



Normative document

WEEELABEX

Logistics

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Foreword

Since the start of the WEEELABEX project in 2009, the WEEE Forum, jointly with stakeholders from the community of WEEE processors and producers of electrical and electronic equipment, has focused on the normative requirements that operators, i.e. collection facilities, logistics operators and treatment sites, are expected to comply with. For the first time, all requirements are presented as one integrated package in a coherent structure.

Previous versions have been subject of intensive discussions in different working groups. This version 9.0 arises from unanimous approval by the General Assembly of the WEEE Forum on 1 April 2011 in Amsterdam.

In 2011 and 2012, the WEEELABEX project will focus on conformity verification. Among the deliverables, it is envisaged to produce an audit reporting template, input measurement protocols, sampling and analysis protocols, audit manuals, a conformity declaration form, definitions of target and concentration values, the definition of the audit dossier, and possibly additional guidelines. To assist the WEEELABEX project management perform these tasks, a 'watch list' was created to list all items (previously highlighted as signposts in the form of notes and comments in the normative documents) which require further research, are purely related to conformity verification or need to be subject of further considerations.

It is also envisaged to set up a *sui generis* WEEELABEX organisation, the governance structure and business model of which will be subject of discussions. Auditors will be trained to perform audits in the light of WEEELABEX conformity verification – the auditors' profile will pertain to, amongst other things, confidentiality and impartiality requirements.

Furthermore, the use of WF_RepTool, a web-based tool developed by the WEEE Forum that allows operators to report recycling and recovery rates on the basis of uniform definitions, shall be actively encouraged.

The member organisations of the WEEE Forum, as well as more generally other organisations that possibly join the WEEELABEX organisation (hereinafter 'WEEE systems'), shall be required to integrate all provisions laid down in this normative document into their contracts with operators. WEEE systems shall only contract with operators that comply with the requirements in this normative document or can demonstrate that they meet equivalent specifications.

At their meeting on 1 April 2011 in Amsterdam, the WEEE systems decided that they will require the operators with whom they have a contractual relationship to comply with the WEEELABEX requirements by 31 December 2013 (old member states) and 31 December 2014 (new member states). A 'vanguard of early birds' will start gaining experience through implementation in 2011-12 and will feed back experience into the WEEELABEX project management.

Until 1 October 2012, i.e. in the 18 months following the adoption of the standards on 1 April 2011, this version 9.0 will not undergo modifications. Formal discussions and approval of the WEEELABEX requirements within CENELEC (or equivalent standardisation organisations) shall not commence earlier than the adoption of the recast Directive 2002/96/EC.

Introduction

The WEEELABEX normative requirements lay down measures related to the protection of the environment and human health and safety through the prevention and mitigation of the adverse impacts of logistics of waste electrical and electronic equipment (WEEE). It defines both technical and management requirements for operators, which can be integrated into other management requirements and assist organisations achieving demands with respect to logistics operations.

Compliance with the WEEELABEX normative requirements cannot infer immunity from legal obligations. This normative document is not intended to create trade barriers nor to increase or decrease an organisation's legal obligations. It is intended that it will apply to all types and sizes of organisations and accommodate diverse geographical, cultural and social conditions.

The structure of the normative document is in accordance to the general rules for the structure and drafting of normative documents. Clauses 1, 2, and 3 introduce and format the document. Clause 4 refers to administrative and organisational principles. Clause 5 covers the technical requirements of the activities at the logistic facilities.

This normative document contains language concerning preparation for re-use activities. However, the preparation for re-use requirements concerning what needs to be in place in order to market equipment which has been prepared for re-use falls outside the scope of this document and is therefore not dealt with here. It is generally agreed that any standard related to the marketing of equipment prepared for re-use should require that the party bringing the equipment prepared for re-use back on the market shall place its name on the equipment, shall safeguard the original manufacturer from any claim related to the equipment and shall deliver legal guarantees for it. Producers or parties contracted to act on their behalf shall deliver a list of authorised preparation for re-use operators, with whom they have contracts with, to the authorities.

In those cases where normative requirements in this document differ from national or sub-national legal or regulatory provisions, the stricter requirements will be applicable.

Until 1 October 2012, i.e. in the 18 months following the adoption of the standards on 1 April 2011, this version 9.0 will not undergo modifications. However, a 'watch list' of issues which will be made subject of further consideration or more research in response to new developments in legislation or evolving technologies and work practises, will allow the WEEELABEX project management to prepare the next review.

Logistics

1 Scope

1.1 This normative document is applicable to all WEEE prior to treatment, i.e. before the first physical modifications.

1.2 This normative document addresses all logistic operations, including handling, sorting, storage and transport until the first treatment step.

1.3 This normative document addresses all logistic operators that perform operations according to clause 1.2, regardless of size, main focus of activities, geographic location, structure of the WEEE business, or legal status of the operator's business.

1.4 This normative document is applicable to the territory of member states of the European Union and the EFTA countries.

1.5 This normative document aims to:

- achieve effective and efficient collection, handling, sorting, and storage of WEEE in order to prevent pollution and minimise emissions,
- prevent inappropriate disposal of WEEE,
- assure protection of the environment and human health and safety,
- prevent illegal (cross boundary) shipments of WEEE,
- prevent undocumented cross boundary shipments of WEEE to operators whose operations fail to comply with this normative document or an equivalent set of requirements
- create fair competition for all operators in the WEEE chain.

This will be achieved through:

- the harmonisation of monitoring, measuring and reporting measures in order to promote environmentally sound collection, handling, sorting, storage and transport of WEEE (demonstration of legal compliance), and
- specification of existing principles and best practices.

1.6 This normative document is based on the objectives of the Community's environment policy which are aimed at preserving, protecting and improving the quality of the environment, protecting human health and utilising natural resources prudently and rationally. That policy is based on the precautionary principle and principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. This normative document is also based on the presumption that operators adhere to the principle of due diligence with all activities. Due diligence includes understanding of all obligations to which the company is subject and transparency with business partners.

2 Normative references

none

3 Terms & definitions

For the purposes of this document, the following terms and definitions apply:

3.1

collection

gathering of WEEE, including the preliminary sorting and preliminary storage of WEEE for the purposes of transport to a WEEE treatment facility

NOTE 1 The term “collection” is derived from Directive 2008/98/EC

NOTE 2 Gathering includes taking back from final users or other collection facilities

3.2

component

element of an appliance with a distinct proper function as part of a device as a larger unit

NOTE Typical components of WEEE are batteries, capacitors, printed circuit boards, CRT, hard disks.

3.3

CRT display appliance

complete TV set or whole computer monitor containing a cathode ray tube (CRT) or CRT with related deflection coil

NOTE CRT display appliances include business to business appliances like hospital monitors, bank cash machines, oscilloscopes etc.

3.4

flat panel display

thin screen equipment, larger than 100 square centimetres (cm²), using technologies that produce and display an image without the use of cathode ray tubes

NOTE Examples of flat panel displays include: LCD TV, Plasma TV, LCD screens and monitors, and notebooks.

3.5

fraction

separate material stream generated by treatment of WEEE, including de-pollution, dismantling, or any other treatment process

3.6

lamps

gas discharge lamps and retrofit LED lamps within the scope of Directive 2002/96/EC

NOTE Retrofit LED lamps are LED lamps used in exchange for CFL or GLS lamps and fit in sockets for these applications

3.7

logistics

process of planning, implementing, and controlling the efficient and effective flow of WEEE in order to achieve appropriate treatment. Logistics involves sorting, handling, storage, and transportation to the first treatment operator

3.8

logistics facility

location for receiving WEEE in order to sort, store, and for prepare for transport, with the intention to deliver to treatment facilities

3.9

operator

entity performing operations with WEEE in accordance with this normative document

NOTE Operations with WEEE may include collection, handling, shipping, sorting, storage, transport, trading, treatment or preparing for re-use.

3.10

preparing for re-use

checking, cleaning or repairing operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing

NOTE Preparing for re-use includes, but is not limited to, the selection, visual inspection, safety and functionality testing, documentation, records and labelling in accordance with the provisions of Directive 2002/96/EC with the result that the electrical and electronic equipment is fit for use.

3.11

re-use

any operation by which products or components that are not waste are used again for the same purpose for which they were conceived

NOTE The term "re-use" is defined in Directive 2008/98/EC.

3.12

treatment

recovery or disposal operations, including any preparation prior to recovery or disposal

NOTE The term "treatment" is defined in Directive 2008/98/EC.

3.13

waste

any substance or object which the holder discards or intends or is required to discard

NOTE The term "waste" is defined in Directive 2008/98/EC.

3.14

WEEE

electrical or electronic equipment which is waste including all components, subassemblies and consumables which are part of the product at the time of discarding

NOTE The definition of "WEEE" is derived Directive 2008/98/EC.

4 Administrative and organisational requirements

4.1 Legal compliance

4.1.1 The operator shall comply with European Community legislation and its corresponding transposition. The operator shall maintain a record documenting compliance with legal and regulatory obligations applying to all activities undertaken on site.

4.1.2 The operator shall establish and maintain a procedure in order to identify legal requirements that are applicable to the environmental, health and safety aspects of all activities, services and processes undertaken at the facility. Records of the operator's activities and related legal provisions shall be controlled and valid permits required by all relevant authorities shall be maintained.

4.2 Management principles

4.2.1 The operator shall ensure that a management system is in place for all activities in the fields of health, safety, environment and quality.

4.2.2 The operator shall demonstrate continuous improvement of its activities by a review and management process. The policy shall also be updated or revised as changes occur to the activities of the operator and evaluated in order to monitor its effectiveness.

4.3 Technical and infrastructural preconditions

4.3.1 The operator shall possess infrastructure in terms of size, technologies installed, and characteristics that are suitable for the activities performed on site. Suitability of site shall be assessed by a risk assessment for all tasks performed on site and include the identification of hazards, the assessment of risk and, where appropriate, the elimination or reduction of the risk, and documentation of the process.

4.3.2 Employees handling lamp waste shall properly use required personal protective equipment as identified by a risk assessment.

4.3.3 Logistics facilities including storage areas shall be designed, organised, and maintained to provide safe access to and egress from the site, and avoid access by unauthorised persons.

4.3.4 Logistics facilities shall be secured to prevent damage to and theft of WEEE and components thereof.

4.3.5 The logistics operator shall ensure that there is insurance coverage or other financial resources in place adequate to the nature and size of the operations. The insurances or financial resources shall accommodate legal and regulatory requirements, but as a minimum cover risks and liabilities of:

- bodily injury of employees, contractors, visitors or neighbours of the plant,
- damages to neighbouring facilities,
- damages due to accidental pollutant release to the environment where the owner of the property is liable,
- closure of the facility assuring proper cleanup of the site and any WEEE.

4.4 Training

4.4.1 All employees at the logistics facility shall be familiar with the environmental, health and safety policy of the facility. Employees and contractors involved in operations shall be instructed and trained to perform the tasks assigned to them.

4.4.2 Training shall include emergency response planning, occupational health and safety measures, and training for the relevant operations performed on site. The effectiveness and suitability of training shall be checked regularly. Training programmes shall be delivered at a level suitable to the trainee in form, manner and language.

4.4.3 Employee training materials and information including technical guidance documents, risk assessments, safety statements, information charts, information tables, photos or examples of components of WEEE, and safety data sheets for hazardous chemical components shall be available at the work place or be easily accessible to employees at all times

4.5 Downstream monitoring

4.5.1 The operator shall trace and document the downstream logistic chain of WEEE until the first treatment step. Documentation shall record proper processing according to clause 5 of this normative document. The operator shall be in a position to identify the origin of WEEE. If downstream operators comply with this normative document as approved by an independent entity, special documentation is not necessary.

NOTE Tracking of lamps is carried out on a container basis

4.5.2 Responsibility of downstream monitoring remains in cases where handing over of WEEE to intermediate parties, including the facilities where treatment of WEEE takes place.

4.6 Preparing for re-use

4.6.1 The operator is only entitled to contract with a third party authorised to perform preparing for re-use activities, if it can ensure that WEEE and fractions thereof not used for re-use are returned to the collection facility.

4.6.2 If the operator is involved in preparing for re-use activities, it shall conform with [clause 4.6 of the Treatment normative document].

4.7 Shipments

4.7.1 WEEE which is intended for cross-border shipments shall be subject to the requirements of Directive 2002/96/EC.

4.7.2 No operator shall initiate, contribute to, or otherwise allow shipments of WEEE that would result in treatment that is not in compliance with the objectives of the WEEELABEX normative requirements for treatment and with Directive 2002/96/EC.

4.7.3 The minimum monitoring requirements for shipments as laid down in Regulation 1013/2006 on shipments of waste shall be strictly adhered to.

NOTE Lamps are often classified as hazardous waste (EWC), but according to ADR they are not classified as dangerous goods.

5 Technical requirements

5.1 Handling

5.1.1 WEEE shall be handled and stored with due care in order to avoid release of hazardous substances into air, water, or soil, as a result of damage and/or leakage.

NOTE Handling includes loading and unloading

5.1.2 During handling and storage special attention shall be given to:

- temperature exchange equipment, to avoid damage to the temperature exchange system,
- CRT display appliances to avoid implosion and/or emissions of fluorescent coatings,
- lamps and appliances containing lamps to prevent breakage resulting in the release of mercury
- lamps when handling and separating into linear and non-linear categories to prevent breakage of lamps,
- smoke detectors as they may contain radioactive components,
- appliances containing oil and other liquids within an internal circuit as part of the appliance or capacitors containing mineral or synthetic oil to avoid spillages and other emissions, and
- appliances containing asbestos to avoid release of asbestos fibres.

NOTE 1 Appliances that contain lamps include sun beds and flat panel displays

NOTE 2 Appliances that may contain asbestos include heaters, and stoves

NOTE 3 Temperature exchange equipment includes refrigerators, freezers, equipment which automatically deliver cold products, dehumidifying equipment, air-conditioning equipment and heat pumps.

5.1.3 All handling of WEEE including the loading, unloading and transport shall be carried out with appropriate tools, containers and fixing to avoid damage to WEEE.

5.1.4 Uncontrolled tipping of containers of CRT display appliances, flat panel displays, temperature exchange equipment, and lamps shall not be permitted.

5.1.5 WEEE shall not be handled in such a way that subsequent preparation for re-use, de-pollution, or recovery according to this normative document is adversely affected or even inhibited.

5.1.6 Crushing or compacting of WEEE prior to the treatment is not permitted. Except for luminaires, dismantling of WEEE prior to treatment is not permitted, unless explicitly requested by the downstream treatment operator subject to WEEELABEX conformity verification. All WEEE and components, if already separated, shall be forwarded to treatment operator.

5.2 Storage

5.2.1 Storage areas of the logistics facilities require:

- impermeable surfaces for all WEEE storage areas

- spillage collection facilities are necessary for all uncovered storage areas
- weatherproof covering shall exist where temperature exchange equipment, CRT display appliances, flat panel displays, and lamps are stored

The quantity of WEEE stored without weatherproof covering shall not exceed the average quantity of WEEE supplied per month.

NOTE Weatherproof covering includes roof, closed or covered containers.

5.2.2 Storage areas designated for the storage of WEEE intended for preparation for re-use shall have weatherproof covering.

5.2.3 When storing CRT display appliances, flat panel displays, temperature control equipment, and lamps they shall be placed in containers or stacked in a stable manner to prevent damage or breakage.

5.3 Separate collection and sorting

5.3.1 During collection and transport WEEE shall not be mixed with other types of waste within the same container or receptacles. Exceptions from this paragraph shall be acceptable, provided the operator can assure re-separation before treatment or when required by national or sub-national guidelines.

5.3.2 WEEE shall be sorted into the WEEE collection categories or any other groups of WEEE based on legislation or agreed contractually with take-back organisations or other customers.

5.3.3 Lamps shall be removed manually from any separately collected luminaires. The removal of lamps from appliances shall be carried out in such a way that environmentally sound recycling and recovery of components or whole appliances is not hindered.

5.4 Preparation for transport of CRT display appliances and flat panel displays

5.4.1 CRT display appliances and flat panel displays shall be prepared and loaded for transport in such a way that they are not damaged during loading and transport.

5.4.2 Appropriate methods shall be used to prevent the breakage of flat panel displays during transport.

5.5 Documentation

5.5.1 Operators of logistics facilities shall record the quantity and origin of WEEE collected and forwarded by means of weight notes, piece count or documentation of number, size, and filling level of receptacles. Agreements regarding the location where weighing and data provision is foreseen shall be possible.

5.5.2 Electronic or hard copies of records shall be available for at least three years, unless authorities, WEEE take-back organisations or other customers stipulate a longer period.

5.5.3 Operators of logistics facilities shall ensure that transport operators record the amount and origin of WEEE received and the amount and destination where the WEEE is forwarded to.

5.5.4 Transporters shall keep documents and records in accordance with international, national and sub-national legal requirements. Minimum monitoring requirements as laid down in Directive 2002/96/EC and in Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on the shipments of waste shall be applicable.

Bibliography

- [1] Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE). (Official Journal of the European Union (OJ) L 37, 13.2.2003).
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- [3] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008.)
- [4] Regulation 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ, L 190/1, 12.7.2006). Regulation as last amended by Commission Regulation (EC) No 1379/2007 (OJ L 309, 27.11.2007, p. 7).