Transboundary Shipments of Waste Electrical and Electronic Equipment

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Information sheet No ...

Regulation (EEC) No 259/93 ('Waste Shipments Regulation')

adopted by the

Meeting of the Correspondents

for the Waste Shipment Regulation

Note: This Information sheet should be amended before the date of application of Regulation (EC) No 1013/2006 on shipments of waste to make it consistent with this new Regulation.



Introduction

This information sheet reflects the agreed approach of Member States and the Commission on the enforcement of the Waste Shipments Regulation (WSR) with respect to used electrical and electronic equipment.

It provides information for:

- those arranging shipments of waste electrical and electronic equipment (WEEE) or;
- holders of electrical and electronic equipment (EEE) arranging transboundary transports of this equipment who wish to ensure compliance with the Waste Shipments Regulation ((EEC) No. 259/93);
- those responsible for the enforcement of the Waste Shipments Regulation.

The control procedures that apply depend, in the first instance, on **whether the material in question is waste** (as defined in Article 1(a) of the Waste Framework Directive).

Whether or not a substance is discarded as a waste, and when waste ceases to be waste is determined on a case by case basis and the interpretation of the law is ultimately a matter for the Courts.

If the material is a waste then the control procedures depend on whether the waste is 'hazardous' (notifiable) or 'non-hazardous' (non-notifiable) under the Waste Shipment Regulation (Reference 1).

1. EEE or WEEE?

EEE becomes WEEE if its holder discards it, or intends or is required to discard it. To make this judgement it is necessary to examine the history of an item on a case by case basis. However, there are characteristics of electrical and electronic equipment that are likely to indicate whether it is waste or not. Examples of appropriate indicators that such material is not waste is provided in **Appendix 1**.

EEE may not be considered waste if it is

- fully functioning and is not destined for any of the operations listed in Annex II of the Waste Framework Directive 2006/12/EEC, and is directly reused for the purpose for which it was originally intended; and
- presented for sale or exported for the purpose of being put back to direct reuse or sold to end consumers for such reuse (cleaning and minor repairs included).

Prior to any transboundary transport of EEE the holder should be in a position to provide information to any relevant state authorities (e.g. customs, police or environmental agencies) that proves that the above criteria are met. Failure to meet the above criteria would generally indicate to the relevant authorities that the material is WEEE and a precautionary approach to environmental protection would be taken in these circumstances, notably in cases where the holder has to prove that the equipment was not waste; in some Member States, however, it remains for the state authorities to prove that the equipment at issue is WEEE.

Further indicators that material is not waste include:

- a. a copy of the invoice and contract relating to the sale and/or transfer of ownership of the EEE which states that the equipment is for direct re-use and fully functional;
- evidence of evaluation/testing in the form of copy of the records (certificate of testing

 proof of functional capability) on every item within the consignment and a protocol containing all record information (see Appendix 1);

- c. a declaration made by the holder who arranges the transport of the EEE that none of the material within the consignment is waste as defined by Article 1(a) of the Waste Framework Directive;
- d. sufficient packaging to protect it from damage during transportation, loading and unloading.

Simple Evaluation scheme

Used EEE \Rightarrow testing \Rightarrow functional capability, proper packaging, record \Rightarrow non-waste (EEE)

Used EEE ⇒ any kind of major repair, refurbishment, upgrading necessary, no proper packaging, no testing, no record ⇒ waste (WEEE)

2. Shipments of WEEE

Shipments of WEEE are regulated by the Waste Shipment Regulation (WSR). In certain circumstances the WSR provides for shipments of waste to be subject to additional regulatory controls under the national legislation of Member States or other importing countries.

In any case shipments of old or out-dated EEE destined for cannibalization (to gain spare parts) are waste shipments.

2.1 Shipments of WEEE destined for disposal

• Shipments within the EU:

All such shipments of waste within the EU are subject to the notification procedure referred to in the WSR. Member States may generally prohibit shipments of waste to or from other Member States for disposal and enquiries should be made of the relevant competent authorities to establish if the planned shipment for disposal is allowed under national legislation.

• Exports from the EU:

All exports from the EU destined for disposal are prohibited (except waste shipments to EFTA states being parties to Basel Convention).

• Imports into the EU:

Such imports are generally prohibited, although EU Member States may make exceptions where they consider that there are sound environmental reasons for doing so. All imports for disposal are subject to the notification procedure referred to in the WSR.

2.2 Shipments of WEEE destined for recovery

Shipments within the EU:

Shipments within the EU may be subject to either the notification procedure referred to in the WSR or they may be subject to another, lower level, of WSR controls (see Annex II of WSR; requirements pursuant to Art. 11 of the WSR). The applicable controls are determined by the classification of the WEEE in question in the relevant lists of waste annexed to the WSR. The WSR lists of waste differ from those in the European Waste List (EWL) in respect of shipments within the Community. A precautionary approach should be taken to the classification of WEEE. If it is not clear that the WEEE in question is suitable for entry in Annex II of WSR (Green List) the shipment should be notified.

Exports from the EU:

They are permitted under certain conditions. These conditions depend on the clas-

sification of the waste ('hazardous' – 'non hazardous' ¹) and the provisions applicable to the country of destination². Exports of hazardous waste for recovery to Non-OECD-countries are forbidden³. Again, the lists that determine the levels of control are as annexed to the WSR and reference is made to the EWL for Exports to non OECD countries under specific circumstances as set out in the WSR.

• Imports into the EU:

In principle, imports or shipments from other EU-Member States destined for recovery are allowed, unless the waste is hazardous and the country of dispatch is not a party to the Basel Convention. The classification of the waste (see **Appendix 2**) determines notification procedure according to the Waste Shipment Regulation applicable for such shipments⁴.

Additional information on the classification of WEEE for shipments is given in **Appendix 3**.

3. Controls

- Controls are conducted by state authorities (e.g. police, customs, inspectors) at facilities and during the transport. In order to prove the classification as non-waste or non-hazardousness waste, used EEE has to be sufficiently tested, recorded accordingly⁵ and packaged properly.
- For practical reasons of control, every load (e.g. shipping container, lorry) of used EEE should be accompanied by
 - a. a CMR document,
 - a proof of the evaluation/testing in form of copy of the records and a protocol containing all testing and recording information (see Appendix 1) on the single items of the transport; and
 - c. a declaration of the liable person on its responsibility.
- In case of non-proof the state's authority has to presume the material is a (hazardous) waste subject to controls warranted for (hazardous) waste or has to reject the transport and to inform the competent authority.

² See Council Regulation 1420/1999 and Commission Regulation 1547/1999 as amended.

See Appendix 2.

See Annex V of the WSR.

For Green Listed Waste (non hazardous waste) in Annex II of the WSR requirements are laid down in Art. 11 of the WSR.

⁵ Certificate of testing, displaying/stating functional capability and issued on the condition only, the EEE can be used directly without major repair; see Appendix 1 III. "Record".

If the shipment is stopped on the territory of the country of transit or destination a notifiable shipment without notification (illegal shipment) the competent authorities shall be informed immediately and work together to reach a satisfying solution.

Indicators to distinguish between waste and non-waste

I. General evaluation

Any of the following may indicate that EEE is waste:

- 1. The product is not complete, essential parts are missing;
- 2. A defect that materially affects its functionality;
- 3. Physical damage that impairs its functionality or safety, as defined in relevant standards;
- 4. Insufficient packaging for protecting it from damage during transport and loading and unloading operations;
- 5. A generally worn or damaged appearance which would appear to reduce the marketability of the item(s);
- 6. The item has as its constituent part(s) anything that is required to be discarded or is banned under community or national legislation;⁷
- 7. The EEE is destined for disposal or recycling instead of re-use;
- 8. There is no regular market for the EEE (see further indicators).

Further indicators might be: Age of item, out of fashion, non tradable model, banned constituents etc.

Example

IT-Products are defined as waste if they have any of the followings:

- 1. A defect that materially affects its functionality. For example it does not:
 - a. power up;
 - b. perform BIOS or internal set-up routines or self-checks fail;
 - c. have a functioning motherboard;
 - d. communicate with the host;
 - e. print/scan/copy a test page or the page is not identifiable or readable or is blurred or lined;
 - read, write or record/burn.
- 2. A physical damage that impairs its functionality or safety, as defined in relevant standards. Physical damage includes inter alia:
 - a. a screen that has physical damage, such as burn marks, or is broken, cracked, heavily scratched or marked, or that materially distorts image quality;
 - b. a signal (input) cable has been cut off or cannot be easily replaced without recourse to opening the case;
 - c. a faulty Hard Disk Drive or a faulty RAM or a faulty Video Card; or
 - d. batteries containing lead, mercury or cadmium or batteries containing hazardous liquid cathodes that are unable to be charged or to hold power.
- 3. An insufficient packaging to protect it from damage during transportation, loading and unloading operations
- 4. PCs older than six years are normally obsolete.

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E.g. asbestos, PCB, CFC's,

II. <u>Testing</u>

The tests to be conducted depend on the kind of EEE (see Annex IB of Directive 2002/96/EC on waste electrical and electronic equipment (WEEE Directive - Reference 2)). Functionality has to be tested and hazardous substances have to be evaluated.

An inspection carried out only visual in not sufficient.

For most of the EEE a functionality test of the key functions is sufficient.

Results of evaluation and testing have to be recorded and a record (certificate of testing, displaying/stating functional capability) has to be placed on each tested EEE.

III. Record

The record has to be fixed securely but not permanently on either the EEE itself (if not packed) or on the packaging so it can be read without unpacking the equipment.

The record has to contain the following information:

- 1. Name of item (WEEE Directive, Name of the equipment and number of category in Annex I)
- 2. Identification Number of the item (type no.)
- 3. Year of Production (if available)
- 4. Name and address of the company responsible for evidence of functionality
- 5. Result of tests (e.g. naming defective parts and defect or indication of full functionality).
- 6. Kind of tests performed.

The protocol of testing and evaluation has to accompany the transport.

IV. Packaging

Insufficient packaging for protecting items from damage during transportation, loading and unloading operations is an indication that the item(s) may be waste. In general, the observation of poor packaging should lead enforcement agencies/authorities to make further enquiries regarding the item(s) being transported.

<u>Classification of waste for shipments destined for recovery or reuse following repair</u>

The approach to classification of waste is partly governed by whether the waste is destined for a Member State of the EU (see **Reference 3**) or a member country of the Organisation for Economic Co-operation and Development (OECD) (see **Reference 4**) or a non-OECD country.

Section A details the classification procedure for shipments to Member States of the EU and OECD member countries. Section B details the two stage classification process that applies to exports to non-OECD countries; firstly to determine whether or not the export is potentially permitted (Stage 1) and, secondly, if potentially permitted, to determine the controls applicable to the export (Stage 2).

It is important to note that exports that are claimed to be for re-use which is not direct reuse but in fact is re-use that involves first a repair operation, may very well involve disposal or recovery and may be subject to control. This is because hazardous parts may be discarded during the repair process.

A. Shipments within the EU and from the EU to OECD member countries

The Annexes to the Waste Shipment Regulation (Reference 1) provide waste lists to be used for the classification of shipped waste destined for recovery operations. These are referred to as:

- The 'green' list (Annex II)⁸ containing non-controlled wastes (basic information must accompany the waste as specified in Article 11 of the Waste Shipment Regulation)
- The 'amber/red' list (Annexes III and IV) containing controlled wastes

For the classification of WEEE the Annexes II, III and IV of the Waste Shipment Regulation are relevant. In cases of doubt the competent authority of dispatch should be consulted. Box 1 lists the categories relating to WEEE that should be considered.

Note 1 – Green listed wastes that are contaminated with hazardous materials may be classified as controlled waste.

Box 1 Categories relating to WEEE in the Waste Shipment Regulation

Annex II

GC010 Electrical assemblies consisting only of metals or alloys

GC020 Electronic scrap (e.g. printed circuit boards, electronic components, wire, etc.) and reclaimed electronic components suitable for base and precious metal recovery

Annex III

AA100 Mercury waste and residues •)

AA170 Lead acid batteries, whole or crushed

AA180 Used batteries or accumulators, whole or crushed, other than lead acid batteries, and waste and scrap arising from the production of batteries and accumulators, not otherwise specified or included

AB040 Glass waste from cathode ray tubes and other activated glass

Annex IV - Red List

RA 010 Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB) and/or polychlorinated terphenyl (PCT) and/or polybrominated biphenyl (PBB), including any other polybrominated analogues of these compounds, at a concentration level of 50 mg/kg or more

Waste not listed- Annex IV (Art. 10 of the WSR)

- WEEE, containing or contaminated with hazardous constituents to an extent that the waste exhibits a risk or prevents environmentally sound recovery
- Parts of WEEE, not listed elsewhere, containing or contaminated with hazardous constituents to an extent that the waste exhibits a risk or prevents environmentally sound recovery

B. Exports to non-OECD countries (application of the export prohibition)

For the classification of WEEE, Annex V to the Waste Shipment Regulation or the competent authority should be consulted. There is a two stage process to be completed before waste may be exported to non-OECD countries.

Stage 1

Annex V to the Waste Shipment Regulation (**Reference 1**) implements a prohibition on the export of 'hazardous' wastes to non-OECD countries. This stage determines only whether a proposed export to a non-OECD country is prohibited or potentially permitted.

^{*)} This listing includes wastes in the form of ash, residue, slag, dross, skimming, scaling, dust, powder, sludge and cake, unless a material is expressly listed elsewhere

Box 2 Categories in Part 1 of Annex V relating to WEEE

Part 1 List A (prohibited for export)

- **A1160** Waste lead-acid batteries, whole or crushed
- A1170 Unsorted waste batteries excluding mixtures of only list B batteries. Waste batteries not specified on list B containing Annex I constituents to an extent that render them hazardous
- A1180 Waste electrical and electronic assemblies or scrap*) containing components such as accumulators and other batteries included on list A, mercury switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or contaminated with Annex I constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they possess any of the characteristics contained in Annex III (note the related entry on list B B1110)*)
- **A2010** Glass from cathode ray tubes and other activated glasses

Part 1 List B (potentially permitted for export)

- **B1040** Scrap assemblies from electronic power generation not contaminated with lubricating oil, PCB or PCT to an extent to render them hazardous
- **B1070** Waste of copper and copper alloys in dispersible form, unless they contain Annex I constituents to an extent that they exhibit Annex III characteristics
- **B1090** Waste batteries conforming to a specification, excluding those made with lead, cadmium or mercury⁹
- **B1110** Electrical and electronic assemblies:
 - Electronic assemblies consisting only of metals or alloys
 - Waste electrical and electronic assemblies or scrap*) (including printed circuit boards) not containing components such as accumulators and other batteries included on list A, mercury-switches, glass from cathode-ray tubes and activated glass and PCB capacitors, or not contaminated with Annex I constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) or from which these have been removed, to an extent that they do not possess any of the characteristics contained in Annex III (note the related entry on list A A1180)
 - Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct re-use*) and not for recycling or final disposal*)
- This entry does not include scrap assemblies from electric power generation.
- PCBs are at a concentration level of 50 mg/kg or more¹⁰.

*) This entry does not include scrap assemblies from electric power generation.

- *) Re-use can include repair, refurbishment or upgrading, but not major re-assembly.
- •) In some countries these materials destined for direct re-use are not considered wastes.

These batteries are non-hazardous wastes according to Art. 1.1. a of the Basel Convention; however applying the hazard criteria of the EU all types of batteries fulfil a hazard criterion due to their electrolytes (e.g. corrosive, harmful, leachate, ecotoxic) and shall be subject to the export ban regulation into non-OECD countries applying the criteria of Annex V of the WSR (=1.1. b wastes of the Basel Convention)

The national legislation on the determination of PCBs must be taken into consideration (e.g. 6 or 7 PCB- congeners; sometimes multiplication of the sum of these congeners with factor 5 is required), especially considering results of analyses carried out in non-EU countries or compliance with limit values required in non-EU-countries

Annex V has three parts:

- Part 1 is divided into List A and List B. If a waste is listed on List A, then its export to non-OECD countries is prohibited. If listed on List B, its export is potentially permitted.
- Parts 2 and 3 of Annex V should only be considered if a waste does not appear in either List A or List B of Part 1. If a waste is identified as hazardous in Part 2 of Annex V (by being marked by an asterisk) or is listed in Part 3 of Annex V then its export to non-OECD countries is prohibited. If the waste is not marked with an asterisk in Part 2 of Annex V then its export to non-OECD countries is potentially permitted. If waste does not appear on the lists in either Part 2 or 3 to Annex V, then export to non-OECD countries is potentially permitted subject to the appropriate controls.

In **summary**, waste may **potentially** be exported to non-OECD countries if either:

- it appears on List B of Part 1 and does not exhibit a hazard criterion according to EClegislation; or
- it is not prohibited by virtue of its listing in Annex V.

Stage 2

Exports of waste not subject to the export prohibition to non-OECD countries

This stage only needs to be considered if Stage 1 indicates that the waste export is potentially permitted.

The first step is to establish whether the waste is listed in Annex II to the Waste Shipment Regulation (Reference 1). In addition, the competent authority may be consulted. However, Box 1 lists those entries most likely to be relevant.

If the waste is not described by any entry in Annex II, then its export is subject to the controls set out in the Waste Shipment Regulation.

For waste listed in Annex II, the specific requirements will depend on the waste category and country of destination. The specific requirements for each country are listed in:

- Council Regulation (EC) No. 1420/1999 (see Reference 5) (for prohibitions)
- Commission Regulation (EC) No. 1547/1999 (see **Reference 6**) (for systems of control).

Each listed country is able to prohibit the import of a particular waste or request that a variety of controls apply. These controls range from normal commercial controls, amber controls, red controls to Article 15 controls. With regard to shipments to the new EU Member States (see **Reference 7**).

Exports for Re-Use Following Repair (waste shipments):

Notwithstanding entry B1110 and its footnote on re-use in box 2, it is clear that if the repair, refurbishment or upgrading involves discarding of a hazardous part, which will need to go to disposal or recovery operation listed in Annex II of the Waste Framework Directive) then a transboundary movement of hazardous waste will have taken place and full controls are to be applied (export ban of hazardous wastes to non-OECD countries). For this reason in order to determine whether the WEEE will need to be controlled, diligent enforcement for those claiming re-use following repair, must require testing to determine what kind of repair

will take place. If the repair will replace a hazardous part such as a CRT or circuit board, or battery, then full controls must apply.

Shipments of non-operative goods for repair (return to original producer or producer-related repair centres)

Shipments of non-operative reclamation goods, which are sent back to the original producer or producer-related repair centres for repair within their guarantee time (in most cases: return to the owner) are **outside the scope of the EC-Waste Shipment Regulation**, as there is no intention of the consumer (owner) to discard the electronics but to get back the fully repaired product.

When the consumer sends back the electronic equipment with defects, he/she cannot assess whether the equipment will be repairable or whether he/she will get back a replacement equipment instead, as it will turn out at the original producer or the producer-related repair centre that the original product cannot be repaired, but will be scrapped and recovered within the production process. Even in those cases **product shipment can be assumed**.

In the case of shipments of EEE in their guarantee time it is without importance whether the device can be repaired easily or requires complex repair (e.g. change of spare parts) or whether the device contains hazardous components (e.g. cathode ray tubes, batteries, accumulators) or not.

Of course any required classification as waste shipments by the importing country must be obeyed (the more stringent classification shall predominate).

Shipment of non-operative reclamation goods, which are sent back for repair to the original producer or producer-related repair centres after guarantee time (in most cases: return to the owner)

In case of shipments of electronic equipment for repair after expiry of the guarantee time and take-back of the repaired goods by the consumers, these can be classified as **shipments of non-waste either**. Of course any **required classification as waste shipments by the importing country must be obeyed** (the more stringent classification shall predominate).

<u>Assignment of codes of the European List of Wastes to categories of WEEE listed in Annex IB of the WEEE Directive</u>

The Table below is based on Annex IB of the WEEE Directive and its purpose is to assign codes of EU List of Wastes and Custom Codes to the items listed in Annex IB of the WEEE Directive in order to support competent authorities and custom concerning the control of shipments of WEEE.

Mixed scrap has to be classified as non-listed and has to be notified and controlled

In case of shipments of hazardous wastes (EU criteria) to non-OECD countries the EXPORT BAN must be obeyed.

(Table to be further elaborated)

| Waste description | | Was | | Remarks | | |
|---|-----------------------|----------|-----------|---------------------|------|---|
| | EU-EWL | | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| 1. Large household appliances | | | | | | |
| Large cooling appliances | 160211* or 200123* | | | AC150 AD160 | | hazardous if containing CFCs as cooling agent or in the foam All EOL-refrigeration equipment is |
| Refrigerators | 160211* or 200123* | | | AC150 AD160 | | hazardous if containing CFCs, HFCCs or HFCs as refrigerant or in the insulation foam. All other EOL-refrigeration equipment is hazardous due the content of ammonia or propane, butane etc. |
| Freezers | 160211* or 200123* | | | AC150 AD160 | | |
| Other large appliances used for refrigeration, conservation and storage of food | 160211* or 200123* | | | AC150 AD160 | | Absorber refrigerators using ammonia or refrigerators using propane, butane –EWL Codes: 20 01 35* or 16 02 13* |

| Waste description | | Was | Remarks | | | |
|---|-----------------------|----------------------|-----------|-------------------------|----------------|---|
| | EU-EWL | | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Washing machines | 160213* or 201035* | 160214 200136 | | RA010 A1180 | GC010 B1110 | Hazardous when containing: PCB capacitors (old machines, older than 20 years), mercury switches, heavy metals or flame retardants |
| Clothes dryers | 160213* or 201035* | 160214 200136 | | RA010 | GC010 B1110 | Hazardous when containing: PCB capacitors (old machines, older than 20 years), heavy metals or flame retardants |
| Dish washing machines | 160213* or 201035* | 160214 200136 | | RA010 RB010 A1180 | GC010 B1110 | Hazardous when containing: PCB capacitors (old machines, older than 20 years), heavy metals or flame retardants |
| Cooking | 160213* or 201035* | 160214 200136 | | RB010 | GC010 B1110 | Hazardous when containing: mineral fibres or asbestos |
| Electric stoves | 160213* or 201035* | 160214 200136 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |
| Electric hot plates | 160213* or 201035* | 160214 200136 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |
| Microwaves | 160213* or 201035* | 160214 20 01 36 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |
| Other large appliances used for cooking and other processing of food | 160213* or 201035* | 16 02 14 20 01 36 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |
| Electric heating appliances | | 160214 200136 | | | GC010 B1110 | |
| Old electric night storage heating appliances, containing asbestos: | 160212* 200135* | | | RB010 | | Hazardous when containing: asbestos |

| Waste description | | Was | | Remarks | | |
|--|--------------------|----------|-----------|----------------|------------|---|
| | EU-EWL | | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Electric radiators (containing oil or heat transfer fluids) | 160213* 200135* | | | RA010 A1180 | | In case of PCB-oil the radiator is haz- ardous even after removal of the oil (see PCB limit of 50 ppm for classifica- tion of haz waste) |
| Radiators freed from heat transfer oil | | 160214 | | | GC010 | fully emptied |
| (non-halogenated oils) | | 200136 | | | B1110 | |
| Radiators freed from halogenated heat transfer oil | 160213* 200135* | | | A1180 | | In case of PCB-oils the radiator is hazardous even after removal of the oil (wastes containing more than 50 ppm PCB** are hazardous wastes) |
| Other large appliances for heating rooms, | 160213*or | 160214 | | RB010 | GC010 | Hazardous when containing: |
| beds, seating furniture | 201035* | 200136 | | | B1110 | asbestos |
| Electric fans | 160211* or | 160214 | | | GC010 | Hazardous when containing: |
| Lieutiu idiis | 201023* | 200136 | | A1180 | B1110 | batteries, accumulators |
| Air conditioner appliances | 160212* | | | AC150 | | |
| (containing CFC's HFCs etc) | 200123* | | | AD160 | | |
| Other fanning, exhaust ventilation and conditioning equipment | | | Х | Art.10 | | |
| 2. Small household appliances | | | | | | |
| | 160213* | 160214 | | | GC010 | Hazardous when containing: |
| Vacuum cleaners | 200135* | 200136 | | A1180 | B1110 | PCB capacitors, batteries, accumulators, heavy metals or flame retardants |
| _ | 160213* | 160214 | | | GC010 | Hazardous when containing: |
| Carpet sweepers | 200135* | 200136 | | A1180 | B1110 | PCB capacitors, batteries, accumulators, heavy metals or flame retardants |
| Other appliances for cleaning | | | Х | Art.10 | | |

| Waste description | | Was | | Remarks | | |
|---|--------------------|------------------|-----------|----------------|----------------|--|
| | EU-E | WL | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Appliances used for sewing, knitting, weaving and other processing for textiles | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries, accumulators, heavy metals or flame retardants |
| Irons and other appliances for ironing, mangling and other care of clothing | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, mercury switches |
| Toasters | 160213* 200135* | 160214 200136 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |
| Fryers | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, PCB capacitors |
| Mixer | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries, accumulators, heavy metals or flame retardants |
| Grinders, coffee machines and equipment for opening or sealing containers or packages | 160213* 200135* | 160214 200136 | | RB010 | GC010 B1110 | Cofee machines are hazardous when containing: asbestos |
| Electric knives | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/accumulators they are hazardous wastes. |
| Appliances for hair-cutting, hair drying, tooth brushing, shaving, massage and other body care appliances | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/accumulators they are hazardous wastes. |
| Clocks, watches and equipment for the purpose of measuring, indicating or registering time | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/accumulators they are hazardous wastes |

| Waste description | | Was | Remarks | | | |
|--|--------------------|------------------|-----------|-------------|----------------|---|
| | EU-EWL | | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Scales | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/accumulators they are hazardous wastes |
| 3. IT and telecommunications equipment | | | | | | |
| Centralised data processing: | | | | | | |
| Mainframes | 160213* 200135* | | | A1180 | | Mainframes = large, powerful central computers with a number of workstations, consisting of a keyboard and monitor (CRTs) which access the mainframe computer via automated servers. Mercury switches and relays were traditionally used in large mainframe computers, even PCB-components cannot be excluded. CFC-applications in refrigeration systems for large computer equipment possible; buffer batteries; |
| Minicomputers | 160213* 200135* | | | A1180 | | Due to batteries/accumulators and LCD |
| Printer units | 160213* 200135* | | | A1180 | | Hazardous components: bigger electrolyte capacitors, buffer batteries, fluorescent tubes, toner cartridges with maybe hazardous toner residues (in ink jet and laser printer) Nowadays non-problematic organic photo conductor (OPC) cartridges are used, in very old appliances also PCB-capacitors were found; portable printers contain accumulators |

| Waste description | | Was | Remarks | | | |
|--|-----------------------------|----------------------|-----------|---------------------|----------------|---|
| | EU-EWL | | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Personal computing: | | | | | | |
| Personal computers (CPU, mouse, screen and keyboard included) as a whole | 160213* 200135* | | | A1180 | | |
| PCs (including CPU) | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | |
| • mouse | | 160214 200136 | | | GC010 B1110 | |
| screen CRT | 160215* [200135*] | | | A1180 | | hazardous due to lead oxide content |
| TFT screen | 160215* [200135*] | | | A1180 | | hazardous due to mercury background lighting of large screens |
| keyboard | | 160214 200136 | | | GC010 B1110 | |
| Laptop computers (CPU, mouse, screen and keyboard included) as a whole | <i>160213*</i> 20 01 35* | | | A1180 | | |
| PCs (including CPU) | 160213* 200135* | 16 02 14 20 01 36 | | A1180 | GC010 B1110 | |
| • mouse | | 160214 200136 | | | GC010 B1110 | |
| • screen | 160215* [200135*] | | | A1180 | | |
| TFT screen | 160215* [200135*] | | | A1180 | | |

| Waste description | | Was | Remarks | | | |
|---------------------------------------|----------------------|------------------|-----------|-------------|----------------|--|
| | EU-E | WL | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| keyboard | | 160214 200136 | | | GC010 B1110 | |
| Notebook computers | 160213* [200135*] | | | A1180 | | |
| Notepad computers | 160213* [200135*] | | | A1180 | | |
| Printers | 160213* 200135* | | | A1180 | | Hazardous components: bigger electrolyte capacitors, buffer batteries, fluorescent tubes, toner cartridges with maybe hazardous toner residues (in ink jet and laser printer) Nowadays non-problematic organic photo conductor (OPC) cartridges are used, in very old appliances also PCB-capacitors were found; portable printers contain accumulators |
| Copying equipment | 160213* 200135* | | | A1180 | | Hazardous components: Electrolyte capacitors, fluorescent tubes; Portable photocopiers: PCB-capacitors in old equipment, fluorescent tubes, toner cartridges with photo conductor drums (nowadays non-problematic organic photo conductor (OPC) cartridges), which in former days contained cadmium sulphide, selenium, compounds |
| Electrical and electronic typewriters | | | Х | Art.10 | | |
| Pocket and desk calculators | 160213* 200135* | | | A1180 | | Due to batteries |

| Waste description | | Was | te classifica | tion | | Remarks |
|--|----------------------|------------------|---------------|---------------------|----------------|---|
| | EU-E | WL | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| and other products and equipment for the collection, storage, processing, presentation or communication of information by electronic means | | | Х | Art.10 | | |
| User terminals and systems | | 160214 200136 | | | GC010 B1110 | |
| Facsimile | 160213* 200135* | | | A1180 | | Big electrolyte capacitors, toner cartridges with photo conductor drums, fluorescent tubes; in single cases: other mercury-bearing components found |
| Telex | | | Х | Art.10 | | |
| Telephones | | 160214 200136 | | | GC010 B1110 | |
| Pay telephones | | | Х | Art.10 | | |
| Cordless telephones | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous due to batteries; if free of accumulators/batteries – non haz waste |
| Cellular telephones | 160213* [200135*] | | | A1180 | | Hazardous due to batteries free of accumulators/batteries – non haz waste |
| Answering systems | 160213* 200135* | | | A1180 | | |
| and other products or equipment of transmitting sound, images or other information by telecommunications | | | Х | Art.10 | | |

| | Was | | Remarks | | |
|--------------------|--|--|--|--|---|
| EU-E | WL | | EU-WSR (O | ECD/Basel) | |
| hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| | | | | | |
| 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/ac- cumulators or flame reterdents they are hazardous wastes. |
| 160213* 200135* | | | A1180 | | Hazardous due to CRT (lead oxide) or LCD (Hg background lighting) or lead glass in the plasma display panel (=gas discharge display with traces of haz. substances) |
| 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous due to batteries free of accumulators/batteries – non haz waste |
| 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous due to batteries free of accumulators/batteries – non haz waste |
| 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous due to batteries free of accumulators/batteries – non haz waste |
| | 160214 200136 | | A1180 | GC010 B1110 | If the appliances contain batteries/ac- cumulators or flame reterdents they are hazardous wastes |
| 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous due to batteries free of accumulators/batteries – non haz waste |
| | | Х | Art.10 | | |
| | hazardous 160213* 200135* 160213* 200135* 160213* 200135* 160213* 200135* 160213* 160213* | EU-EWL hazardous non-haz. 160213* 160214 200135* 200136 160213* 200135* 200135* 160214 200135* 200136 160213* 160214 200135* 200136 160213* 160214 200136* 160214 200136 160214 200136 160214 160213* 160214 200136 160214 | EU-EWL hazardous non-haz. uncertain 160213* 160214 200135* 200136 160213* 160214 200135* 200136 160213* 160214 200135* 200136 160213* 160214 200135* 200136 160214 200136 160213* 160214 200136 160214 200136 160214 200136 200136 | hazardous non-haz. uncertain III, IV/A 160213* 160214 200135* A1180 160213* 200135* A1180 160213* 160214 A1180 160213* 160214 A1180 160213* 160214 A1180 160213* 160214 A1180 160214* 200136 A1180 160213* 160214 A1180 160213* 160214 A1180 160213* 160214 A1180 160213* 160214 A1180 | EU-EWL EU-WSR (OECD/Basel) hazardous non-haz. uncertain III, IV/A II/B 160213* 160214 GC010 B1110 160213* 200136 A1180 B1110 160213* 160214 GC010 B1110 160213* 160214 GC010 B1110 160213* 160214 GC010 B1110 160213* 160214 GC010 B1110 160213* 200136 A1180 B1110 160213* 200136 A1180 B1110 160213* 160214 GC010 B1110 160213* 160214 GC010 B1110 160213* 160214 GC010 B1110 |

| Waste description | | Was | Remarks | | | |
|--|--------------------|------------------|-----------|----------------|----------------|--|
| | EU-EWL | | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| 5. Lighting equipment | | | | | | |
| Luminaires for fluorescent lamps with the exception of luminaires in households | 160210* 200121* | | | RA010 A1180 | | |
| Straight fluorescent lamps | 160215* 200121* | | | A1180 | | |
| Compact fluorescent lamps | 160215* 200121* | | | A1180 | | |
| High intensity discharge lamps, including pressure sodium lamps and metal halide lamps | 160215* 200121* | | | A1180 | | metal halide lamp contain a mixture or argon, mercury, and a variety of metal halides.; sodium lamps contain an amalgam of metallic sodium |
| Low pressure sodium lamps | 160215* 200121* | | | A1180 | | |
| Other lighting or equipment for the purpose of spreading or controlling light with the exception of filament bulbs | | | Х | Art.10 | | Energy saving lamps contain mercury – hazardous waste |
| 6. Electrical and electronic tools (with the exception of large-scale stationary industrial tools) | | | | | | |
| Drills | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Saws | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Sewing machines | 160213* | 160214 | | RB010 | GC010 | Hazardous when containing: |

| Waste description | | Was | | Remarks | | |
|---|--------------------|------------------|-----------|----------------|----------------|---|
| | EU-EWL | | | EU-WSR (O | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| | 200135* | 200136 | | A1180 | B1110 | asbestos, batteries/accumulators, flame retardents, heavy metals |
| Equipment for turning, milling, sanding, grinding, sawing, cutting, shearing, drilling, making holes, punching, folding, bending or similar processing of wood, metal and other materials | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Tools for welding, soldering or similar use | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Equipment for spraying, spreading, dispersing or other treatment of liquid or gaseous substances by other means | 160213* 200135* | 160214 200136 | | RB010 A1180 | GC010 B1110 | Hazardous when containing: asbestos, batteries/accumulators, flame retardents, heavy metals |
| Tools for mowing or other gardening activities | | | Х | Art.10 | | Lead accumulators or Ni-Cds; electrolyte capacitors Free of accus – non-haz wastes |
| 7. Toys, leisure and sports equipment | | | | | | |
| Electric trains or car racing sets | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries/accumulators flame retardents, heavy metals |
| Hand-held video game consoles | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries/accumulators flame retardents, heavy metals |
| Video games | 160213* | 160214 | | | GC010 | Hazardous when containing: |

| Waste description | | Was | Remarks | | | |
|--|--------------------|------------------|-----------|---------------------|----------------|--|
| | EU-E | WL | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| | 200135* | 200136 | | A1180 | B1110 | batteries/accumulators flame retardents, heavy metals |
| Computers for biking, diving, running, rowing, etc. | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries/accumulators flame retardents, heavy metals |
| Sports equipment with electric or electronic components | | | Х | Art.10 | | |
| Coin slot machines | | | Х | Art.10 | | |
| 8. Medical devices (with the exception of all implanted and infected products) | | | | | | |
| Radiotherapy equipment | 160213* 200135* | | | A1180 | | If hazardous due to the content of radioactive material – transfrontier shipments do not fall under waste legislation (radiation protection legislation); If the equipment does not contain radioactive material any more, but contains electrolyte capacitors, PCB-components; fluorescent tubes, Beryllium–windows – hazardous waste |
| Cardiology | | | Х | Art.10 | | monitor (CRT or TFT screen) – haz. waste |
| Dialysis | | | Х | Art.10 | | monitor (CRT or TFT screen) – haz. waste |
| Pulmonary ventilators | | | Х | Art.10 | | |
| Nuclear medicine | | | Х | Art.10 | | |
| Laboratory equipment for in-vitro diagnosis | | | Х | Art.10 | | |
| Analysers | | | Х | Art.10 | | |

| Waste description | | Was | Remarks | | | |
|---|-----------------------------------|------------------|-----------|---------------------|----------------|---|
| | EU-EWL | | | EU-WSR (OECD/Basel) | | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Freezers (containing CFCs, HFCs) | <i>160211*</i> 200123 <i>*</i> | | | AC150 AD160 | | If absorber refrigerators using ammonia or refrigerators using propane, butane 20 01 35* or 16 02 13* |
| Fertilization tests | | | Х | Art.10 | | |
| Other appliances for detecting, preventing, monitoring, treating, alleviating illness, injury or disability | | | Х | Art.10 | | Equipment with monitors hazardous due to Cathode ray tubes (lead oxide) or LCD (Hg-background lighting) |
| 9. Monitoring and control instruments | | | | | | if containing mercury such as switches – hazardous waste |
| Smoke detector | 160213* | 160214 | | | GC010 | Hazardous when containing: |
| Cirioke detector | 200135* | 200136 | | A1180 | B1110 | batteries/accumulators flame retardents, heavy metals |
| Heating regulators | | | Х | Art.10 | | |
| Thermostats | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries/accumulators, flame retardents, heavy metals |
| Measuring, weighing or adjusting appliances for household or as laboratory equipment | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Hazardous when containing: batteries/accumulators, flame retardents, heavy metals |
| Other monitoring and control instruments used in industrial installations (e.g. in control panels) | | | Х | Art.10 | | Equipment with monitors hazardous due to Cathode ray tubes (lead oxide) or LCD (Hg-background lighting) |
| 10. Automatic dispensers | | | | | | |
| Automatic dispensers for hot drinks | 160213* 200135* | 160214 200136 | | RB010 | GC010 B1110 | Hazardous when containing: asbestos |

| Waste description | Waste classification | | | | | Remarks |
|---|----------------------|------------------|---------------------|-------------|----------------|---|
| | EU-EWL | | EU-WSR (OECD/Basel) | | ECD/Basel) | |
| | hazardous | non-haz. | uncertain | III, IV / A | II/B | |
| Automatic dispensers for hot or cold bottles or cans | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Automatic dispensers for cold bottles or cans are haz. waste if containing CFCs, or HFCCs or HFCs as refrigerant If absorber refrigerators using ammonia |
| | | | | | | or refrigerators using propane, butane 20 01 35* or 16 02 13* |
| Automatic dispensers for solid products | 160213* 200135* | 160214 200136 | | A1180 | GC010 B1110 | Automatic dispensers for solid products requiring refridgeration are haz. waste if containing CFCs, or HFCCs or HFCs as refrigerant |
| | | | | | | If absorber refrigerators using ammonia or refrigerators using propane, butane 20 01 35* or 16 02 13* |
| Automatic dispensers for money | 160213* | 160214 | | | GC010 | Hazardous when containing: |
| | 200135* | 200136 | | A1180 | B1110 | flame retardents, heavy metals |
| All appliances which deliver automatically all kind of products | | | X | Art.10 | | |

Appendix 3 A

<u>Assignment of codes of the European List of Wastes to categories of Disassembled WEEE</u> (non-hazardous and hazardous) fractions

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|--|------------------------------------|--|
| METAL AND METAL CONTAINING PARTS INCLU- DING METAL CASES | | |
| iron and steel | 16 02 16, 19 12 02, 19 10 01 | |
| non-ferrous metals , such as Al, Cu, Pb | 16 02 16, 19 12 03, 19 10 02 | e.g. Cu-yokes (from CRTs), metals from cables |
| transformers and motors without hazardous compounds | 16 02 16 | The transformers must be free of oil; PCB-transformers, even without PCB oil, are not part of the Green List (residual contamination). The motors must be freed from oil and must not have PCB-capacitors |
| disassembled or partly disassembled printed circuit boards and chassis not containing hazardous components | 16 02 16 | The following hazardous components must have been removed: batteries, accumulators, mercury-containing components, bigger capacitors, such as electrolyte capacitors, PCB-containing components, and LCDs > 100cm² (Hg-background lighting) Note: "Bigger" capacitors and electrolyte capacitors are those with the following dimensions: height > 25 mm; diameter > 25 mm (or equivalent volume); assembled printed circuit boards without hazardous components are considered to be equivalent to disassembled printed circuit boards, e.g. printed circuit boards only containing ICs (integrated circuits) and resistors |

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|--|--|---|
| cables (without hazardous compounds such as PCB, oil) | 17 04 11, 16 02 16 | in no case underground cables! |
| PLASTICS | | |
| plastics (not containing hazardous substances) | 16 02 16, 19 12 04 | toner cartridges without haz. toners; plastic fractions not containing or contaminated with hazardous substances (e.g. flame retardants) |
| | | Note: plastic fractions must not be mixed with rubber or metal fractions etc. for classification as Green listed waste (see ECJ- case Beside) |
| toner residues | 08 03 18 | Powder toner (black toner) normally non-hazardous - see safety data sheets |
| | | This waste is not mentioned on the Green List! |
| RUBBER | | |
| rubber wastes | 19 12 12, 19 12 04 | Note: fractions of rubber and plastics must not be mixed for classification as Green Listed waste (see ECJ- case Beside) |
| GLASS | | |
| cleaned and conditioned <u>screen</u> glass (lead oxide free) from polychromatic cathode-ray tubes | 10 11 12 could be argued a priori | The cone glass and the glass frit of the CRT must have been separated according to B.A.T. Nota bene: in no case glass from monochromatic picture tubes, as the whole glass contains lead oxide = hazardous waste |
| glass ceramic | 19 12 05, 16 02 16 | |
| glass | 19 12 05 | Nota bene: cleaned glass form fluorescent tubes according to B.A.T must be free from lead oxide glass |
| mirror glass | 19 12 05, 16 02 16 | |

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|--|-------------------------|---|
| METAL AND METAL CONTAINING PARTS WITH HAZARDOUS SUBSTANCES | | |
| capacitors, transformers (containing PCB) | 16 02 09* | |
| capacitors, transformers (containing oil, but free of PCB) | 16 02 15* | |
| electrolyte capacitors | 16 02 15* | |
| lithium batteries | 16 06 05 | Remark: hazardous waste applying all EU hazard criteria, but not explicitly marked as haz. waste in the EWC |
| nickel metal hydride batteries | 16 06 05 | Remark: hazardous waste applying all EU hazard criteria, but not explicitly marked as haz. waste in the EWC |
| lead accumulators | 16 06 01* | |
| nickel-cadmium accumulators | 16 06 02* | |
| mercury-containing batteries | 16 06 03* | |
| batteries unsorted | 16 06 05 | Mixed batteries may contain Pb-, Hg-, Cd-batteries; applying the hazard criteria of the EU all types of batteries fulfil a hazard criterion due to the electrolytes (e.g. corrosive, harmful, leachate, ecotoxic), but there is no specific hazardous entry in the EWC for mixtures of batteries |
| printed circuit boards fitted with hazardous components | 16 02 15* | hazardous components: batteries, accumulators, mercury-containing components, bigger capacitors, such as electrolyte capacitors, PCB-containing components, and without LCDs > 100cm ² (Hg-background lighting) Note: "Bigger" capacitors and electrolyte capacitors are those with the following |
| | | dimensions: height > 25 mm; diameter > 25 mm (or equivalent volume) |
| cables, containing or contaminated with PCB | 17 04 10*, 16 02 15* | e.g. underground cables containing PCB in their insulation |

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|---|-------------------------|---|
| cables, containing or contaminated with other hazardous substances than PCB | 17 04 10*, 16 02 15* | e.g. cables containing oil-soaked paper or paraffin as insulation material |
| MERCURY COMPOUNDS | | |
| mercury vapour lamps | 20 01 21, 16 02 13 | |
| other gas discharge lamps | 20 01 21, 16 02 13 | fluorescent tubes, energy saving lamps |
| coatings of fluorescent lamps | 19 12 11* | contain mercury |
| other components containing mercury | 16 02 15* | |
| e.g. mercury switches, rectifiers containing Hg etc. | | |
| HAZARDOUS GLASS WASTES | | |
| cathode ray tubes | 16 02 15* | CRT contain lead oxide glass and coating |
| cullet or glass parts of cathode ray tubes with coating | 10 11 11*, 16 02 15* | contain lead oxide glass and coating |
| cleaned cullet or glass parts of cathode ray tubes, containing lead oxide glass | 10 11 11* | monochromatic picture tubes consist of lead oxide glass only and are hazardous wastes, even after cleaning. |
| S S | | polychromatic CRTs: cone glass, glass frit or mixed cone and screen glass are hazardous waste due to the lead oxide content |
| | | note: only cleaned Ba- and Sr-oxide screen glass of polychromatic CRTs may be classified as non-hazardous waste |
| cullet and glass fractions from WEEE, containing lead and/or other heavy metals | 10 11 11* 16 02 15* | e.g. lead glass from fluorescent tubes, from plasma display panels; glass containing other toxic heavy metals e.g. antimony |

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|--|------------------------|--|
| LCDs (TFT screens, flat screens) | 16 02 15* | hazardous due to mercury background lighting |
| REFRIGERANTS | | |
| halogenated refrigerants (CFCs, HFCs) | 14 06 01* | |
| hydrocarbons | 14 06 03* | |
| ammonia (and containing chromate) | 06 02 05* | |
| OILS | | |
| heat transfer oils, containing PCB | 13 03 01* | |
| heat transfer oils, halogenated | 13 03 06* | halogenated oils, but free of PCB |
| heat transfer oils, non- halogenated | 13 03 07* | |
| PLASTIC WASTES CONTAINING OR CONTAMI- NATED WITH HAZARDOUS SUBSTANCES | | |
| toner and ink cartridges (containing hazardous toners or hazardous toner residues) | 16 02 15* | see safety data sheets of the toners |
| toner wastes with hazardous characteristics | 08 03 17* | see safety data sheets of the toners |
| plastic casings and plastic parts containing hazardous flame retardants | 16 02 15*, 1912 11* | Flame retardants inhibit or resist the spread of fire. Usually halo-carbons such as and chlorendic acid derivates, most often dibutyl chlorendate and <u>dimethyl</u> <u>chlorendate</u> have been used; other flame retardants are e.g. chlorinated paraffins, polybrominated biphenyls (PBB), penta-bromo-diphenyl ether (pentaBDE), octa-bromo-diphenyl ether (octaBDE), tetrabromobisphenol a (TBBP-A). tri-o-cresyl phosphate, tris(2,3-dibromopropyl) phosphate (TRIS), bis(2,3-dibromopropyl) |

| NON-HAZARDOUS FRACTIONS | EWL | COMMENT/EXPLANATION |
|--|--------------------------|---|
| | | phosphate, tris(1-aziridinyl)-phosphine oxide (TEPA) etc. There are also inorganic flame retardants with hazardous characteristics such as antimony trioxide compounds. |
| ASBESTOS | | |
| asbestos waste and WEEE containing asbestos | 17 06 01*, 16 02 12'* | e.g. used in old night-storage heating |
| BARIUM COMPOUNDS | | |
| components of barium compounds | 16 02 15* | getter plates from CRTs; Barium oxide reacts with humid air and water and disintegrates; barium carbonate - harmful |
| BERYLLIUM AND BE-COMPOUNDS | | |
| WEEE-parts containing beryllium or beryllium oxide | 16 02 15* | Beryllium is used for applications that require an excellent heat conductor; furthermore Be is highly permeable to X-rays (used as x-ray windows – radiology); Beryllium and Beryllium oxide are toxic substances and carcinogenic. |

References

1. Council Regulation (EEC) No. 259/93 (Waste Shipment Regulation)

http://www.europa.eu.int/comm/environment/waste/shipments/wsr_consolidated.pdf

2. Directive 2002/96/EC on waste electrical and electronic equipment (WEEE Directive) http://europa.eu.int/comm/environment/waste/weee_index.htm

3. EU Member States

http://www.europa.eu.int/abc/governments/index_en.htm#members

4. OECD countries and non-OECD countries

http://www.oecd.org/countrieslist/0,3025,en 33873108 33844430 1 1 1 1 1,00.html

5. Council Regulation (EC) No. 1420/1999

http://europa.eu.int/eur-lex/en/consleg/main/1999/en_1999R1420_index.html

6. Commission Regulation (EC) No. 1547/1999

http://europa.eu.int/eur-lex/en/consleg/main/1999/en 1999R1547 index.html

7. Shipments to accession countries

http://www.europa.eu.int/comm/environment/waste/shipments/oecd_info.pdf

8. Commission Decision 2001/68 of 16 January 2001 establishing two reference methods of measurement for PCBs pursuant to Article 10(a) of Council Directive 96/59/ECon the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCBs/PCTs)