Standardization framework Treasure: a state of the art analysis

Giovanni Miccichè

Treasure Project

TREASURE

TREASURE

Home Project Objectives Partners News, events and Media Resources Newsletter Contact

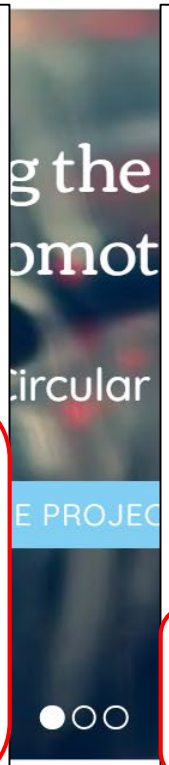
PROJECT

TREASURE wants to support the **transition of the automotive sector towards Circular Economy** (CE) trying to fill in the existing information gap among automotive actors, **both at design and EoL stage**.

To this aim, a scenario analysis simulation tool dedicated to car electronics will be developed and tested with a set of dedicated demonstration actions.

The scenario analysis simulation tool will have a multiple perspective.

- The **TREASURE solution can assist both car parts suppliers and carmakers** in assessing their design decisions in terms of circularity level, also considering the effects of their decisions on EoL processes (e.g. on car dismantlers and shredders operational performances and advanced metallurgical recycling processes).
- Car **dismantlers and shredders could benefit from the TREASURE solution** by knowing about new design features of cars to be recycled in order to optimize their processes.



OBJECTIVES

TREASURE is willing to reach three main results

- **Developing an AI-based scenario assessment tool**

supporting the development of circular supply chains in the automotive sector

- **Representing a set of success stories**

in three key value chains of the automotive industry, as dismantlers/shredders, recyclers and manufacturers, by demonstrating the benefits coming from the adoption of CE principles in the automotive sector

- **Integrating Key Enabling Technologies (KETs)**

for the efficient design of car electronics and subsequent disassembly and materials recovery.

POLITECNICO MILANO 1863 TNO CIRCE UniversidadZaragoza Scuola universitaria professionale della Svizzera italiana SUPSI UNIVERSITÀ DEGLI STUDI DE L'AQUILA MARAS EDGE RYDERS EuroLCDs WALTER PACK AUTODEMOLIZIONE POLLINI rottamiamo per l'ambiente SEAT S.A. TXT INDUSTRIAS LÓPEZ SORIANO UNI next move

Legislative framework

TREASURE

end of life vehicle — **Under revision**

L 269/34 EN Official Journal of the European Communities 21.10.2000

DIRECTIVE 2000/53/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 18 September 2000
on end-of life vehicles

- no reference to car electronics as source of Critical Raw Materials (CRMs)

Community, and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission (1),

- no reference to the standardisation activities

Having consulted the Committee of the Regions,

Acting in accordance with the procedure referred to in Article 251 of the Treaty in the light of the joint text approved by the Conciliation Committee on 23 May 2000 (3),

Whereas

(1) The different national measures concerning end-of life vehicles should be harmonised in order, first, to minimise the impact of end-of life vehicles on the environment, thus contributing to the protection, preservation and improvement of the quality of the environment and energy conservation, and, second, to ensure the smooth operation of the internal market and avoid distortions of competition in the Community.

(2) A Community-wide framework is necessary in order to ensure coherence between national approaches in attaining the objectives stated above, particularly with a view to the design of vehicles for recycling and recovery

(7) Member States should ensure that the last holder and/or owner can deliver the end-of life vehicle to an authorised treatment facility without any cost as a result of the measures; the normal functioning of market forces should not be hindered.

(8) This Directive should cover vehicles and end-of life vehicles, including their components and materials, as well as spare and replacement parts, without prejudice to safety standards, air emissions and noise control.

(9) This Directive should be understood as having borrowed, where appropriate, the terminology used by several existing directives, namely Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (4), Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers (5), and Council Directive 75/442/EEC of 15 July 1975 on waste (6).

Under evaluation — **waste electrical and electronic equipment**

L 197/38 EN Official Journal of the European Union

DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 4 July 2012
on waste electrical and electronic equipment (WEEE)
(recast)

- no reference to car electronics as category of electrical and electronic equipment (EEE) covered by this directive

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

- reference to the standardisation activities

Having regard to the opinion of the European Economic and Social Committee (1),

Having regard to the opinion of the Committee of the Regions (2),

Acting in accordance with the ordinary legislative procedure (3),

Whereas:

(1) A number of substantial changes are to be made to Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) (4). In the interests of clarity, that Directive should be recast.

mentioned waste electrical and electronic equipment (WEEE) as one of the target areas to be regulated, in view of the application of the principles of prevention, recovery and safe disposal of waste.

management legislation of the Union, such as Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste (6). It refers to the definitions in that Directive, including the definitions of waste and general waste management operations. The definition of collection in Directive 2008/98/EC includes the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility. Directive 2009/125/EC of the European Parliament and of the Council (7) establishes a framework for setting ecodesign requirements for energy-related products and enables the adoption of specific ecodesign requirements for energy-related products which may also be covered by this Directive. Directive 2009/125/EC and the implementing measures adopted pursuant thereto are without prejudice to the waste management legislation of the Union. Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (8) requires the substitution of banned substances in respect of all electrical and electronic equipment (EEE) within its scope.

Legislative framework

TREASURE

Art. 8, comma 5, para 3

The Commission shall, not later than 14 February 2013, request the European standardisation organisations to develop European standards for the treatment, including recovery, recycling and preparing for re-use, of WEEE. Those standards shall reflect the state of the art.

Art. 8, comma 5, para 4

In order to ensure uniform conditions for the implementation of this Article, the Commission may adopt implementing acts laying down minimum quality standards based in particular on the standards developed by the European standardisation organisations. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 21(2).

waste electrical and electronic equipment

L 197/38 EN Official Journal of the European Union

DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 4 July 2012

on waste electrical and electronic equipment (WEEE)

(recast)

- no reference to car electronics as category of electrical and electronic equipment (EEE) covered by this directive

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

mentioned waste electrical and electronic equipment (WEEE) as one of the target areas to be regulated, in view of the application of the principles of prevention, recovery and safe disposal of waste.

- reference to the standardisation activities

Having regard to the opinion of the European Economic and Social Committee [1],

Having regard to the opinion of the Committee of the Regions [2],

Acting in accordance with the ordinary legislative procedure [3],

Whereas:

(1) A number of substantial changes are to be made to Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) [4]. In the interests of clarity, that Directive should be recast.

management legislation of the Union, such as Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [6]. It refers to the definitions in that Directive, including the definitions of waste and general waste management operations. The definition of collection in Directive 2008/98/EC includes the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility. Directive 2009/125/EC of the European Parliament and of the Council [7] establishes a framework for setting ecodesign requirements for energy-related products and enables the adoption of specific ecodesign requirements for energy-related products which may also be covered by this Directive. Directive 2009/125/EC and the implementing measures adopted pursuant thereto are without prejudice to the waste management legislation of the Union. Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment [8] requires the substitution of banned substances in respect of all electrical and electronic equipment (EEE) within its scope.

Legislative framework

TREASURE

Art. 8, comma 5, para 3

The Commission shall, not later than 14 February 2013, request the European standardisation organisations to develop European standards for the treatment, including recovery, recycling and preparing for re-use, of WEEE. Those standards shall reflect the state of the art.

Art. 8, comma 5, para 4

In order to ensure uniform conditions for the implementation of this Article, the Commission may adopt implementing acts laying down minimum quality standards based in particular on the standards developed by the European standardisation organisations. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 21(2).

EUROPEAN COMMISSION
DIRECTORATE-GENERAL ENVIRONMENT

Sustainable Resources Management, Industry & Air
Waste Management

Brussels, 24 January 2013
M/518 EN

MANDATE TO THE EUROPEAN STANDARDISATION ORGANISATIONS FOR STANDARDISATION IN THE FIELD OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (DIRECTIVE 2012/19/EU (WEEE))

1. TITLE

Mandate for the development of (a) standards for the treatment of waste electrical and electronic equipment (WEEE).

2. PURPOSE OF THE MANDATE

To develop one or more European standard(s) for the treatment (including recovery, recycling and preparing for re-use) of waste electrical and electronic equipment, reflecting the state of the art.

Legislative framework

TREASURE

Art. 8, comma 5, para 3

The Commission shall, not later than 14 February 2013, request the European standardisation organisations to develop European standards for the treatment, including recovery, recycling and preparing for re-use, of WEEE. Those standards shall reflect the state of the art.

Art. 8, comma 5, para 4

In order to ensure uniform conditions for the implementation of this Article, the Commission may adopt implementing acts laying down minimum quality standards based in particular on the standards developed by the European standardisation organisations. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 21(2).

EUROPEAN COMMISSION
DIRECTORATE-GENERAL ENVIRONMENT

Sustainable Resources Management, Industry & Air
Waste Management

Brussels, 24 January 2013
M/518 EN

MANDATE TO THE EUROPEAN STANDARDISATION ORGANISATIONS FOR STANDARDISATION IN THE FIELD OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (DIRECTIVE 2012/19/EU (WEEE))

Article 8(5) of the WEEE Directive requires the Commission to request that the European standardisation organisations develop European standards for the treatment, including recovery, recycling and preparing for re-use, of WEEE, reflecting the state of the art. Unlike harmonised standards, the references of which are published in the Official Journal of European Union, and which are prepared to support Union harmonisation legislation, these standards do not automatically provide a "presumption of conformity". However, the Commission may in the future adopt implementing acts laying down minimum quality standards based in particular on the European standards developed by the European standardisation organisations.

The European standard(s) requested by this mandate shall assist relevant operators in fulfilling the requirements of the WEEE Directive. The European standard(s) may also give additional guidance to operators beyond the level of protection requested strictly by the WEEE Directive. Such additional guidance should be clearly distinguished from the rest of the text, e.g. figuring as a separate annex or in a separate deliverable. The standard(s) shall distinguish between requirements which are of an informative nature, and requirements which should be used by operators in the recycling chain in order to be able to verify compliance with the requirements in the standard(s).

Standardization framework

TREASURE

Reference	Title	Committee
EN 50419:2006	Marking of electrical and electronic equipment in accordance with Article 11(2) of Directive 2002/96/EC (WEEE)	CLC/TC 111X
EN 50419:2022	Marking of electrical and electronic equipment (EEE) in respect to separate collection of waste EEE (WEEE)	CLC/TC 111X
EN 50614:2020	Requirements for the preparing for re-use of waste electrical and electronic equipment	CLC/TC 111X
prEN 50614	Requirements for the preparing for re-use of waste electrical and electronic equipment	CLC/TC 111X
EN 50625-1:2014	Collection, logistics & Treatment requirements for WEEE - Part 1: General treatment requirements	CLC/TC 111X
EN 50625-2-1:2014	Collection, logistics and treatment requirements for WEEE - Part 2-1: Treatment requirements for lamps	CLC/TC 111X
EN 50625-2-2:2015	Collection, logistics & Treatment requirements for WEEE - Part 2-2: Treatment requirements for WEEE containing CRTs and flat panel displays	CLC/TC 111X
EN 50625-2-3:2017	Collection, logistics & treatment requirements for WEEE - Part 2-3: Treatment requirements for temperature exchange equipment and other WEEE containing VFC and/or VHC	CLC/TC 111X
EN 50625-2-4:2017	Collection, logistics & treatment requirements for WEEE - Part 2-4: Treatment requirements for photovoltaic panels	CLC/TC 111X
CLC/TS 50625-3-1:2015	Collection, logistics & treatment requirements for WEEE - Part 3-1: Specification for de-pollution - General	CLC/TC 111X
CLC/TS 50625-3-2:2016	Collection, logistics & Treatment requirements for WEEE - Part 3-2: Technical specification for de-pollution - Lamps	CLC/TC 111X
CLC/TS 50625-3-3:2017	Collection, logistics & treatment requirements for WEEE - Part 3-3: Specification for de-pollution - WEEE containing CRTs and flat panel displays	CLC/TC 111X
CLC/TS 50625-3-4:2017	Collection, logistics & treatment requirements for WEEE - Part 3-4: Specification for de-pollution - temperature exchange equipment	CLC/TC 111X
CLC/TS 50625-3-5:2017	Collection, logistics & Treatment requirements for WEEE - Part 3-5: Technical specification for de-pollution - Photovoltaic panels	CLC/TC 111X
CLC/TS 50625-4:2017	Collection, logistics & treatment requirements for WEEE - Part 4: Specification for the collection and logistics associated with WEEE	CLC/TC 111X
CLC/TS 50625-5:2017	Collection, logistics & Treatment requirements for WEEE - Part 5: Specification for the final treatment of WEEE fractions - Copper and precious metals	CLC/TC 111X
CLC/TR 50625-6:2018	Collection, logistics & treatment requirements for WEEE - Part 6: Report on the alignment between Directive 2012/19/EU and EN 50625 series standards and EN 50614	CLC/TC 111X

M/518 EN

MANDATE TO THE EUROPEAN STANDARDISATION ORGANISATIONS FOR STANDARDISATION IN THE FIELD OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (DIRECTIVE 2012/19/EU (WEEE))

Standardization framework

TREASURE

CLC/TC 111X

Environment

Status:	Active
Secretariat:	NEC
Secretary:	Mr MG. Geertzen (martijn.geertzen@nen.nl) (Appointed on 2018-10-02)
Chairperson:	Mr C. Dworak (DE) (Appointed on 2022-03-02 , end of term of office: 2025-03-02)
CCMC PM:	Mrs C. Müller (cmueller@cencenelec.eu)

Access to TC platform

Work programme | Alerts | Technical body substructure | **Technical body details** | Participation | Meetings | Timeline

Current status:	Active
Current status start date:	2005-01-14
Creation date:	2005-01-14

Activity sector:	07ENVI - Sewage, refuse, cleaning and environmental services

English title:	Environment
English scope:	To deal with environmental aspects for electrical and electronic products and systems. To promote activities in CENELEC relevant to reducing detrimental impacts of electrotechnical activities/products/systems on the natural environment (In this context "reducing" means a process of continual environment improvement aimed towards an optimum balance with social, economic, safety and performance requirements). To enhance CENELEC's environmental links with the European legal framework, particularly in the context of standardization aspects of EU environmental regulations and directives. To improve energy and resource efficiency of electrotechnical products and systems as important aspects in order to reduce impacts on the environment (for example climate changes and resource depletion) To prepare the necessary standards framework and in co-operation with other CENELEC Technical Bodies co-ordinate the development of, or when necessary produce, the needed standardization deliverables. Product TCs remain autonomous in dealing with environmental aspects relevant to the products included in their scope. To assist product committees in the elaboration of environmental requirements of product standards in order to foster common technical approaches and solutions for similar problems and thus promote consistency in CENELEC standards. To cooperate with recognized standardization bodies and other relevant organizations for matters of common environmental interest. To communicate with and to give advice to CENELEC BT and Technical Committees on questions related to work on environmental issues. EMC and EMF aspects are excluded, but relevant developments will be noted.

Standardization framework

TREASURE

CLC/TC 111X

Environment

Status:	Active
Secretariat:	NEC
Secretary:	Mr MG. Geertzen (martijn.geertzen@nen.nl) (Appointed on 2018-10-02)
Chairperson:	Mr C. Dworak (DE) (Appointed on 2022-03-02 , end of term of office: 2025-03-02)
CCMC PM:	Mrs C. Müller (cmueller@cencenelec.eu)

Access to TC platform

Work programme | Alerts | **Technical body substructure** | Technical body details | Participation | Meetings | Timeline

Technical body Sub-structure:

Reference	Technical body title	Status
CLC/TC 111X/WG 01	Publicity	Disbanded
CLC/TC 111X/WG 02	Database	Disbanded
CLC/TC 111X/WG 03	EuP standardisation programme	Disbanded
CLC/TC 111X/WG 04	End of life requirements for household appliances containing volatile fluorinated substances or volatile hydrocarbons	Disbanded
CLC/TC 111X/WG 05	Substance management and declaration	Active
CLC/TC 111X/WG 06	WEEE Recycling Standards	Active
CLC/TC 111X/WG 07	Development of a proposal for EN 50614 "Requirements for the preparing for re-use of waste electrical and electronic equipment"	Disbanded
CLC/TC 111X/WG 08	Method for quantitative eco design via life cycle assessment and environmental declarations through product category rules for EEE	Active
CLC/TC 111X/WG 09	Task Force to prepare the NWIP for revision of EN 50419	Active
CLC/TC 111X/WG 10	Task force SBP update	Active
CLC/TC 111X/WG 11	Ancillary Action on Material efficient recycling and preparation for re-use of CRMs	Active

Standardization framework

TREASURE

CLC/TC 111X

Environment

Status: Active
Secretariat: NEC
Secretary: Mr MG. Geertzen (martijn.geertzen@nen.nl) (Appointed on 2018-10-02)
Chairperson: Mr C. Dworak (DE) (Appointed on 2022-03-02 , end of term of office: 2025-03-02)
CCMC PM: Mrs C. Müller (cmueller@cencenelec.eu)

Access to TC platform

Work programme | Alerts | Technical body substructure | Technical body details | **Participation** | Meetings | Timeline

Note: According to the rules all the NSB/NC are potential members by default and are not listed on this page

Liaison and Partner organisations:

Organisation	Start date
ANEC	2014-02-05
APPLiA	2013-12-04
DigitalEurope	2014-05-08
EC	2014-01-01
ECOS	2014-01-31
EERA	2014-06-19
EPIA	2013-10-16
ERP	2014-05-08
EUCOLIGHT	2016-02-26
EUROPACABLE	2013-12-12
EuRIC	2014-05-08
PRE	2019-01-16
WEEE Forum	2014-01-23

TC Cooperation:

Organisation	Start date
CEN/CLC/JTC 10	2016-11-10
CEN/TC 406	2016-08-25
CLC/TC 61	2014-11-27

Standardization framework

TREASURE

CEN/TC 406

Mechanical products - Ecodesign methodology

Status: Active
Secretariat: AFNOR
Secretary: Mrs S.E. Brito (se.brito@unm.fr) (Appointed on 2018-12-19)
Chairperson: Mr P. Vinzio (FR) (Appointed on 2021-12-11 , end of term of office: 2024-12-11)
CCMC PM: Mrs C. Vigneron (cvigneron@cencenelec.eu)

Access to TC platform

Work programme | Alerts | Technical body substructure | Technical body details | Participation | Timeline

Number of Results: 4 Alerts: 1

Auto filters

WI Number	Reference	Title	WI Status	Standard Status	Last Milestone
00406001	CEN/TS 16524:2013	Mechanical products - Methodology for reduction of environmental impacts in product design and development	Closed	Withdrawn	99.60.0000
00406002	CEN/TR 17004:2016	Mechanical products - Conditions to set up environmental communication models by recognizing sectorial particularities	Active	Published	60.60.0000
00406003	EN 16524:2020	Mechanical products - Methodology for reduction of environmental impacts in product design and development	Active	Published	60.60.0000
00406004		Mechanical products — Order of magnitude of key environmental data	Active	Not Published	10.99.0000

Standardization framework

TREASURE

UNI

STANDARD REFERENCE	LINK	TITLE	YEAR	SCOPE	AREA
EN 62542:2013		Environmental standardization for electrical and electronic products and systems - Glossary of terms	2013		Glossary
EN 62430:2009		Environmentally conscious design for electrical and electronic products	2009		Design
EN IEC 62430:2019		Environmentally conscious design (ECD) - Principles, requirements and guidance	2019		Design
prEN IEC 63372		Quantification and communication of GHG emissions and emission reductions/avoided emissions from electric and electronic products, services and systems â€“ Principles, methodologies and guidance	3372		GHG emissions
EN 50693:2019		Product category rules for life cycle assessments of electronic and electrical products and systems	2019		LCA
prEN IEC 63366		Product category rules for life cycle assessment of electrical and electronic products and systems.	3366		LCA
EN 50625-1:2014		Collection, logistics & Treatment requirements for WEEE - Part 1: General treatment requirements	2014		Logistic
CLC/TS 50625-3-1:2015		Collection, logistics & treatment requirements for WEEE - Part 3-1: Specification for de-pollution - General	2015		Logistic
CLC/TS 50625-4:2017		Collection, logistics & treatment requirements for WEEE - Part 4: Specification for the collection and logistics associated with WEEE	2017		Logistic
CLC/TS 50625-5:2017		Collection, logistics & Treatment requirements for WEEE - Part 5: Specification for the final treatment of WEEE fractions - Copper and precious metals	2017		Logistic
EN 62321-2:2014		Determination of certain substances in electrotechnical products - Part 2: Disassembly, disjointment and mechanical sample preparation	2014		Disassembly
EN IEC 62321-2:2021		Determination of certain substances in electrotechnical products - Part 2: Disassembly, disjointment and mechanical sample preparation	2021		Disassembly
EN 50581:2012		Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances	2012		Substance determination
EN IEC 63000:2018		Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances	2018		Substance determination

Standardization framework

TREASURE

UNI

Area	Topic	Source	Definition (from ISO catalog when available)
Design	Value chain	Standards mapping V0	stage of information development that is concerned with determining what information for users will be provided in a product and what the nature of the information will be (SOURCE: ISO/IEC 26514:2008)
Deployment	Value chain	Standards mapping V0	phase of a project in which a system is put into operation and cutover issues are resolved ISO/IEC/IEEE 24765:2017(en), 3.1113 or process to bring entities or resources into effective action
Assembly	Value chain	Standards mapping V1	number of component parts fitted together to perform a specific function ISO 10209:2022(en), 3.1.8
Use	Value chain	Standards mapping V0	activity that the user may perform with or on the product during its whole life cycle Use covers the intended use and the reasonably foreseeable misuse in normal and reasonably foreseeable conditions of use. ISO 10209:2022(en), 3.14.45
Reuse	Value chain	Standards mapping V0	activity of recovering components and materials for further use without reprocessing ISO 21070:2017(en), 3.1.6
Disassembly	Value chain	Standards mapping V0	process whereby a product is taken apart in such a way that it could subsequently be reassembled and made operational [SOURCE: IEC 62542:2013, 6.1]
Determination of materials	Value chain	Standards mapping V0	
Recover of critical raw materials	Value chain	Standards mapping V0	
Recycling	Value chain	Standards mapping V0	any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes ISO/TS 21929-2:2015(en), 3.33

AREA
Glossary
Design
Design
GHG emissions
LCA
LCA
Logistic
Logistic
Logistic
Logistic
Disassembly
Disassembly
Substance determination
Substance determination

Phases of the process:

- Design
- Manufacturing
- Deployment
- Installation
- Use
- Re-use
- Disassembly
- Determination of materials
- Recover of critical raw materials
- Recycling

Standardization framework

TREASURE

UNI								FEEDBACK			
STANDARD REFERENCE	LINK	TITLE	KEYWORDS	ISO/TC	CEN/TC	UNI/TC	STATUS	Partner	Reference person: name - surname	Comments	Relevant? YES / NO / MAYBE
EN 62542:2013		Environmental standardization for electri Glossary of terms		TC 111 - Environmental standardization for			Published				
EN 62430:2009		Environmentally conscious design for elec					Published				
EN IEC 62430:2019		Environmentally conscious design (ECD) -		CEI-CT111			Published				
prEN IEC 63372		Quantification and communication of GH emissions from electric and electronic prc methodologies and guidance		CLC/TC 111X Environment			Not Published				
EN 50693:2019		Product category rules for life cycle asses systems		CEI-CT111			Published				
prEN IEC 63366		Product category rules for life cycle asses systems.		CEI-CT111			Not Published				
EN 50625-1:2014		Collection, logistics & Treatment requiren requirements		CEI-CT111			Published				
CLC/TS 50625-3-1:2015		Collection, logistics & treatment requirem pollution - General		CEI-CT111			Published				
CLC/TS 50625-4:2017		Collection, logistics & treatment requirem collection and logistics associated with W		CEI-CT111			Published				
CLC/TS 50625-5:2017		Collection, logistics & Treatment requiren treatment of WEEE fractions - Copper anc		CEI-CT111			Published				
EN 62321-2:2014		Determination of certain substances in ele disjointment and mechanical sample prep		TC 111 - Environmental standardization for			Published				
EN IEC 62321-2:2021		Determination of certain substances in ele disjointment and mechanical sample prep		TC 111 - Environmental standardization for			Published				
EN 50581:2012		Technical documentation for the assessm respect to the restriction of hazardous sul					Published				
EN IEC 63000:2018		Technical documentation for the assessm respect to the restriction of hazardous sul		TC 111 - Environmental standardization for			Published				

Standardization framework

VDI 2343 Blatt 1	Recycling of electrical and electronic products - Principles and terminology	Edition 2001-05
VDI 2343 Blatt 2	Recycling of electrical and electronical equipment – Logistics	Edition 2010-02
VDI 2343 Blatt 3	Recycling of electrical and electronical equipment – Disassembly	Edition 2009-04
VDI 2343 Blatt 4	Recycling of electrical and electronic equipment - Preparation techniques	Edition 2012-01
VDI 2343 Blatt 5	Recycling of electrical and electronic equipment - Material and thermal recycling and removal	Edition 2014-11
VDI 2343 Blatt 6	Recycling of electrical and electronic equipment – Marketing	Edition 2020-09
VDI 2343 Blatt 7	Recycling of electrical and electronical equipment - Re-use	Edition 2014-12

TREASURE

giovanni.micciche@uni.com

@HorizonTreasure TREASURE HORIZON 2020