication of the present Order in the Official Journal if the dry-cleaning machine uses a flammable solvent**

*"Compliance with the emission limit value laid down in Point 6.2 of Annex I of the present Order is guaranteed for machines using an inflammable solvent by a drying controller."*

Object of the audit:

Machine fitted with a drying controller

**D. For other facilities:**

*"Compliance with the emission limit value laid down in Point 6.2 of Annex I of the present Order is guaranteed by one of the following solutions:*

- *A machine with the NF mark*
- *A machine meeting the following criteria:*
  - *A continuous measurement system measuring the mass concentration of organic solvent in the drum. At the end of the drying process, the mass concentration of organic solvent in the drying air of the drum (rotating drum, ventilation on, drum door closed and temperature higher than 35°C) does not exceed 2 g/m<sup>3</sup> (with a rate of air circulation between 2 and 5 m<sup>3</sup>/h/kg of clean linen). The measurement system has a measuring range adapted to the concentrations of organic solvent to be measured, giving a maximum concentration of 2 g/m<sup>3</sup>. The recorded measurements are made available to the Inspectorate for Classified Facilities for a period of 5 years. The continuous measurement system includes an automatic calibration tool. The measurement system is re-calibrated every year by an authorised body. A calibration certificate is supplied and retained for a period of 5 years.*
  - *A safety unit holds the loading/unloading door locked from the start of the cycle to the end of the drying process; the outcome of the continuous measurement of the organic solvent concentration stipulated above does not exceed 2 g/m<sup>3</sup>."*

Object of the audit:

NF certification of the machine

or

- Presence of a measurement system linked to a safety unit as described above
- Presence of recorded measurements for the past 5 years
- Verification of compliance with the concentration of 2 g/m<sup>3</sup> on recorded measurements for the previous year
- Presence of calibration certificates for the past 5 years
- Verification of the correct operation of the safety unit (by testing during a cycle)

## 7. Waste

### 7.2 Circuit checks

*"The operator is bound to abide by the obligations for registration, waste disposal declaration and tracking sheet in accordance with the conditions laid down in the regulation."*

Object of the audit:

Presence of a register containing the declarations and waste tracking sheets

### 7.3. Storage of waste

*"The waste produced by the facility is stored in conditions to prevent any risks of pollution (prevention of take-off, runoff, seepage into the ground, odours, etc.)."*

*The quantity of waste stored on the site does not exceed the monthly capacity produced or, in case of external treatment, a normal shipping lot to the disposal facility."*

Object of the audit:

Storage conditions

Quantity of waste present on the site

### 7.5. Hazardous waste

*"Hazardous waste and in particular sludge, filter cartridges and packaging products contaminated with toxic or pollutant products are disposed of at facilities authorised for this purpose under the Environmental Code, in accordance with the respective conditions in order to ensure environmental protection. A list of the hazardous waste produced (type, tonnage, disposal process, etc.) is updated on a regular basis. The operator or the collector issues a tracking sheet. This provides evidence of the disposal or recycling then disposal. Supporting documents are kept for 3 years."*

Object of the audit:

Presence of an up-to-date hazardous waste register

Presence of supporting documents for the disposal of sludge, filter cartridges and packaging products

## **ANNEX IV**

### **Additional provisions for existing facilities**

#### **A. Additional provisions for all existing facilities**

##### 1. Installation rules

Dry-cleaning machines using organic solvents are:

- Installed in a workshop with an area of confinement controlled in accordance with the terms and conditions under Point 2.6 of Annex I of the present Order.
- Installed with an entirely closed circuit.

##### 2. Accidental discharge of organic solvents

Any discharge of organic solvents must be notified to the emergency services (fire service) and to the inspectorate for classified facilities. The discharge is mopped up immediately by an authorised person. The contaminated elements are placed in a sealed container. These are disposed of in accordance with the conditions set out in Point 7 of Annex I of the present Order.

##### 3. Holding tanks

Dry-cleaning machines and all stocks of any liquid that is likely to create water or ground pollution must have a holding capacity whose volume is at least equal to the larger of the two values below:

- 100% of the capacity of the largest tank
- 50% of the global capacity of the related tanks

The holding capacity must be impermeable to the products that it may contain and resistant to fluid pressure.

Absolute impermeability and the correct upkeep of all equipment, tanks and pipes for organic solvents will be checked regularly.

The floor of the workshop shall be impermeable; it shall be fitted with a tank or any other similar installation so that in the event of an accident, all of the organic solvent can be retained within the workshop.

##### 4. Catchment and purification of waste emitted into the atmosphere

The facility does not create odours that may disturb the surrounding area.

All facilities have a point of discharge that extends at least 3 m past any buildings located within an area of 15 m. If using organic solvents, the operator may abstain from this latter provision if all of the gas effluents from the workshop are channelled and trapped using an appropriate system, for example an active carbon filter placed on the ventilation duct for the workshop set out in Point 2.6 of Annex I. The filter is regenerated every year except if the manufacturer's requirements stipulate a more frequent replacement.

The operator shall prepare:

- A maintenance programme for the facility, in particular, in order to guarantee the permanence of the machine's impermeability and to guarantee the correct operation of the

continuous measurement system set out in Point 5 of Annex IV of the present Order if necessary, in agreement with the supplier's recommendations.

- A solvent management register, in particular, containing documents certifying the quantity of solvent purchased by the operator and documents certifying the destruction of the sludge and used filter cartridges, according to the terms and conditions set out in Point 7.5 of Annex I of the present Order.

#### 5. Monitoring by the operator of the pollution discharged

Compliance with the emission limit value laid down in Point 6.2 of Annex I of the present Order is guaranteed for machines using a halogenated solvent by one of the following solutions:

- A machine with the NF mark
- A machine meeting the following criteria:
  - A continuous measurement system measuring the mass concentration of organic solvent in the drum. At the end of the drying process, the mass concentration of organic solvent in the drying air of the drum (rotating drum, ventilation on, drum door closed and temperature higher than 35°C) does not exceed 2 g/m<sup>3</sup> (with a rate of air circulation between 2 and 5 m<sup>3</sup>/h/kg of clean linen). The measurement system has a measuring range adapted to the concentrations of organic solvent to be measured, giving a maximum concentration of 2 g/m<sup>3</sup>. The recorded measurements are made available to the Inspectorate for Classified Facilities for a period of 5 years. The continuous measurement system includes an automatic calibration tool. The measurement system is re-calibrated every year by an authorised body. A calibration certificate is supplied and retained for a period of 5 years.
  - A safety unit holds the loading/unloading door locked from the start of the cycle to the end of the drying process, the outcome of the continuous measurement of the organic solvent concentration stipulated above does not exceed 2 g/m<sup>3</sup>.

Compliance with the emission limit value laid down in Point 6.2 of Annex I of the present Order is guaranteed for machines using an inflammable solvent by a drying controller.

#### **B. Additional provision for existing facilities whose declaration date is between 5 May 2002 and the date of publication of the present Order in the Official Journal, plus 4 months**

#### 6. Fire behaviour of premises

The walls of the premises housing a facility containing inflammable solvents or more generally inflammable materials offer the following minimum response and fire resistance characteristics:

- High walls and floors: REI 120 (2-hour fire-break);
- Framework and insulation: Class A1 materials according to the provisions of standard NF EN 13 501-1 (non-combustible);
- Interior doors REI 30 and fitted with a door closer or a system to ensure automatic closing;
- Exterior door RE 30.

The upper part of the premises is equipped with systems that allow any fumes and combustion gas that are released in the event of fire to be evacuated (skylights in the roof, openings in the façade or any other similar system). Manual opening controls are positioned next to points of access. The smoke extraction system is adapted to the specific hazards of the facility.

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**ANNEX V**  
**Provisions applicable to existing facilities**

A. Provisions from Annex I applicable to existing facilities whose declaration date is between 5 May 2002 and the date of publication of the present Order in the Official Journal, plus 4 months, according to the following timetable:

<b>Article</b>	<b>Date of compliance</b>
1. General provisions	Publication date of the Order, plus 4 months
2. Installation and development (excluding 2.1, 2.4 and 2.9)	Publication date of the Order, plus 4 months
2.1 Installation rules	Applicable to any replaced machine and no later than 1 January 2021
3. Operation and maintenance (excluding 3.1.2)	Publication date of the Order, plus 4 months
3.1.2 Training	Publication date of the Order, plus 24 months
4. Risks	Publication date of the Order, plus 4 months
5. Water (excluding 5.3)	Publication date of the Order, plus 4 months
6. Air and odours (excluding 6.1 and 6.3)	Publication date of the Order, plus 4 months
6.3. Monitoring by the operator of the pollution discharged	Applicable to any replaced machine and no later than 1 January 2021
7. Waste	Publication date of the Order, plus 4 months
8. Noise and vibration	Publication date of the Order, plus 4 months
9. Repair	Publication date of the Order, plus 4 months

*Any provisions not included in the table above do not apply to the facilities in question.*

B. Provisions from Annex I applicable to existing facilities whose declaration date is prior to 5 May 2002, according to the following timetable:

Article	Date of compliance
1. General provisions (excluding 1.3 and 1.4)	Publication date of the Order
1.4 Classified facility file	Publication date of the Order, plus 4 months
2. Installation and development (excluding 2.1, 2.3.2, 2.4, 2.5, 2.9 and 2.10)	Publication date of the Order
2.1 Installation rules	Applicable to any replaced machine and no later than 1 January 2021
2.3 Premises inhabited or occupied by third parties or inhabited above and below the facility	Publication date of the Order, plus 12 months
3. Operation – Maintenance (excluding 3.1 and 3.7)	Publication date of the Order, plus 4 months
3.1.1 Operation monitoring	Publication date of the Order
3.1.2 Training	Publication date of the Order, plus 24 months
3.7 Operating guidelines	Publication date of the Order
4. Risks (excluding 4.3)	Publication date of the Order, plus 4 months
4.3 Fire-fighting methods	Publication date of the Order, plus 12 months
5. Water (excluding 5.3)	Publication date of the Order
6.2 Limit values and waste conditions	Applicable to any replaced machine and no later than 1 January 2021
6.3. Monitoring by the operator of the pollution discharged	Publication date of the Order, plus 4 months
7. Waste	Publication date of the Order
8.2 Vehicles and construction plant	Publication date of the Order
8.4 Monitoring of noise emissions by the operator	Publication date of the Order
9. Repair	Publication date of the Order

*Any provisions not included in the table above do not apply to the facilities in question.*

## ANNEX VI

### Protocol of tests to determine VOC emissions from a machine

#### I. PREAMBLE

The test protocol checks that the closed-circuit dry-cleaning machines are able to comply with the limit value of 20 g/kg of clean and dry linen set out in Point 6.2 of Annex I of the present Order when operating on a long-term basis.

#### II – AIMS OF THE TEST PROTOCOL

Based on the tests described below, the following protocol certifies that:

- The dry-cleaning machine offers an emission factor EF of less than 20g of solvent per kg of clean linen. This emission factor is determined by the differential weighing of the machine;
- The dry-cleaning machine using organic solvents, which is submitted to testing, is a closed-circuit machine meeting the following definition:

Definition: A closed-circuit dry-cleaning machine is a machine incorporating all of the non-removable solvent recovery systems that are deemed necessary – during all cleaning phases resulting in a clean, dry and aired load – to prevent automatically and without regeneration:

- Any link between the atmosphere of the workshop and the machine enclosure (including internal parts of the machine and pipes)
- Any discharge of residue (excluding water, stripped of solvent, via the separator siphon)

Solvent purification operations are not taken into account in the preceding definition.

The protocol is implemented in a test facility whose ambient conditions are controlled and meet the conditions set out in III "General test conditions" of the present Annex.

In order to verify the correct operation of the closed-circuit machine and, if necessary, in order to identify the abnormal causes of emissions that may worsen as the machine ages, the monitoring of the ambient concentration of the test facility is carried out according to the protocol and the conditions described in III "General test conditions" of the present Annex. The causes identified are indicated in the test report.

#### III – GENERAL TEST CONDITIONS

- Machine loads:
  - The loads introduced into the machine for each cycle must correspond to the nominal capacity  $C_n$  of the machine. The nominal capacity is such that:

$$\frac{V}{C_n} = 22 - \frac{C_n}{6} \text{ where } C_n \text{ is between 0 and 25 kg}$$

$$\frac{V}{C_n} = 18.7 - \frac{C_n}{27} \text{ where } C_n \text{ is between 26 and 50 kg}$$

V being the volume of the basket, expressed in litres, equal to the volume calculated taking the interior diameter of the basket as the diameter, excluding blades, and the distance between the front flange of the basket and the back, measured at the shroud, as the depth.

The exact measurements  $m_1$  and  $m_2$  of the loads used are noted to the nearest gram based on the calculation in VIII of the present Annex.

- Before determining  $m_1$  and  $m_2$ , the textile loads are placed for at least 24 hours in a controlled environment (temperature  $23 \pm 3^\circ\text{C}$ ; hygrometry:  $60 \pm 15\%$ ) to stabilise the initial humidity ratio of the textile.
- The composition of the textile load is made up of 20% wool, 30% cotton and 50% polyester-cotton. The items in polyester-cotton consist of 50% to 65% polyester and 35% to 50% cotton.
- Feed water:
  - Temperature =  $15 \pm 2^\circ\text{C}$
  - Pressure (measured at the machine input when in operation):  $2.5 \cdot 10^5$  Pa
- Ambient temperature and relative humidity
  - Temperature =  $23 \pm 3^\circ\text{C}$
  - Relative hygrometry =  $60 \pm 15\%$

#### IV – CLEANING CYCLES

- The dry-cleaning cycle used is a continuous two-bath distillation cycle;
- The number of cycles to be completed between the initial weighing and the final weighing is  $50 \pm 2$ .

#### IV - 1. DETAILS OF THE CYCLE

*The manufacturer programmes, on the tested machine, a standard cleaning cycle based on the timetable below:*

1. Prewash – low level (for information: duration = 3 minutes)
2. Drainage to the distiller (continuous distillation)
3. Spinning
4. Cleaning (for information: duration = 6 minutes)
5. Drainage to the tank
6. Spinning
7. Drying – Air temperature:  $65^\circ\text{C}$  at input (subject to the machine options)
8. Deodorisation (3 to 5 minutes)

The solvent filter is not used.

Drying is carried out under the control of the drying controller or another appropriate system.

#### IV - 2. DRYING TEMPERATURE

The temperature stipulated above is currently used for dry cleaning with perchloroethylene. To achieve comparable results, the cycles used for the tests must show this temperature value.

#### IV - 3. DISTILLATION

The programme prepared by the manufacturer must include continuous distillation of the successive prewash baths.

To overcome the considerable uncertainty regarding the presence of distillation residues and their analysis to determine their solvent content, distillation is carried out without soiling (clean clothes, no introduction of artificial soiling).

#### IV - 4. MACHINE CAPACITY

To guarantee the accuracy of the differential weighing, the machine tested must offer a nominal capacity (in accordance with III of the present Annex) of greater than or equal to 8 kg. This remains limited to 50 kg at most.

### V – WEIGHING EQUIPMENT

#### V - 1. TEXTILES LOADS

These are determined using a scale with a reading uncertainty of less than or equal to  $\pm 0.5$  grams. The measurements  $m_1$  and  $m_2$  are recorded in kg to the nearest gram (e.g. 14.962 kg).

#### V - 2. TEST MACHINE

The weighing equipment used consists of pallet scales with a range adapted to the weight of the machine, at least 3 000 kg, offering a reading accuracy of less than or equal to  $\pm 100$  grams.

The reading is taken via a digital display. The pallet scales are equipped with a level and cylinder indicator intended to control the level.

For weighing, the pallet scales are positioned on a pallet truck with an adapted geometry and load capacity to ensure a satisfactory level of adjustment of the pallet scales.

*N.B.: The scales assigned to these tests must be calibrated regularly and any necessary corrections made.*

### VI – INITIAL WEIGHING

#### VI - 1. PREPARATION OF THE MACHINE

The machine must be clean, in good working order, with full solvent tanks and an empty drum.

##### VI.1.1. Separators

As far as possible, a single separation stage will be used. The second stage will be replaced with a weighted drum. The separators will be prepared for the initial weighing. This preparation consists creating of an initial state that can be easily reproduced for the final weighing.

The method used aims to establish the level of the water, to define this accurately for the initial weighing and to reproduce this for the final weighing.

Depending on the design of the separators and their interconnection, the method used will be detailed in the test report.

Determining the dimensions (lengths and widths:  $L^1$ ,  $l_1$  and  $L_2$ ,  $l_2$  expressed in mm) or the separator sections expressed in  $\text{mm}^2$ .

Solvent must not be added to the separators at the end of testing.

The measurements carried out when re-establishing the water levels must be taken into account in the error calculation for the EF (emission factor).

#### VI.1.2. Active carbon tank

If the machine is fitted with a basic version of an active carbon tank, this must be removed for the initial weighing and placed outside of the machine with the mounting elements detached.

Once the initial weighing is complete, the active carbon tank is replaced for the tests.

#### VI.1.3. Fixing the machine

The machine shall be fixed firmly to the ground during the course of the cycles in such a way that it can be removed for weighing.

### VI.2. INITIAL WEIGHING (MACHINE)

The machine undergoes the initial weighing under these conditions. All hoses are held under pressure, closed with valves, disconnected from the mains and placed on the machine before weighing so that the result of the differential weighing is not influenced (electricity, steam, water, and compressed air). The machine is then placed on the pallet scales. The mass shown is recorded as  $M_0$ , expressed in kg and tenths of a kg (e.g. 1 778.3 kg). The mounting elements must be removed from the machine.

Weighing is carried out without any air flows (ventilation within the premises is stopped, doors and windows are closed) at a temperature of  $23 \pm 3^\circ\text{C}$ .

Before reading, the competent authority checks that the pallet scales were placed on the pallet truck in advance with a correct level setting. If this is not the case, the level setting is corrected.

To check the reliability of the weighing, it is reproduced three times.

The mass obtained is recorded as  $P_0$ .

***N.B.:** If the renewable active carbon filter is optional, the machine tested shall be placed in its basic configuration by the manufacturer before arriving at the test premises. If the renewable filter is part of the standard system equipment, the machine shall be tested as is (follow the manufacturer's recommendations for renewable in the latter case: frequency, operating mode).*

### VI.3. INITIAL WEIGHING (TEXTILE LOAD)

The loads are subject to an initial weighing once in a chamber controlled for each textile type used (wool, polyester-cotton, and cotton). The mass of each shall be adhered to ( $\pm 100$  g). The total masses  $m_i$  ( $i=1$  or  $2$ ) must always meet:

$$C_n - 200\text{g} < m_i < C_n$$

The masses are recorded respectively as  $m_1$  and  $m_2$ .

## VII – PERFORMANCE OF CLEANING CYCLES

### VII - 1. PROCEDURE

Following the initial weighing, the machine is reattached onto the supporting beams and returned to operating mode.

The machine is then loaded using the textile loads prepared. The cycles are then linked up one after the other until all of the cycles set out in IV of the present Annex are complete.

### VII - 2. USE OF TEXTILE LOADS

Alternatively two loads with masses  $m_1$  and  $m_2$  will be used (one large in the machine, one load on hangers): At the end of each cycle, the machine is unloaded and then reloaded with the load on hangers.

As soon as the next load is started, the unloaded clothes are placed on hangers.

In the end 25 cycles ( $\pm 1$ ) will have been completed with the load with mass  $m_1$  and 25 cycles ( $\pm 1$ ) with the load with mass  $m_2$ .

### VII - 3. AIR CHANGE

During the performance of the cycles, the test premises undergoes an air change T as described below:

- For machines with nominal capacity of less than or equal to 25 kg  
 $T \text{ (m}^3\text{/h)} = (58 \pm 8) \times C_n \text{ (kg)}$
- For machines with nominal capacity of greater than 25 kg  
 $T \text{ (m}^3\text{/h)} = (58 \pm 5) \times C_n \text{ (kg)}$

### VII - 4. MAINTENANCE OPERATIONS

#### VII.4.1. Cleaning the filters

According to the manufacturer's instructions (maintenance manual) or every 5 cycles for the primary air filter and the pin filter and every 10 cycles for the secondary air filter, if any.

#### VII.4.2. Distiller

A simulation of cleaning the distiller takes place on the morning of the last day of testing with a cold machine to simulate real-life operating conditions.

Refer to the user manual.

- Check that the machine is switched on (to activate the security features);
- Half-open the distiller door using a modulating tool;
- Open the door fully and leave it open for 4 minutes;

- Collect any solvent and solid residue (fibres) remaining at the bottom of the distiller and place it all in a closed, sealed tank, which has been weighted in advance;
- Reclose the door of the distiller.

*N.B.:* It is probable that the textile loads drop a few fibres that are left in the machine during the tests. The test protocol is designed to limit the impact of the mass of these fibres on the final result. This is why on the one hand the solvent filter used to collect a part is not used (in accordance with IV.1 of the present Annex) and on the other hand the mass of fibres found in the distiller at the end of the test is taken into account (in accordance with VIII of the present Annex and above).

It is based on the assumption that the other fibres not found in the distiller or extracted from the air filters (cleaning planned) only have a limited impact. Any other solid residue (fibrous mass, metallic particles, etc.) found in the machine at the start of the tests and located in part in the distiller at the end and extracted from it, consists of fibres which cannot be accurately taken into account.

### VIII – FINAL WEIGHING

This takes place after the end of the last cycle ( $50 \pm 2$ ), after cleaning all of the filters (final cleaning), after the simulation of cleaning the distiller and subject to the following conditions:

#### VIII - 1. SEPARATORS

Return the separator(s) to their original state.

#### VIII - 2. ACTIVE CARBON TANK

The active carbon tank is disassembled for the final weighing and placed outside of the machine with the mounting elements detached.

#### VIII - 3. WEIGHING THE MACHINE

The machine is prepared in the same way as in VI.2 of the present Annex. It is then placed on the pallet scales. The mass shown is recorded as  $M_f$ , expressed in kg and tenths of a kg (e.g. 1 773,1 kg).

Weighing is carried out without any air flows (ventilation stopped, doors and windows closed) at a temperature of  $23 \pm 3^\circ\text{C}$ .

Before reading, the competent authority checks that the pallet scales were placed on the pallet truck in advance with a correct level setting. If this is not the case, the level setting is corrected.

To check the reliability of the weighing, the weighing is repeated three times.

#### VIII - 4. TAKING ACCOUNT OF THE SOLVENT COLLECTED FROM THE DISTILLER

Weigh the pre-weighted tank containing the solvent and the solid residue collected from the distiller:

$M_d$  = Total mass collected from the distiller expressed in kg to the nearest gram (e.g.: 1.556 kg).

Filter all of the material using an 80 µm stainless steel filter whose mass is known to the exact gram.

Dry the filter and its contents for 10 minutes under an air flow.

Weigh the filter and its contents:

$M_s$  = Mass of dried solid residue expressed in grams, to the nearest gram (e.g.: 3 g).

Determine the mass of solvent collected

$M_p$  = Mass of solvent collected, not discharged into the atmosphere.

$$M_p = M_d - M_s$$

$M_p$  is expressed in kg and rounded to the nearest gram (e.g.: 1 553 kg).

#### VIII - 5. TAKING ACCOUNT OF THE SOLVENT PRESENT IN THE ACTIVE CARBON TANK

The active carbon tank is weighed separately before testing starts:  $P_0$

The same is carried out at the end of the tests:  $P_f$

Residual solvent in the active carbon tank:  $P_r = P_f - P_0$

$P_r$  is added to the solvent consumption of the machine.

#### IX - EXPRESSION OF THE RESULT

EF is the target emission factor.

$$EF = [M \times 1\,000] / [25 \times m] \text{ (in g/kg)}$$

$$m = m_1 + m_2$$

$$M = M_0 - M_f - M_p + P_r \text{ (general scenario)}$$

( $M$ ,  $M_0$ ,  $M_f$ ,  $M_p$ ,  $P_r$ ,  $m$ ,  $m_1$  et  $m_2$  expressed in kg)

$$M_p = M_d - M_s$$

The final result is rounded to 1/100<sup>th</sup> of g/kg

The result EF is provided in the test report with an indication of the expanded uncertainty  $U(EF) = k \times u(EF)$  (*uncertainty type*).  $k = 2$  for 95% probability that the value calculated is within the interval defined by  $EF \pm U(EF)$ .

**Emission factor EF = value calculated EF  $\pm$  U(EF)**