European Union Network for the Implementation and Enforcement of Environmental Law

Inspection Guideline on Annex VI of the WEEE Directive

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the EU Member States, acceding and candidate countries of the European Union and EEA countries. The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 7th Environment Action Programme and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu

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Executive Summary

Annex VI of the WEEE Directive gives Member States tools to fight illegal export of waste more effectively. Annex VI requires exporters to test and provide documents on the nature of their shipments when the shipments run the risk of being waste. Although Annex VI gives more tools, there are still elements, which Member States can interpret (e.g. when is testing done properly and the classification) and enforce differently. Different interpretation and enforcement will cause effects like port hopping and discussions on return shipments.

One of the aim of this project was to improve the enforcement of illegal shipments of WEEE to countries with poor treatment facilities (African and Asian countries) by creating a guideline for a more uniform interpretation and enforcement of Annex VI of the WEEE Directive.

This document contains the Inspection Guideline on Annex VI of the WEEE Directive.

TABLE OF CONTENTS

1. Preface

In 2017 and 2018 an IMPEL project on the implementation and enforcement of the WEEE-Directive with a focus on Annex VI of this Directive, brominated flame retardants in WEEE plastics and classification of WEEE has been carried out. This guideline focus on Annex VI, for BFR's in WEEE plastic and classification separate reports are made

Annex VI of the WEEE Directive gives Member States tools to fight illegal export of waste more effectively. Annex VI requires exporters to test and provide documents on the nature of their shipments when the shipments run the risk of being waste. Although Annex VI gives more tools, there are still elements, which Member States can interpret (e.g. when is testing done properly and the classification) and enforce differently. Different interpretation and enforcement will cause effects like port hopping and discussions on return shipments.

The aim of this project is to improve the enforcement of illegal shipments of WEEE to countries with poor treatment facilities (African and Asian countries) by creating a guideline for a more uniform interpretation and enforcement of Annex VI of the WEEE Directive.

In the report of 2017 of this project the following conclusions and recommendations in relation to Annex VI were made:

Conclusions Annex VI

1. In most countries, Annex VI of the WEEE Directive is implemented in national legislation as set out in Annex VI. Deviation is minor. There are however some interpretation differences, e.g. in some countries Annex VI is only applicable if the shipment is first considered as waste.
2. Just three countries have more extensive legal test requirements. Annex VI does not contain detailed test requirements. The lack of test requirements for both exporters as inspectors makes the enforcement of Annex VI more difficult.
3. Although the test requirements are different among countries, they are similar in the way the requirements are set up (visual inspection, electrical safety and functionality testing).

Recommendations Annex VI

1. To develop guidelines on test requirements, which exporters and inspectors can use and which are uniform within Europe. These test requirements should be binding for all MS.
2. To develop an uniform document for test recording, labelling and declaration. This also includes the requirement (see 3, step 1 Testing of Annex VI) the evaluation of the presence of hazardous substances.
3. To develop an inspection guidance note which includes the test requirements.

This guideline will implement some of these recommendations.

2. Introduction of the guideline

2.1. Annex VI

In Annex VI of the WEEE Directive minimum requirements for shipments are laid down.

"*In order to distinguish between EEE and WEEE, where the holder of the object claims that he intends to ship or is shipping used EEE and not WEEE, Member States shall require the holder to have available the following to substantiate this claim:*

- *copy of the invoice and contract;*
- *evidence evaluation or testing in the form of a copy of the records (certificate of testing, proof of functionality);*
- *a declaration made by the holder who arranges the transport that none of the material/equipment is waste;*
- *appropriate protection against damage during transportation.*

Regarding the testing Annex VI states:

- *functionality shall be tested and the presence of hazardous substances shall be evaluated. The tests to be conducted depend on the kind of EEE. For most of the used EEE a functionality test of the key functions is sufficient;*
- *results of evaluation and testing shall be recorded.*

Regarding the recording is stated:
The record shall be fixed on either the EEE or on the packaging (so it can be read without unpacking the equipment).

The record shall contain the following information:

- *name of the item;*
- *Identification number where applicable;*
- *year of production if available;*
- *name and address of the company responsible for evidence of functionality;*
- *date and result of the functionality test;*
- *kind of test performed.*

2.2. The implementation of Annex VI in Member States regarding test requirements declaration, reporting and labelling

Most MS have implemented Annex VI in national legislation exactly as set out in Annex VI. Four countries deviate, but the deviation is minimal e.g. having less recording requirements.

To distinguish UEEE from WEEE the exported equipment should be tested. Just a few countries have more extensive legal test requirements (UK, Czech Republic and Belgium). In Finland the test requirements are part of the brochure for exporters. Austria has criteria for mobile phones.

The requirements of the five countries (having requirements that are more extensive) are not exactly the same, but similar in the way they are set up.

All the requirements contains:

- a visual inspection (e.g. damage, cracks, signs of overheating, plug, cord);
- an electrical safety testing (e.g. earth leakage, insulation testing, touch current). Regarding the electrical testing some countries follow the same electrical safety rules as for new equipment;
- a functionality test, does it works as it is supposed to do.

Some countries have companies who can carry out these tests. Some countries refer to qualified mechatronic technicians and/or registered at the Chamber of Commerce. In the ports of Hamburg, Antwerp and Amsterdam there are companies who are able to test the UEEE before export. In general, the conclusion is that in most countries anyone can test the equipment as long as it is clear who or which company has carried out the test. The test itself is often nothing more than just insert the plug into the socket and see if the equipment is switch on.

To carry out these extensive tests is quite expensive. For the export market to Africa too expensive and too complicated.

The evaluation of the presence of hazardous substances is often not carried out. It is almost impossible to know if UEEE contains hazardous substances and which one. Only the more obvious substances are known, like CRT screens and (h) CFK's.

As said in some countries Annex VI is not applicable if the load of the UEEE looks good and are properly packed, which means in that cases it is not an obligation to test the UEEE.

Within in the European Union there is also no uniform system on how the declaration, the test recording and the labelling should look like. Some countries have developed a format.

The content of these declarations are almost the same.

In Annex I of this document, you will find some examples regarding the test requirements and declarations, reporting and labelling.

3 . Guideline for inspectors

2.1. The inspection

When the inspector stops a shipment with UEEE for export both within Europe as outside Europe, the following steps can be taken.

Step 1 Documents

First, check if all the necessary documents are available and meet the standard of Annex VI:

- test report;
- the declaration;
- and the label.

Please note that all the items must have been tested and labelled. Therefore, the test report and declaration has to match with the number of items.

If not, the load will be considered as waste. The inspector can decide to give the exporter the opportunity to test the equipment and to take care of all the necessary documents.

Annex VI also requires a copy of the invoice and contract. In practice, these documents are often not available.

Note there are some countries having another opinion on this one, no need for documents if the load looks good and is properly packed.

If the documents are all available, you take step 2.

Step 2 Visual inspection and packaging

After step 1 visual inspection and the check if the items are properly packed has to be carried out.
The visual inspection can be more or less thorough.

Less thorough is just looking if the items are:

- clean
- not damaged
- no essential parts missing
- no forbidden h(CFK's).
- properly packed

More thorough see under test requirements.

If the content is properly packed and pass the visual inspection, the inspector can decide to let the shipment go or to unload (a part of) the items to check if the items in the back are also labelled and pass the visual inspection.

If the items do not pass the visual inspection, the load will be considered as waste. If the load exists in a mix of not passing and passing the visual inspection, the inspector can decide that the items passing the visual

inspection are allowed to be exported and to consider the rest is as waste. The inspector can also decide to consider the whole load as waste. Items not passing the visual inspection is a sign that the testing has not be carried out properly.

All items should be properly packed.

The decision to let the shipment go can also be based on e.g.:

- the impression of the items (in general good quality or knowing the exporter as being somebody who works according the rules);
- the items were tested by a (verified) test location/company.

Step 3 Unloading and testing

If one decide to unload (a part of the) the shipment, one can check:

1. if all items meet the standard of Annex VI (testing, declaration, labelling) and pass the visual inspection (clean, not damaged, no essential parts missing) and are properly packed.

- If all the items looks good and are being labeled, matched with the test report and declaration, the inspector can decide to let the shipment go.

  See further under step 2.

2. and /or one can decide to test the items.

   To decide if the items are indeed properly test, you have to test a representative amount. A possible formula for a representative amount could be √N+1. E.g. 100 refrigerators means √ 100+1=11

The first part of the test is a more thorough visual inspection. If already some items do not pass the visual inspection, there is no need to test further on electrical safety and functionality.
If the items do not pass the electrical safety test, there is no need to test the functionality.

2.2. How to carry out the test

Step 1 Visual inspection

A. Parts to check: E.g.: Fuses, plugs, external flexible cords, strain relief devices, barriers preventing access to live parts (body panels and covers must be secure) and pressure relief valves.

If damaged is found the item has not been properly tested.

B. External and internal: inspection:
   - casing damage-dents, scratches and stress fractures, parts securely held;
   - leaks: rust damage;
   - completeness and integrity: covers and guards in working order;
   - condition of trims and fascias;

- controls and knobs for mechanical operation;
- switches for mechanical operations;
- twisted doors;
- oven burning damage;
- clean: no mold, grease etc;
- indications that equipment has been stored outside: moisture, dirt.

Step 2 Electric safety and functionality test.

It is recommended to do the electric safety test before the functionality test

If the item pass the visual inspection, the next step is to put the plug in a socket.
However, before this will be done check if:

- mains lead is undamaged;
- mains plug in good condition, and correct fuse fitted;
- wiring must be correct polarity;
- fixings and mounting are tight.

For smaller household appliances hair dryers, coffee machines, radio, blenders) it is often enough to just put the plug in the socket and sees if they works.

For the bigger appliances (e.g.: stoves, microwaves, ICT appliance, televisions) the minimum is to put the plug in the socket and sees if it works.

If you want to check the electric safety more thorough the following tests could be done.

- earth continuity (detailed below), particularly important for heating and cooking appliances;[1]

[1] The earth safety test is carried out with the appliance isolated from the supply.
The connections between the various earthed parts should be checked as far as possible without further dismantling of the appliance. It may be necessary to tighten connections to ensure good continuity.
Earth continuity is checked by measuring the resistance of the circuit using an appropriate instrument. The open-circuit voltage of the measuring instrument should not exceed 24 V or be less than 4 V. It may be AC or DC. The current should not exceed 10 A or be less than 0.2 A. The appropriate instrument is usually a good multimeter, dual range insulation tester, or PAT tester.
The earth resistance is measured between accessible conductive parts, which can become live in the event of a fault. Resistance should be measured from the:

- earth pin of the plug for all plug connected appliances;
- earth terminal of the appliance or any earthed part nearby for appliances with fixed wiring.

During the test, flexible cords should be manipulated to check for any breakage of the conductors.
If the appliance is connected to earth by additional paths, for instance water connections, it may be necessary to disconnect the earth at the terminal in order to avoid false readings. In this case, care has to be taken to ensure the earth wire is reconnected properly after the test.
The resistance of the earth circuit should not exceed 0.1 ohm. If this value is exceeded or if there is fluctuation in the reading during the test, the earth circuit has to be examined for discontinuities.
Any faults have to be corrected before testing the appliance for insulation resistance.

- insulation resistance (detailed below). Please note for this part you need a suitable qualified person (e.g. certified electrician)[2].

See also Annex II of this guideline: The In Service Inspection & Testing of Electrical Equipment

If you want to check the functionality more thorough the following tests could be done (described for 6 items, which are seen most, being exported):

[2] The insulation resistance test is carried out with the appliance isolated from the supply. If the appliance is normally immersed in water, it is covered with water while the test is being carried out. All switches and controls are to be in the closed position in order to ensure all the insulation is covered by the test.
It is carried out with the appliance isolated from the supply.
The test should not be carried out if the appliance contains parts that could be damaged if they are subjected to 500 V DC. All domestic white goods in general circulation can withstand this test.
If parts of the circuit require the appliance to be energised before they are connected to the supply, e.g. relays, such circuits will not be covered by the test. It may be necessary to test these circuits separately. In particular, the time delay door switch and lock fitted to many washing machines, could be energised by connecting the machine, switching on briefly, and then disconnecting and testing within a minute or so.
The measuring instrument shall have a minimum DC output voltage not less than 500 V and not more than 550 V with a load resistance of 0.5 Mohm. Most insulation testers (Meggers) and also PAT testers conform to this standard.

1. Cooling equipment (freezers, refrigerators)

As far as the minimum variant of the plug in test is concerned, it is recommended that the equipment is fully started and left on for a few minutes. In the event of a malfunction, the equipment will switch off during start up.
With an extended endurance test the equipment should reach the final temperature (minus 18 Celsius for a freezer, 3 Celsius for a refrigerator). With a small refrigerator this can be assessed after approx. 1-2 hours. For a large freezer it is expected to take at least 12-24 hours before the final temperature of at least -18oC will be reached. It can be assessed with the help of a data logger if the temperature remains stable. A limitation for carrying out an endurance test can be the necessary space capacity to carry this out.

2. Cooking equipment (oven , microwaves)

A minimal variant is the plug in test: assess whether the equipment is switched on after connection to the electricity grid. A more extensive variant is to leave the equipment on for at least one hour so that it can be assessed which end temperature is being reached and / or the thermostat is still functioning. It can also be assessed with the help of a data logger how stable the temperature remains. A limitation for carrying out an endurance test can be the necessary space capacity to carry this out.

3. Televisions

Connecting a signal via the scart or HDMI connection provides sufficient information to be able to assess the operation. If sufficient picture and sound can be played through this connection, the television will function adequately. A television is usually connected to digital satellite dish tuners or to DVD / media players via the scart or HDMI connection. A comprehensive test to assess the analog antenna signal (operation of the internal television tuner) or a test on the many other connections (for example home cinema systems etc.) takes a lot of time and resources. Many plugs are required to provide all connections with the correct signal. The corresponding remote control is usually not found near the TV set. The television sets have sufficient control buttons to enable them to be operated without a remote control. Therefore, the presence of the corresponding remote control is not required for carrying out the test.

4. ICT equipment (computers, laptop)

Connect the desktop computer or laptop to the electricity grid and start it up completely. It is therefore necessary that the computer has a HDD or SDD with a working operating system. If the computer does not start up, cannot start up completely or does have a bad screen or sound, rejection will follow. Because the start-up of old computers can take a few minutes, testing equipment requires more time. An assessment of the existing image and sound data and existing software on the computer's storage disks is not part of the functionality test. The distribution or use of stored data and the illegal use of software licenses is therefore not assessed, but does have its own legal regulations.

5. Media equipment (video- ,dvd-, stereo players)

Connect the media equipment to the electricity grid and startup it up completely. If the equipment does not start up, cannot start up completely or does have a bad screen or sound, rejection will occur. In cause

of an integrated/combined system (video and dvd in one, both should work). Starting up older equipment can sometimes take a few minutes, it means that testing of this equipment may take longer. An assessment of the available image and sound data on the storage discs, if any, is not part of the functionality test. The distribution or use of stored data and the illegal use of licenses is therefore not assessed, but does have its own legal regulations.

Annexes

Some examples regarding test requirements

Just a few countries will test during an inspection. And if so, just a small part of the total load. Just two countries will test the functionality, the rest only test if the equipment's switch on. Testing by the inspectors during a road inspection or in the ports is almost impossible (e.g. time consuming, no place to carry out the inspection). Another difficulty is the fact that not all countries have trained staff to carry out this kind of inspections.

Czech Republic

Every appliance used by a legal entity have to undergo a safety test every 24 months when using (e.g. fridge, microwave in every office building). Such tests are also required when exporting UEEE. In practice, this means that:

First, all appliances will be examined – the protection class and the parameters of the appliance supply are determined. Then comes a series of measurements. For those appliances that can be disconnected from the grid for measurement purposes, they measure the wire resistance, insulation resistance and leakage current. If the instrument is not disconnected from the mains at the time of the test, measurements will be made as soon as possible. The measurement also includes checking of leads, cables and their accessories. The appliance will then be re-connected to the grid and its operation will be checked. Finally, it is still necessary to determine if the appliance's name is sitting, if necessary, it needs to be adjusted to match the current state. When checking electrical appliances, it is, of course, necessary to keep the enclosed documentation (where possible) and the information contained therein.

Normally, the revision of electrical appliances ranges from CZK 40 to CZK 70 a piece (2 -3, 5 Euro) and can only be carried out by qualified person who holds an authorization issued by competent authority in the field of occupational safety. The price affects the type of electrical appliance, the number of units on the premises and the transportation of the inspection techniques.

When exporting UEEE there is only a need for a safety check of an appliance (see above) and a basic check of the functionality. Functionality tests are not described in detail in legislation, since every appliance has different functions. Functionality test is done and approved by same qualified person as the safety test. Furthermore, it is in CZ forbidden to export/import any UEEE containing:

- controlled substances under the specific legislation on the handling of ozone depleting substances (CFFs);
- PCB;
- asbestos - containing components, or
- radioactive substances.

The exporter is obliged to have valid tests during the transport. When carrying out inspections – if tests are missing - the transport is considered as an illegal transport. In case there is a substantial doubt about the functionality of UEEE the exporter could be asked by customs or inspector to carry out functionality tests on his own cost. In doubts about the test result/report provided during inspection probably an "outsourced" revision technician" will be hired to carry out the tests. This situation did not happen so far, because there is not much exports of UEEE and usually tests are missing completely (export by natural persons/individuals to Africa) and/or UEEE is in fair quality (export by specialized companies) so there were no doubts about the test reports.

Some of the compliance schemes do extensive tests, but they are different then the tests for exporting UEEE by third parties. The main difference is that compliance schemes act as producers, so they take full responsibility for placing UEEE on market again. Tests are carried out in authorized services and might be time consuming and the cost of such service is of course quite expensive as well. These tests are only suitable for newer appliance. The appliances undergo all functionality tests guaranteed by the producer and they also provide warranty.

Currently MoE is developing a guidance/manual for exporting UEEE, giving details and practical information on this issue.

UK

Scotland has trained staff. Some inspectors have had a 5-day training course to be able to test UEEE. There is a preference to test the UEEE during an inspection before the container is loaded. The disadvantage of this type of inspection is the fact that you are not sure if the UEEE will be exported. As long the export documents are not made up the exporter still has the possibility to test the UEEE.
Many larger companies in Scotland/UK carry out this service as part of facilities and asset management. These large companies are not seen in the export sector though. Any electrician or qualified PAT tester can do the testing, so in theory there are thousands of people out there that may be capable. A couple of exporters have done the qualification themselves and bought the equipment.

SEPA have asked for qualifications in the past and we do keep in touch with some of the PAT technicians if we need to require information. The test record that they are required to fill out as part of the PAT testing should be supplied to SEPA before export. As each appliance should be labelled, we are able to check appliance number against test results. Sometimes a site has the records stored on the PAT testing machine itself, which is easy for an inspector to check. There is always the possibility that an exporter will fake results. As part of

inspecting sites, SEPA officers can check testing records and then carry out their own testing to verify whether or not the results are legitimate. Nothing is fool proof though.

In England they require shippers moving used electricals to comply to the correspondence guideline no 1, if stopped for inspection then they must have the correct paperwork showing that used electricals are fully functional and packaged so they don't get damaged during loading, transportation and unloading.

If they cannot then they are required to send the shipment back to a permitted site to comply to the guidelines, this is done at their cost.

In **Belgium (Flanders),** they have extensive legal test requirements. UEEE out of Flanders has to be tested according these requirements before export or put on the market in Flanders. Some elements of these requirements:

Equipment may only be reused when that equipment:

- *is fully functional;*
- *is electrically safe;*
- *is completely encased;*
- *contains all the essential components, which are in good condition;*
- *does not have any significant signs of rusting and/or outer damage;*
- *does not contain any CFCs or HCFCs;*
- *complies with specific requirements on energy consumption (e.g. refrigerators and freezers label A, wasmachine label B);*
- *does not contain any cathode ray tubes (CRT);*
- *there is a regular market for the equipment;*
    - *Is packaged, stacked, and transported in such a way that the reuse thereof does not come under threat;*

There must be a regular market for the equipment. For example, for computers, this means that the processor must be at least a Pentium 4 generation. Therefore, you cannot put any equipment into reuse that is outdated, that no longer has any market value, or that cannot be economically repaired.

Regarding the electrical safety test:

- *test the energy consumption (find or measure energy label) of specific equipment;*
- *test the electric safety*
- *test the functionality;*
- *delete the data on the storage media or, if necessary, remove the storage media;*
- *uninstall the non-transferrable copyright-protected software;*
- *if necessary: repair according to the documented repair procedure, using the replacement parts that are still permitted and which are suited to the intended purpose;*
- *retest the electrical safety and functionality after repairing the equipment.*

Regarding functionality (example computers and auxiliary equipment):

- *The power-on self-test (POST) must be successful. The POST is carried out by the BIOS when the device is turned on. It checks whether the RAM, the video card, the storage drives, keyboard, and other hardware is functioning normally.*
- *The computer must respond to the mouse and keyboard. These must be entirely intact.*
- *The screen must not be damaged or have any screen burn-in.*
- *Cables and plugs must be entirely intact and safe.*
- *Laptop adapters and batteries must be operational. The battery must be able to power the laptop for at least 30 minutes of normal usage.*
- *Printers must be able to print out a test page.*
- *Other loose parts must be operational and tested.*

In general, it is acknowledge that these extensive legal requirements works well for the internal market. For the export market it seems too extensive (can take days) and too expensive.

Finland

Product specific guideline for test of functionality and evaluation of hazardous substances

The following descriptions cover relevant equipment for export for reuse. For other products, you should look at the general guideline and the literature references given in this guideline. The guideline emphasizes test of functionality and evaluation of hazardous content. In addition, you will find other relevant recommendations as well.

The equipment specific guideline is divided in three main categories; of which the first two categories are related to the export regulations and are to be complied with, while the latter is derived from best practices among actors engaged in such export.

1) Evaluation for the presence of hazardous substances
2) Test of functionality
3) Recommended additional criteria

Exporters will most likely need to develop own procedures based on this guideline including additional requirements given by customers and other considerations. The tests should be made by a qualified person.

Acceptance criteria should be set up by the company responsible for the export and updated on a regular basis.

Refrigerators and freezers

This guideline specifies the process for test of functionality for refrigerators, freezers and combined fridge/ freezers and which hazardous substances to be particularly aware in connection with this type of equipment.

An example of a non- functional refrigerator: power -plug missing.

Topic	Test	Acceptable test result
Evaluation for the presence of hazardous substances		
CFC- or HCFC-compounds	Check refrigerant and foam type. Equipment containing CFC- or HCFC-compounds is banned from export (see appendix 1). Usually the refrigerant type is marked on the back of the equipment or on the compressor. If the refrigerant and/or foam type cannot be ascertained, the equipment should not be reused. The export of equipment which are planned to use the above mentioned banned compounds is not allowed also if no such compound is present at the moment of export.	The equipment is without CFC- or HCFC-compounds. The equipment is not planned to use the above mentioned banned compounds.
Other hazardous substances	Check the equipment for the presence of hazardous substances and evaluate the risk of damage to the environment if the equipment is exported for reuse. It is recommended to evaluate the equipment against the restrictions in the RoHS directive. Refrigerators and freezers may contain brominated flame retardants (e.g. in circuit boards), mercury (e.g. in switches) or other hazardous substances.	The presence of hazardous substances has been evaluated, including the risk of damage to the environment if the equipment is exported for reuse. In general it is not recommended to export products that are not RoHS-compliant out of OECD.
Test of functionality		

Topic	Test	Acceptable test result
Components necessary for functionality	Visually check that all components are present and without damage, corrosion or serious signs of wear: • Cabinet and door • Door seal(s) • Control panel and switches • Compressor and cooling matrix	Present without damage.
	Check that the interior wall is not loosened from the cooling matrix (on back) as this will significantly impair the equipment´s ability to cool (and will often be difficult and expensive to repair).	Interior wall is connected to the cooling matrix.
Safety	Visually check power cord, plug and insulation.	Complete and intact.
	Perform an earth continuity test.	Earth continuity OK.
	Perform an earth resistance test.	Earth resistance OK.
	Perform an insulation resistance test.	Insulation resistance OK.
Test of functionality	Perform temperature control at a room temperature of 15-25°C: Place one thermometer in freezer compartment and one on top shelf of the fridge compartment. Set the thermostat to midway/cold setting. Turn the equipment on and let it run for 12 hours. Check that the thermostat works by checking that the compressor starts/stops appropriately according to the temperature settings. A non-functioning thermostat can lead to over-freezing.	The compressor starts and cooling begins. The thermostat turns the compressor off when the pre-set temperature is reached (no over-freezing). Acceptance temperatures: Fridge: 0 - 5°C 1 star freezer: -6°C (max) 2 star freezer: - 12°C (max) 3 star freezer: -18°C (max)
Recommended additional criteria		
Complete and functional equipment	Visually check interior parts (shelves, salad compartments etc.).	Present without damage.
	Visually check feet.	Present without damage.
	Check that the internal light turns on when opening the door and off when closing it.	Internal light OK.
Market value	Evaluate market value and market demand for the specific equipment. Evaluate the technology of the equipment compared to new equipment/technology.	There is market demand for the equipment. The technology of the equipment is not obsolete.

Topic	Test	Acceptable test result
Energy labelling	Check for energy label. If not present, check the equipment by internet search (manufacturer´s website).	Export for reuse is only recommended for equipment with energy label A or B.
Hygiene condition	Check interior for moisture, food residues and smell.	The equipment´s interior is clean, dry and without smell or food residue.

In the Netherlands the following declaration and test recording is used, although it is not an obligation to use this form. This form is based on the form used in the Basel WEEE Guideline.

Example

Non-official example of a declaration as specified in article 1, under c in Annex 6 of the Directive 2012/19/EU as well as proof of evaluation and testing as specified in article 1, under b of Annex 6 of the Directive 2012/19/EU.

3 Person who arranges the transport (responsible for testing):	**4 Company who performed the test:**
Name: Address: Contact person: Tel: E-mail:	Name: Address: Contact Person: Tel: E-mail:

5 Declaration

I, the person who conducted the evaluation and testing of all below listed equipment, declare that the results of evaluation and testing are complete and correct (Annex 6, Article 1 under b).

Name: Date: Signature:

I, the person who arranges the transport of the equipment listed below, hereby declare that prior to export the used equipment listed below was tested and is fully functional. (1) I confirm that this equipment is not defined as or considered to be waste in any of the countries involved in the transport and is destined for direct reuse (2) and not for recovery or disposal operations (Annex 6, Article 1 under c).

Name: Date: Signature:

4. Assigned number of the item of equipment (given by the holder)	**5. Name of the item of equipment (3)**	**6. Brand /producer**	**7. Identification number (type No.) if applicable**	**8. Year of production (if available)**	**8. Date of the functionality test**	**9. Kind of test performed (4)**	**10. Results of test (e.g. indication of full functionality or indication of defective parts and defect functions)(5)**

(1) Equipment is “fully functional” if it has been tested and demonstrated to be capable of performing the key functions that it was designed to perform.

(2) The using again of fully functional equipment that is not waste for the same purpose for which it was conceived without the necessity of repair or refurbishment.
(3) List the equipment for which the information is the same and that is intended to be moved together, and identify the names of the equipment, such as PC, refrigerator, printer, TV, etc.
(4) For example: laundry machine has been tested on main functions like program start, drain/pump program, spinning program. Television has been tested on main functions like image, volume, switching on/of, switching channels

Attach details if necessary.

Example Czech Republic

Dokumentace a další doklady přikládané k nákladu přepravovaných použitých elektrozařízení

Documentation and other documents accompanying load of shipped used equipment

A. Doklady přikládané k nákladu přepravovaných použitých elektrozařízení

Documents accompanying load of shipped used equipment

Tabulka č. 1: Údaje o odesílateli/držiteli/příjemci přepravovaných elektrozařízení
Information on dispatcher/holder/consignee of shipped equipment

Odesílatel elektrozařízení ***Dispatcher of equipment*** Obchodní firma/název/jméno a příjmení: *Name:* IČO: *National ID* Adresa: *Address* Tel: E-mail:	**Držitel elektrozařízení** ***Holder of equipment*** Obchodní firma/název/jméno a příjmení: *Name:* IČO: *National ID* Adresa: *Address* Tel: E-mail:	**Příjemce elektrozařízení** ***Consignee of equipment (retailer/distributor)*** Obchodní firma/název/jméno a příjmení: *Name:* Adresa: *Address:* Stát vývozu: *Country of export:* Tel: E-mail:

Tabulka č. 2: Seznam přepravovaných elektrozařízení
List of shipped equipment

Pořadové číslo položky *Item number*	**Název elektrozařízení, výrobce, značka** *Name of equipment, Producer, Brand name*	**Datum provedení zkoušky funkčnosti** *Functionality testing date*	**Číslo protokolu o zkoušce funkčnosti** *Funcionality testing protocol number*

Tabulka č. 3: Seznam nebezpečných látek obsažených v přepravovaných elektrozařízeních

List of hazardous substances in shipped equipment

Pořadové číslo položky *Item number*	**Název elektrozařízení, výrobce, značka** *Name of equipment, Producer, Brand name*	**Nebezpečné látky obsažené v elektrozařízení** *Hazardous substances in shipped equipment*

Tabulka č. 4: Prohlášení držitele přepravovaných elektrozařízení o jeho odpovědnosti za splnění povinností podle § 37r zákona*:*
A declaration by the holder of shipped equipment on its responsibility for fullfiling of duties according to § 37r of the Act

Prohlášení držitele přepravovaných elektrozařízení o jeho odpovědnosti za splnění povinností podle § 37r zákona

Níže podepsaná osoba prohlašuje, že je držitelem elektrozařízení uvedených v přiloženém seznamu přepravovaných elektrozařízení odpovědným za splnění povinností podle § 37r zákona a že tato elektrozařízení nejsou odpadem ve smyslu § 3 odst. 1 zákona o odpadech.

A declaration by the holder of shipped equipment on its responsibility for fullfiling of duties according to § 37r of the Act No. 185/2001 Coll. on Waste

I, the undersigned, hereby declare that I am the holder of equipment listed in enclosed list of shipped equipment responsible for fullfiling of duties according to § 37r of the Act and that none of the material or equipment within the consignment is Waste according to § 3(1) of the Act on Waste.

Držitel elektrozařízení:

Holder of equipment

Jméno a příjmení statutárního orgánu držitele: Datum: Podpis:

Name and surname of statutory body of holder *Date* *Sigtnature*

B. Dokumentace ke každému jednotlivému kusu přepravovaného elektrozařízení

Documentation accompanying each shipped equipment

1. Protokol o zkoušce funkčnosti použitého elektrozařízení

Funcionality testing protocol of used equipment

PROTOKOL O ZKOUŠCE FUNKČNOSTI POUŽITÉHO ELEKTROZAŘÍZENÍ Č. …

FUNCIONALITY TESTING PROTOCOL OF USED EQUIPMENT NO.			
ÚDAJE O PŘEPRAVOVANÉM ELEKTROZAŘÍZENÍ *Data on shipped eqipment*			
Název elektrozařízení *Name of the equipment*		Skupina a podskupina elektrozařízení *Category and subcategory of equipment*	
Výrobce elektrozařízení (je-li znám) *Name of the producer (if available)*			
Výrobní nebo identifikační číslo elektrozařízení (pokud je k dispozici) *Equipment ID (if available)*		Rok výroby elektrozařízení (je-li znám) *Year of production (if available)*	
ÚDAJE O PROVEDENÍ ZKOUŠKY FUNKČNOSTI ELEKTROZAŘÍZENÍ *Data on functionality test*			
OBJEDNATEL ZKOUŠKY FUNKČNOSTI *Test ordered by:*		**ZKOUŠKU FUNKČNOSTI PROVEDL:** *Test made by:*	
Obchodní firma/název/jméno a příjmení / *Name*		Obchodní firma/název/jméno a příjmení / *Name*	
Adresa / *Address*		Adresa / *Address*	
IČO / *National ID*		Evidenční číslo oprávnění a evidenční číslo osvědčení *Authorization No.and Certificate No.*	
Telefon / *Telephone Number*			
Výsledek prohlídky elektrozařízení *Result of equipment inspection*			
Výsledky provedených zkoušek *Result of testing*			
Soupis použitých přístrojů *List of used testing equipment*			

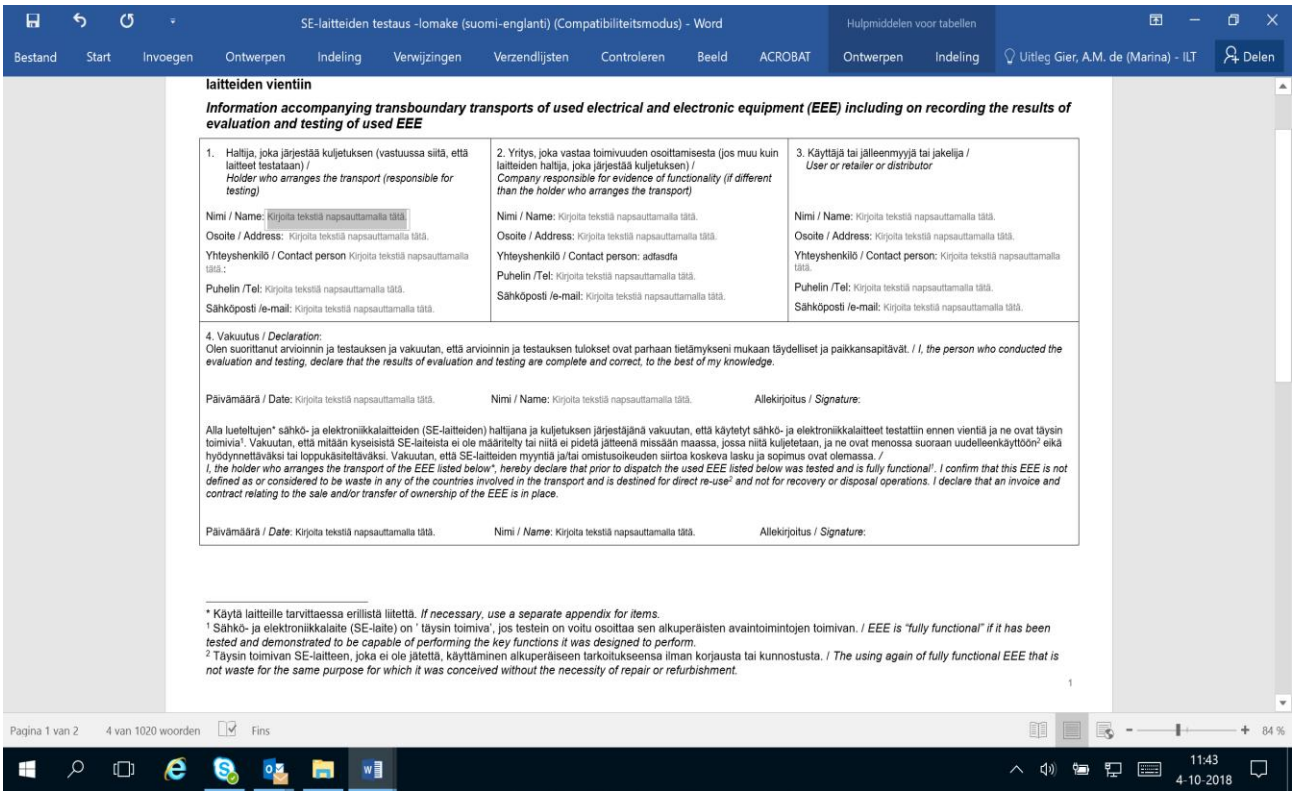
Vyhodnocení zkoušky chodu elektrozařízení *Evaluation of operation test*	
Celkové vyhodnocení stavu elektrozařízení z hlediska bezpečnosti osob, zvířat a majetku *Overall result of equipment safety condition*	
Poznámka *Remark*	
Datum vypracování protokolu *Date*	Podpis osoby, která provedla zkoušku funkčnosti elektrozařízení *Signature of person concluding equipment functionality test*
Protokol o zkoušce funkčnosti převzal (datum a podpis) *Funcionality testing protocol accepted by (name and signature)*	

2. Doklad o obsahu nebezpečných látek v přepravovaném elektrozařízení

Přiloží se příslušný doklad, v němž jsou uvedeny údaje o obsahu nebezpečných látek v elektrozařízení.

Evidence of presence of hazardous substances

Example Finland


SE-laitteiden testaus -lomake (suomi-englanti) (Compatibiliteitsmodus) - Word
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Bestand Start Invoegen Ontwerpen Indeling Verwijzingen Verzendlijsten Controleren Beeld ACROBAT Ontwerpen Indeling
Uitleg Gier, A.M. de (Marina) - ILT
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laitteiden vientiin
Information accompanying transboundary transports of used electrical and electronic equipment (EEE) including on recording the results of evaluation and testing of used EEE
1. Haltija, joka järjestää kuljetuksen (vastuussa siitä, että laitteet testataan) / Holder who arranges the transport (responsible for testing)
Nimi / Name: Kirjoita tekstiä napsauttamalla tätä.
Osoite / Address: Kirjoita tekstiä napsauttamalla tätä.
Yhteyshenkilö / Contact person Kirjoita tekstiä napsauttamalla tätä.:
Puhelin /Tel: Kirjoita tekstiä napsauttamalla tätä.
Sähköposti /e-mail: Kirjoita tekstiä napsauttamalla tätä.
2. Yritys, joka vastaa toimivuuden osoittamisesta (jos muu kuin laitteiden haltija, joka järjestää kuljetuksen) / Company responsible for evidence of functionality (if different than the holder who arranges the transport)
Nimi / Name: Kirjoita tekstiä napsauttamalla tätä.
Osoite / Address: Kirjoita tekstiä napsauttamalla tätä.
Yhteyshenkilö / Contact person: adfasdfa
Puhelin /Tel: Kirjoita tekstiä napsauttamalla tätä.
Sähköposti /e-mail: Kirjoita tekstiä napsauttamalla tätä.
3. Käyttäjä tai jälleenmyyjä tai jakelija / User or retailer or distributor
Nimi / Name: Kirjoita tekstiä napsauttamalla tätä.
Osoite / Address: Kirjoita tekstiä napsauttamalla tätä.
Yhteyshenkilö / Contact person: Kirjoita tekstiä napsauttamalla tätä.
Puhelin /Tel: Kirjoita tekstiä napsauttamalla tätä.
Sähköposti /e-mail: Kirjoita tekstiä napsauttamalla tätä.
4. Vakuutus / Declaration:
Olen suorittanut arvioinnin ja testauksen ja vakuutan, että arvioinnin ja testauksen tulokset ovat parhaan tietämykseni mukaan täydelliset ja paikkansapitävät. / I, the person who conducted the evaluation and testing, declare that the results of evaluation and testing are complete and correct, to the best of my knowledge.
Päivämäärä / Date: Kirjoita tekstiä napsauttamalla tätä.
Nimi / Name: Kirjoita tekstiä napsauttamalla tätä.
Allekirjoitus / Signature:
Alla lueteltujen* sähkö- ja elektroniikkalaitteiden (SE-laitteiden) haltijana ja kuljetuksen järjestäjänä vakuutan, että käytetyt sähkö- ja elektroniikkalaitteet testattiin ennen vientiä ja ne ovat täysin toimivia[1]. Vakuutan, että mitään kyseisistä SE-laiteista ei ole määritelty tai niitä ei pidetä jätteenä missään maassa, jossa niitä kuljetetaan, ja ne ovat menossa suoraan uudelleenkäyttöön[2] eikä hyödynnettäväksi tai loppukäsiteltäväksi. Vakuutan, että SE-laitteiden myyntiä ja/tai omistusoikeuden siirtoa koskeva lasku ja sopimus ovat olemassa. / I, the holder who arranges the transport of the EEE listed below*, hereby declare that prior to dispatch the used EEE listed below was tested and is fully functional[1]. I confirm that this EEE is not defined as or considered to be waste in any of the countries involved in the transport and is destined for direct re-use[2] and not for recovery or disposal operations. I declare that an invoice and contract relating to the sale and/or transfer of ownership of the EEE is in place.
Päivämäärä / Date: Kirjoita tekstiä napsauttamalla tätä.
Nimi / Name: Kirjoita tekstiä napsauttamalla tätä.
Allekirjoitus / Signature:
* Käytä laitteille tarvittaessa erillistä liitettä. If necessary, use a separate appendix for items.
[1] Sähkö- ja elektroniikkalaite (SE-laite) on ' täysin toimiva', jos testein on voitu osoittaa sen alkuperäisten avaintoimintojen toimivan. / EEE is "fully functional" if it has been tested and demonstrated to be capable of performing the key functions it was designed to perform.
[2] Täysin toimivan SE-laitteen, joka ei ole jätettä, käyttäminen alkuperäiseen tarkoitukseensa ilman korjausta tai kunnostusta. / The using again of fully functional EEE that is not waste for the same purpose for which it was conceived without the necessity of repair or refurbishment.
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SE-laitteiden testaus -lomake (suomi-englanti) (Compatibiliteitsmodus) - Word

5. Laitteen nimi[3] / *Name of the equipment*[3]	6. Tuotemerkki tai valmistajan nimi / *Brand or name of the producer*	7. Tunnistusnumero (tyyppino.) (jos saatavilla) / *Identification number (type No.) (if applicable)*	8. Valmistusvuosi (jos saatavilla) / *Year of production (if available)*	9. Toimivuuden testaus-päivämäärä / *Date of functionality testing*	10. Testaustapa[4] / *Kind of tests performed*[4]	11. Testin tulokset[5] (esim. osoitus täydestä toimivuudesta tai puutteellisista osista tai vioista) / *Results of test*[5] *(e.g. indication of full functionality or indication of defective parts and defect)*
Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita päivämäärä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.
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Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita päivämäärä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.	Kirjoita tekstiä napsauttamalla tätä.

[3] Luettele samalla lomakkeella SE-laitteet, joiden tiedot kohdissa 1-3 ovat samat ja jotka viedään yhdessä. Jos laitteet on mainittu sähkö- ja elektroniikkalaiteromudirektiivin (2012/19/EU) liitteessä II tai IV, merkitse luetteloon laitteiden nimet (kuten PC, jääkaappi, tulostin, TV jne.) ja myös luokka, jos ne kuuluvat johonkin direktiivin liitteissä I tai III mainittuun luokkaan. (Suomessa Vna 519/2014) / *List the EEE for which the information in the boxes 1 to 3 is the same and that is intended to be moved together and identify the names (such as PC, refrigerator, printer, TV, etc.) of the EEE if listed in Annex II or Annex IV to the WEEE Directive, as appropriate, and category set out in Annex I or Annex III to the WEEE Directive, as appropriate (In Finland statute Vna 519/2014).*

[4] Esimerkki: pesukoneen keskeiset toiminnot, kuten ohjelmien käynnistyminen, veden poisto ja linkous tai television keskeiset toiminnot, kuten kuva, ääni, käynnistys/ sulkeminen ja kanavien vaihto on testattu. / *For example: laundry machine has been tested on main functions like program start, drain/pump program, spinning program. Television has been tested on main functions like image, volume, switching on/of, switching channels.*

[5] Liitä tarvittaessa mukaan yksityiskohtaiset tiedot testauksesta ja sen tuloksista. Ks. tarkemmin ohjeesta: Käytettyjen sähkö- ja elektroniikkalaitteiden toimintakunnon testaus - ohje viejille / *Attach details on testing and results where appropriate. See the Guidanace document: Test of functionality of used electric and electronic equipment (UEEE) –*

Annex II In Service Inspection & Testing of Electrical Equipment

Department of Engineering

In Service Inspection & Testing of Electrical Equipment

Visual Portable Appliance Inspection

Visual inspections should be carried out by a competent person who knows what to look at, what to look for and how to avoid danger to themselves and others. This type of inspection does not require the use of any specialist test equipment as it is purely a visual inspection. The inspection should include, when disconnected from the mains supply, the removal of the plug cover and checking that:

- damage, such as cuts or abrasions to the cable covering;
- damage to the plug such as the casing is cracked or the pins are bent;
- non-proprietary joints, including taped, in the cable;
- equipment that has been used in conditions where it is not suitable, such as a wet or dusty workplace;
- damage to the outer cover of the equipment or obvious loose parts or screws;
- overheating (burn marks)
- The card grip is holding the outer part of the cable tightly

- The wires, including the earth wire where fitted, are attached to the éorrect terminals
- No bare wire is visible other than at the terminals
- The terminal screws are tight
- There is no sign of internal damage, overheating, dust or dirt
- Cables located so as to avoid damage (i.e. run unprotected under carpets)
- Means of disconnection/isolation readily accessible
- Adequate equipment ventilation
- Cups, plants and work material correctly placed to avoid spillage
- Equipment positioned to avoid strain on card

Electrical Equip (safety) Regs 1994 Q 5(3) & 12

- Equipment is being operated with the covers in place and any doors are closed
- Indiscriminate use of multi-way adapters and trailing sockets is avoided
- Correct size fuse fitted, BS marked, ASTA marked

This visual inspection will not include taking the equipment itself apart.

Combined Portable Appliance Inspections and Tests

The checks carried out as above will have identified most (but not all) potentially dangerous faults - some deterioration of the cable, its terminals and the equipment itself can be expected after significant use. Equipment may also be misused or abused to the extent that it may give rise to danger. Testing, together with a thorough visual inspection can detect faults such as loss of earth integrity like a braken earth wire within a flexible cable, or deterioration of insulation integrity or contamination of internal or external surfaces.

- The safety of certain appliances depends upon a connection with the earth for its safety.
- **Earth Bond Testing** verifies the integrity (continuity) of the protective bonding of the equipment (Class I equipment) designed to secure safety through the basic insulation and protective earthing.
- A test is carried out using electrical test equipment to ensure a safe earth is present in the appliance.
- The test is to ensure that the connection between the earth pin in the mains plug of the appliance and the metal casing of the appliance is satisfactory and

1

of sufficiently low resistance.
- (Class 1 equipment only): Readings should show no greater than 0.1 + R (where Ris the resistance of the lead). Tested at a current of 1.5 times the

rating of the fuse and no greater than 26A for a period of between 5 and 20 . seconds or with a short-circuit test current within the range 20mA to 200mA.

- A high current is normally used to stress the connection under fault conditions. The length of the test should be limited to prevent damage due to overheating.

Insulation Testing

- **A** test is carried out using electrical test equipment to ensure the insulation resistance in the appliance is at a safe level.
- This test is used to verify that adequate insulation exists between the mains supply pins and the earth.
- The applied test voltage should be approximately 500 V de.
- During the test the test voltage is applied between the earth pin and both the live and neutral pins of the appliance mains supply plug.
- For class 11 appliances the earth bond clip may be used as an earth return lead.

> Class 1 heating equipment 3kW the minimum value is 0.3MQ.

> All other Class 1 equipment lM Ohms is the minimum acceptable value.

> Class 2 Equipment 2M Ohms

> Class 3 Equipment 250k Ohms.

Substitute Leakage Test

- The sub Leakage Test applies a nominal voltage of 40V AC RMS to the appliance and is applied between the earth pin and both the live and neutral pins of the supply plug.

- This test can prove useful in situations where neither conventional insulation nor flash tests are acceptable methods of testing the insulation of the appliance.