

Title	B02TR Eligibility of Treatment and Preparation for Re-use Operators
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1. Context

Certification as a WEEELABEX Operator indicates that WEEE received by a treatment or preparation/*preparing** for re-use operator under the selected WEEE stream is handled and treated in compliance with the requirements of the WEEELABEX Conformity Verification documents *based on WEEELABEX Certification scheme - Operators EU Ro B2501* as defined in the document B 04 WEEELABEX Guidance Document (hereinafter “WEEELABEX requirements”).

** the terms “preparation for re-use” and “preparing for re-use” have the same meaning within this document and within other WEEELABEX documents.*

2. Scope

2.1 WEEELABEX Audits will be performed against eight treatment process criteria enabling Operators to become approved for one or more WEEE streams depending on the type of treatment activity they perform (see figure 1).

2.2 The following WEEE streams can be individually or collectively included within the scope of an approved WEEELABEX Operator’s Conformity Verification Audit:

- A Large appliance (WEEE Category 4; may contain electric water boilers/heaters and radiators containing oil belonging to Category 1)
- B Mixed equipment (WEEE Categories 5, 6; may contain large appliances Category 4 associated with collection and/or treatment of small equipment; may contain radiators containing oil belonging to Category 1; *may contain laptops/notebooks belonging to Category 2; may contain LED lamps belonging to Category 3*)
- C Temperature exchange equipment (WEEE Category 1)
- D CRT display appliances (WEEE Category 2) and cathode ray tubes
- E Flat panel display equipment (WEEE Category 2) and flat panel displays
- F Gas discharge lamps *and other types of lamps* (WEEE Category 3)
- G Photovoltaic panels (WEEE Category 4)
- H Other (other process streams or variations which appear to fall outside of these shall be discussed with the WEEELABEX Office at the time of application. The WEEELABEX Office may refer the matter to the Governing Council for a decision)

Note: The WEEE Categories are based on the DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE)

2.2.1 The respective WEEE stream or streams for which a WEEELABEX Conformity Verification has been carried out shall be included in the listing information published, and the “Certification of Conformity” document issued by the WEEELABEX Office to the WEEELABEX Operator.

2.3 Each WEEE stream will be determined by the type of treatment carried out:

- Type 0: Manual cannibalisation of appliances (no depollution)
- Type 1: Manual treatment, including all or some depollution.
- Type 2: Mechanical treatment (pre-treatment and intermediate treatment), or specific manual treatment, including some or all depollution (where indicated).
- Type 3: Advanced mechanical treatment, including some or all depollution (where indicated).
- Type 4: **Final treatment of WEEE fractions (chemical and metallurgical processes used for the recycling of copper and/or precious metals).**
- Re-use: Preparation for re-use process (checking, cleaning, or repairing recovery 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).

2.3.1 Eligible treatment types:

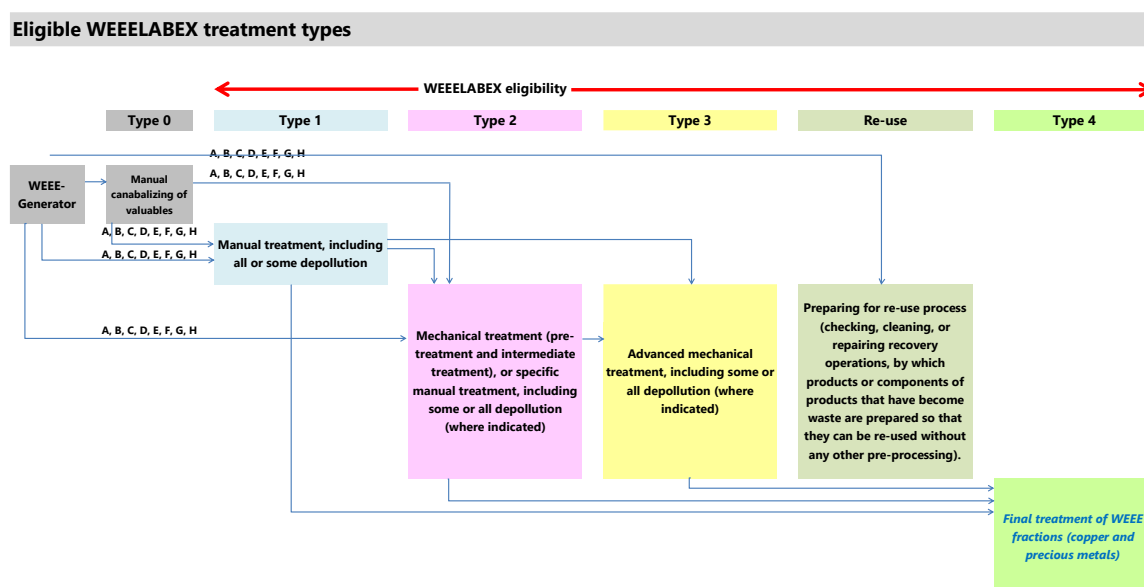


Figure 1

2.3.2 Only operators performing Type 1, Type 2, Type 3 **and Type 4** treatments or Preparation for Re-use process (either singularly or together at the same site) may apply for WEEELABEX Conformity Verification. Type 0: Manual cannibalisation of appliances (no depollution) operators will not be eligible to apply for WEEELABEX Operator status at any time.

2.3.3 A more detailed description of the activities performed by the above treatment types and examples may be found at *Annex I* and *Annex II*.

2.3.4 Operators may perform a singular or combination of Type 1, Type 2, Type 3 **and Type 4** treatment or Preparation for Re-use process activities at their facility for one or several of the WEEE streams noted in clause 2.2. An operator shall seek conformity verification for all the activities performed at their facility for the relevant WEEE stream – an operator may not apply for part of their process (e.g. if an operator performs step 1 and step 2 activities for the Temperature exchange equipment stream, they may not seek conformity verification for just step 1 but must apply for the both steps; or if an operator performs Type 1 manual treatment and Type 2 mechanical treatment and Type 3 advanced mechanical treatment of fractions or components and Preparation for Re-use process for the Mixed equipment stream, they may not seek conformity verification for just

Type 1, or Type 1&2 treatment but must apply for all the treatment activities performed at his facility for the relevant treatment process stream).

Likewise, an operator must apply for certification and be audited for all WEEE types that are treated on-site and belong to the audited WEEE stream.

2.4 An operator who performs Type 1 treatment operations alone will only be certified as a WEEELABEX Operator if he is able to record the downstream treatment of WEEE and fractions thereof by a subsequent Type 2 or Type 3 or another Type 1 operator. The documentation shall contain at least:

- copies of legal authorisation and transportation documents;
- results from a batch test(s) for non-pure fraction(s) that is sent from the Type 1 operator to the subsequent Type 2 or Type 3 or another Type 1 operator (where such a fraction contains 2 % or more impurities by mass, and this fraction is greater than 20 % of the mass of the original input material to the treatment process). Batch test shall be performed according to the EN 50625-1, Annex D;
- results from a special performance test on the material that is sent from the Type 1 operator to the subsequent Type 2 or another Type 1 operator (the special performance test shall be performed according to the EN 50625-2-3 and CLC/TS 50625-3-4 for temperature exchange equipment;
- de-pollution monitoring according to the WEEELABEX requirements for treatment process streams C, D, E, F and G (see clause 2.2); and
- documents that record downstream monitoring of each fraction and records describing the determination of recycling and recovery rates (an overview of the downstream documentation required is given in Annex III).

If downstream operator(s) is WEEELABEX certified, above mentioned 2.4 article documentation shall not be necessary.

2.5 Operators who perform Type 2 or Type 3 **or Type 4** treatment operations and who receive partially treated appliances from a Type 0 and/or a Type 1 and/or a Type 2 **and/or Type 3** operator (who is not certified as a WEEELABEX Operator) will only be considered for certification as an WEEELABEX Operator if he (the Type 2 or Type 3 **or Type 4** operator) can provide evidence of the checks and depollution activities he performs to ensure that the partially treated appliances meet with the WEEELABEX requirements (see Annex II for examples of “treat” and “partially treat”).

3. Procedure

3.1 Primarily the Type 1 operator who receives and treats¹ the WEEE is expected to seek Conformity Verification and be responsible for ensuring that all downstream partners meet with all of the WEEELABEX requirements.

3.2 Type 2 treatment operators receiving partially treated WEEE from a Type 1 (candidate) WEEELABEX Operator will be required to undertake separate Conformity Verification to determine compliance with the requirements of the WEEELABEX requirements.

NOTE: An example of a Type 2 operator in this instance would be a facility where ‘step two’ treatment of temperature exchange equipment is carried out (treatment of cabinets and capture of the blowing agent). Other examples are given in the Annex I and Annex II.

3.3 Type 2 treatment operators receiving partially treated WEEE from a Type 1 operator may choose to seek separate Conformity Verification to determine compliance with the WEEELABEX requirements.

NOTE: An example of a Type 2 operator in this instance would be a facility that receives partially treated WEEE from a Type 1 operator who has signalled they are not able or inclined to seek full Conformity Verification in their own right. The WEEE received by a Type 2 operator in this manner may be in addition to other WEEE streams received directly from the WEEE generator. Other examples are given in the Annex I and Annex II

¹ See Annex II

3.4 Type 3 **or Type 4** treatment operators receiving WEEE fractions or components may choose to seek Conformity Verification to determine compliance with the WEEELABEX requirements.

*NOTE 1: An example of a Type 3 operator would be a facility where plastics are treated to remove impurities (BFRs) and separate the polymers etc. to end-of-waste status. Other examples are given in the Annex I and Annex II. **An example of a Type 4 operator is a facility where chemical and metallurgical processes are used for the recycling of copper and/or precious metals contained in WEEE and fractions of WEEE. Other examples are given in the Annex I and Annex II.***

NOTE 2: Waste brokers² may also be eligible after the auditing service will be announced by WEEELABEX Organization whereby their management systems and their downstream partners would be audited (independently) to verify the routes and compliance with the WEEELABEX requirements whilst maintaining the confidentiality of their commercial downstream chain.

3.5 Preparation for Re-use operators receiving whole WEEE or fractions or components may choose to seek Conformity Verification to determine compliance with the WEEELABEX requirements.

NOTE 1: Preparation for re-use process means checking, cleaning, or repairing recovery 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.

4. Application Process

All prospective operators (auditees) are required to complete a Declaration of Intent form (to confirm their readiness for the Conformity Verification Audit) and will be expected to abide by the terms and conditions set down in the WEEELABEX Treatment Operator Agreement [available from the WEEELABEX office]. The Declaration of Intent shall be submitted for each new Conformity Verification process cycle (it means including each consecutive conformity verification process).

The declaration will in most cases be the result of the treatment operator's internal, voluntary conformity verification. The declaration of intent will allow for an evaluation of the eligibility of the Operator.

An Application Fee will be payable by the operator to the WEEELABEX Organisation with their Declaration of Intent one-time in the single amount disregards quantity of the WEEE streams they wish to be considered during the audit. This fee may be varied from time to time according to the requirements of the WEEELABEX Organization. The Application Fee is non-refundable once the Declaration of Intent is submitted to the WEEELABEX organisation. Further details are available from the WEEELABEX office. The Application Fee is not charged in case of a consecutive conformity verification process.

A registration fee shall be paid by the operator for each of the WEEE streams (being the subject of the conformity verification process) prior to be certified as a WEEELABEX Operator and annually thereafter. The Registration Fee is non-refundable once the operator is certified.

The currently applicable fees may be found on the WEEELABEX website or from the WEEELABEX office.

5. Definitions


“Operator” Means any treatment facility which accepts WEEE **or WEEE fractions** (household / non-household) and which performs Type 1 and / or Type 2 depollution / disassembly treatment activities, Type 3 advanced treatment **or Type 4 final treatment of WEEE fractions**, or preparation for re-use activities at that facility. In general, through-out this document and other WEEELABEX documents, the term “operator” means either “treatment operator”, or “preparation for re-use operator” or a combination of the noted types.

² See 5. Definitions


- “Treat”** Excludes those facilities which only undertake a basic process such as cutting off of the cable / plug. Depollution and / or some further disassembly needs to be carried out as a minimum.
- “Preparing for re-use”** **for** *Preparing* for re-use process covers checking, cleaning, or repairing recovery 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.
- “Waste broker”** A person or organisation who makes arrangements on behalf of others to handle, transport, dispose or recover controlled waste, but do not handle, transport or dispose or recover the waste themselves. A waste broker shares responsibility for the proper transfer of the waste with the holders before and after its transfer. As they control what happens to the waste, waste brokers are legally responsible for the arrangement and so must ensure it is taken to a facility licensed to accept and treat / dispose of the waste being transferred. They will be expected to use treatment operators who conform to the WEEELABEX requirements. Waste brokers include waste dealers who acquire waste and sell it on.

Annex I


Eligible WEEELABEX treatment processes

Type 1		Type 2		Type 3		Type 4			
Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution		
<div>Large Appliances</div> <div></div>	Removal of cables	Removal of PCB and electrolyte capacitors	Removal of motors	Removal of PCB and electrolyte capacitors	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>	
	Removal of casing (metal, plastics)	Removal of batteries	Removal of cables	Removal of batteries	Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	Plastics: sorting/segregation of BFRs plastics (if applicable)	<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>	
	Removal of motors	Removal of mercury containing components	Separation of ferrous fractions	Removal of circuit boards					
	Removal of electric components	Removal of circuit boards	Separation of non-ferrous fractions	Removal of plastics containing BFR (if applicable)	<u>Printed circuit boards:</u> manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	<u>Printed circuit boards:</u> removal of capacitors and/or batteries			
			Separation of plastics fractions	Removal or destroy of blowing agent (VFC/VHC) from PU insulation removed from electric water boilers/heaters – see the WEEELABEX statement no. 2016_003 for details					
		Removal of asbestos and components with asbestos	Separation of other fractions						
		Removal of plastics containing BFR (if applicable)	Downsizing						
		Removal of LCD							
		Removal of lamps			<u>Capacitors:</u> shredding and segregation of metals	<u>Capacitors:</u> sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances			
		Removal of fluids (including oil form oil containing radiators)							
		Removal of components containing refractory ceramic fibres			<u>Mixed fractions and components:</u> additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	<u>Mixed fractions and components:</u> removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics (if applicable)			
		Removal of PU insulation containing VFC/VHC from electric water boilers/heaters			<u>Mixed shredded fractions:</u> additional sorting/segregation of metals, plastics and other materials	<u>Mixed shredded fractions:</u> removal of circuit boards and/or BFRs plastics (if applicable)			

Eligible WEEELABEX treatment processes

	Type 1		Type 2		Type 3		Type 4	
	Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution
B Mixed equipment 	Removal of cables	Removal of PCB and electrolyte capacitors	Removal of motors	Removal of PCB and electrolyte capacitors	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>
	Removal of casing (metal, plastics)	Removal of batteries	Removal of cables	Removal of batteries	Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	Plastics: sorting/segregation of BFRs plastics	<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>
	Removal of motors	Removal of mercury containing components	Separation of ferrous fractions	Removal of circuit boards				
	Removal of electric components	Removal of circuit boards	Separation of non-ferrous fractions	Removal of plastics containing BFR	Printed circuit boards: manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	Printed circuit boards: removal of capacitors and/or batteries		
		Removal of toner cartridges	Separation of plastics fractions					
		Removal of asbestos and components with asbestos	Separation of other fractions					
		Removal of plastics containing BFR	Downsizing					
		Removal of LCD			Capacitors: shredding and segregation of metals	Capacitors: sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances		
		Removal of lamps						
		Removal of radioactive substances Removal of fluids (including oil from oil containing radiators)			Mixed fractions and components: additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	Mixed fractions and components: removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics		
		Removal of components containing refractory ceramic fibres			Mixed shredded fractions: additional sorting/segregation of metals, plastics and other materials	Mixed shredded fractions: removal of circuit boards and/or BFRs plastics		
		<u>Removal of flat panel displays from notebooks / laptops</u>						

Eligible WEEELABEX treatment processes


Type 1		Type 2		Type 3		Type 4	
Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution
<div>Temperature exchange equipment</div> <div></div>	Removal of cables	Removal of cables	Removal of blowing agent (VFC/VHC) from PU insulation	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>
	Removal of interior parts (containers etc.)	Removal of VFC/VHC from the cooling circuit	Separation of ferrous fractions	Removal of PU foam from output fractions	VFC/VHC liquified gasses: preparation steps before incineration or chemical decomposition (e.g. sorting/segregation; mixing; spill from one container to another one, etc.)		
	Removal of casing (metal, plastics, glass)	Removal of PCB and electrolyte capacitors	Separation of ferrous fractions	Removal of circuit boards	<u>Printed circuit boards:</u> manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	<u>Printed circuit boards:</u> removal of capacitors and/or batteries	
	Removal of compressors	Removal of mercury containing components	Separation of non-ferrous fractions	Removal of plastics containing BFR			
		Removal of circuit boards	Separation of plastics fractions	Removal or destroy of blowing agent (VFC/VHC) from PU insulation removed from electric water boilers/heaters – see the WEEELABEX statement no. 2016_003 for details			
		Removal of LCD	Separation of PU fractions				
		Removal of lamps	Separation of other fractions				
		Removal of oil from the oil containing radiators	Downsizing				
		Removal of fluids (including oil form oil containing radiators)					
		Removal of PU insulation containing VFC/VHC from electric water boilers/heaters					
		Removal of NH3 from ammonia appliances					

Eligible WEEELABEX treatment processes


Type 1		Type 2		Type 3		Type 4			
Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution		
Removal of cables	Removal of PCB and electrolyte capacitors	Removal of cables	Removal of PCB and electrolyte capacitors	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>		
Removal of casing (metal, plastics)	Removal of plastics containing BFR	Separation of ferrous fractions	Removal of plastics containing BFR	CRT glass: advanced mechanical treatment of CRT glass (e.g. preparation of the glass for final use (e.g. mixing, advanced cleaning, size reduction, etc.))	CRT glass: advanced mechanical removal of fluorescent coating from fractions			<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>
Removal of electron gun	Removal of circuit boards	Separation of non-ferrous fractions	Removal of circuit boards	Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	CRT glass: advanced sorting of panel and funnel glass				
Removal of shadow mask		Separation of plastics fractions	Manual or mechanical separation of funnel and panel glass		Plastics: sorting/segregation of BFRs plastics (if applicable)				
		Separation of other fractions	Manual or mechanical removal of fluorescent coating	Printed circuit boards: manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	Printed circuit boards: removal of capacitors and/or batteries				
		Separation of other fractions		Capacitors: shredding and segregation of metals	Capacitors: sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances				
				Mixed fractions and components: additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	Mixed fractions and components: removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics				
				Mixed shredded fractions: additional sorting/segregation of metals, plastics and other materials	Mixed shredded fractions: removal of circuit boards and/or BFRs plastics				

D


CRT display appliances



Eligible WEEELABEX treatment processes

	Type 1		Type 2		Type 3		Type 4	
	Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution
E Flat panel display equipment 	Removal of cables	Removal of circuit boards	Removal of cables	Removal of circuit boards	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>
	Removal of casing (metal, plastics)	Removal of LCD	Separation of ferrous fractions	Removal of plastics containing BFR	Plastics; sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	Plastics; sorting/segregation of BFRs plastics	<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>
	<u>Separation of FPD with backlight fluorescent lamps containing mercury and FPD containing LED backlight</u>	Removal of CCFL (<u>backlight fluorescent lamps containing mercury</u>)	Separation of non-ferrous fractions	Separation of mercury				
		Removal of plastics containing BFR	Separation of plastics fractions		<u>Printed circuit boards:</u> manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	<u>Printed circuit boards:</u> removal of capacitors and/or batteries		
			Separation of other fractions		<u>Capacitors:</u> shredding and segregation of metals	<u>Capacitors:</u> sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances		
			Downsizing		<u>Mixed fractions and components:</u> additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	<u>Mixed fractions and components:</u> removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics		
					<u>Mixed shredded fractions:</u> additional sorting/segregation of metals, plastics and other materials	<u>Mixed shredded fractions:</u> removal of circuit boards and/or BFRs plastics		

Eligible WEEELABEX treatment processes

	Type 1		Type 2		Type 3		Type 4	
	Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution
F Gas discharge lamps 			Separation of ferrous fractions	Removal of fluorescent coating	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>
			Separation of non-ferrous fractions	Separation of mercury	Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	Plastics: sorting/segregation of BFRs plastics	<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>
			Separation of plastics fractions					
			Separation of other fractions		Capacitors: shredding and segregation of metals	Capacitors: sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances		
			Downsizing		Mixed fractions and components: additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	Mixed fractions and components: removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics		
					Mixed shredded fractions: additional sorting/segregation of metals, plastics and other materials	Mixed shredded fractions: removal of circuit boards and/or BFRs plastics		

Eligible WEEELABEX treatment processes

		Type 1		Type 2		Type 3		Type 4	
		Manual treatment	Manual De-pollution	Mechanical treatment	De-pollution	Advanced mechanical treatment	De-pollution	End-processing	De-pollution
G	Photovoltaic panels	Removal of cables	Removal of PCB and electrolyte capacitors	Removal of metallic lead or lead solder	Removal of hazardous substances in the semiconductor layer, including contacts	Additional treatment of fractions and components such as:	Additional removal of hazardous component/substances such as:	<u>Final treatment:</u>	<u>Removal of hazardous substances and pollutants:</u>
		Removal of casing	Removal of batteries	Removal of circuit boards	Removal of plastics containing BFR	Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation	Plastics: sorting/segregation of BFRs plastics	<u>WEEE fractions: final treatment - copper and precious metals</u>	<u>WEEE fractions: removal of selected hazardous substances and pollutants during the final treatment</u>
		Removal of electric components	Removal of circuit boards	Downsizing					
		Separation of ferrous fractions	Removal of plastics containing BFR			Printed circuit boards: manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting	Printed circuit boards: removal of capacitors and/or batteries		
		Separation of non-ferrous fractions	Removal of fluids			Capacitors: shredding and segregation of metals	Capacitors: sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances		
		Separation of other fractions				Mixed fractions and components: additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials	Mixed fractions and components: removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics		
						Mixed shredded fractions: additional sorting/segregation of metals, plastics and other materials	Mixed shredded fractions: removal of circuit boards and/or BFRs plastics		

ANNEX II

Examples of operators:

Type 0	Type 1	Type 2	Type 3	Type 4
<p>An operator who <u>only</u> manually removes the ferrous metal and motor and cables – no depollution is performed.</p> <p>They do not work within the framework of the WEEE Directive.</p>	<p>A facility that performs the step 1 degassing of cooling and freezing equipment and who then passes the degassed unit to a Type 2 operator who performs the step 2 treatment.</p> <p>A facility that collects large household appliances and <u>manually</u> removes the cables and plugs; the motor and the capacitors – he then sends the remaining carcass and it is sent to a further WEEE facility for the mechanical treatment (type 2).</p> <p>A facility that collects large household appliances and <u>manual</u> strips and <u>depollutes</u> the <u>whole</u> appliance, sending the resulting materials to a type 2 or a type 3 operator for downsizing of fractions or further treatment etc.</p> <p>They may also send some fractions (pure ferrous) to a type 4 operator (or via brokers / intermediaries).</p> <p>A facility that collects / receives televisions and monitors and who manually removes the CRT tube and plastics and other components, but who does not dismantle the CRT tube itself</p>	<p>A facility that receives partially or fully depolluted large household appliances, which he processes through his <u>mechanical</u> system, separating the metals and plastics and aggregate fractions – he sends these fractions to either a type 3 operator (the plastics) or a type 4 end-processor.</p> <p>A facility that receives mixed non-ferrous fractions derived from WEEE pre-treatment sites and processes these in his <u>mechanical</u> plant to depollute and separate all of the fractions, remove the capacitors etc. , sending the resulting materials to a type 3 operator for downsizing of fractions or further treatment etc.</p> <p>They may also send some fractions (pure ferrous) to a type 4 operator (or via brokers / intermediaries).</p> <p>A facility that receives the whole CRT tubes from a type 1 operator and who processes them in his plant to manually split the panel and funnel glass and then clean the glass (manually or mechanically)</p>	<p>A facility that receives fractions or components that require further advanced treatment and/or de-pollution such as:</p> <p>Plastics: sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation. De-pollution: sorting/segregation of BFRs plastics.</p> <p>Printed circuit boards: manual sorting of printed circuit boards based on various qualities; shredding; sorting of Fe and non-Fe metals; preparation for the final refinery/smelting. De-pollution: removal of capacitors and/or batteries.</p> <p>Capacitors: shredding and segregation of metals. De-pollution: sorting of various types of capacitors (hazardous/non-hazardous); shredding and removal of hazardous substances.</p> <p>Mixed fractions and components: additional dismantling/shredding and subsequent sorting/segregation of metals, plastics and other materials. De-pollution: removal of capacitors and/or batteries and/or circuit boards and/or BFRs plastics.</p> <p>Mixed shredded fractions: additional</p>	<p><i>WEEE and fractions of WEEE: final treatment - chemical and metallurgical processes used for the recycling of copper and/or precious metals contained in WEEE and fractions of WEEE</i></p> <p><i>De-pollution: Removal of hazardous substances and pollutants during the final treatment (e.g. including cleaning of air emissions, waste water treatment).</i></p>

	<p>A facility that collects / receives televisions and monitors and who manually removes the CRT tube and plastics and other components, and who then breaks the CRT tube (but does not remove the fluorescent coating).</p> <p>A facility that collects / receives flat panel displays (televisions and monitors and laptop screens) and who manually removes the backlight lamps and plastics and other components but does not treat these components</p> <p>A facility that collects / receives flat panel displays (televisions and monitors and laptop screens) and who manually removes circuit boards and capacitors but who does not extract the backlight lamps</p> <p>A facility that manually disassembles ICT equipment to remove the value materials and cables – no depollution is performed – they then send the remaining materials to a type 3 operator.</p>	<p>A facility that receives the whole or broken CRT tubes from a type 1 operator and who processes them in his plant to mechanically clean the glass before using as an aggregate product.</p> <p>A facility that performs the step 2 treatment of cooling and freezing equipment to capture the blowing agent from the PUR foam.</p> <p>A facility that collects / receives flat panel displays (televisions and monitors) and who mechanically processes them to remove the fluorescent and mercury.</p> <p>A facility that receives flat panel displays without plastics and other components but with backlight lamps and which process them manually to remove the backlight lamps (to send to another type 2 operator) or who mechanically processes the backlight lamps to remove the fluorescent and mercury</p>	<p>sorting/segregation of metals, plastics and other materials.</p> <p>De-pollution: removal of circuit boards and/or BFRs plastics.</p> <p>Toner cartridges: preparation for re-use or shredding and separation of fractions.</p> <p>De-pollution: removal of hazardous substances.</p> <p>CRT glass: advanced mechanical treatment of CRT glass (e.g. preparation of the glass for final use (e.g. mixing, advanced cleaning, size reduction, etc.))</p> <p>De-pollution: advanced mechanical removal of fluorescent coating from fractions (WEEELABEX Statement 2014_002); advanced sorting of panel and funnel glass.</p> <p>VFC/VHC liquified gasses: preparation steps before incineration or chemical decomposition (e.g. sorting/segregation; mixing; spill from one container to another one, etc.)</p> <p>De-pollution: avoid leakage and emissions of VFC/VHC gasses during this process.</p>	
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Preparing for re-use

Preparing for re-use process covers checking, cleaning, or repairing recovery 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: An operator may be a **combination of the above types** - For example:

- 1) A facility that collects / receives waste **temperature exchange equipment**, and who performs the step 1 (degassing) and step 2 (removal of the PU foam and capture of the blowing agent) processes all at the same site would be considered to be a Type 1 and Type 2 combined operator; or
- 2) A facility that collects / receives small appliances, and performs Type 1 manual de-pollution, then Type 2 mechanical treatment of de-polluted appliances, and then Type 3 advanced mechanical treatment of shredded fraction (e.g. separation of fractions) and/or

Type 3 treatment of plastics (e.g. sorting/segregation of metal impurities; sorting of different types of plastics like ABS, PS; granulation and sorting/segregation of BFRs plastics) processes all at the same site would be considered to be a Type 1 and Type 2 and Type 3 combined operator.

- 3) A facility that collects / receives WEEE and performs re-use activities and also performs the Type 1/Type 2/Type 3 treatment processes would be considered to be a Type 1 and Type 2 and Type 3 and Re-use combined operator.
- 4) ***A facility that receives printed circuit boards and WEEE components, and performs Type 3 advanced mechanical treatment and Type 4 final treatment would be considered to be a Type 3 and Type 4 combined operator.***

ANNEX III

An overview of the downstream documentation required according to the Clause 2.4:

The table below summarises all the information required on fractions for the purpose of downstream monitoring and establishment of recycling and recovery rates. The information recorded shall give a just account of day-to-day business and all outlets used. It will therefore be applicable to both batch and annual data.

Table - Summary of information requirements:

Information Required for Downstream Monitoring and Establishment of Recycling & Recovery rates:	Mass	Composition	Classification of final use of fractions	Final Treatment Technology(ies)	Information on First Acceptor	Information on Downstream Acceptor(s), including Final Acceptor
Fractions that have reached end-of-waste status	(ii)	(iii)		(ii)		
Metal fractions which contain less than 2 % of non-metal fractions	(iii)	(ii)	(ii)	(ii)		
Non-metal fractions containing less than 2 % of other materials	(iii)	(ii)	(ii)	(iii)	(i)	
Fractions which are classified as hazardous according to the European list of wastes and/or fractions containing materials and components covered by Annex F of EN 50625-1	(iii)	(ii)	(ii)	(iii)	(iii)	(i)
Final fractions being forwarded for energy recovery or disposal	(ii)		(ii)	(i)		(iii)
All other fractions	(iii)	(iii)	(ii)	(iii)	(iii)	
Key (i) Requirement specified in 4.4 of the standard EN 50625-1 (ii) Requirement specified in Annex C of the standard EN 50625-1 (iii) Requirement specified in both 4.4 and Annex C of the standard EN 50625-1						

Specifically, the documents/records shall contain following information for specific fractions:

Fractions which are classified as hazardous and/or capacitors, accumulators, batteries:

- data on the mass of the whole WEEE or output fraction,
- information on the first acceptor,
- information on the downstream acceptor(s) of the fraction,
- the final treatment technology,
- authorisation of the final acceptor(s).

Final fractions being forwarded for energy recovery or disposal:

- the final treatment technology,
- information on the downstream acceptor(s) of the fraction,
- composition of the fractions.

Fractions that have reached end-of-waste status:

- data on the mass of the output fraction,
- data on the composition of the fraction,
- intended technology.

Metal fractions which contain less than 2 % of non-metal fractions:

- data on the mass of the output fraction,
- the type of treatment technology (it may be estimated).

Non-metal fractions containing less than 2 % of other materials:

- data on the mass of the output fraction,
- information on the first acceptor,
- the final treatment technology (it may be declared by the first acceptor),
- classification of final use (recycling and recovery rate) of the fraction in the treatment technology (it may be estimated based on the final treatment technology).

All other fractions:

- the mass of the output fraction,
- information on the first acceptor,
- composition of the fractions (it may be declared by the first acceptor),
- final treatment technology (it may be declared by the first acceptor),
- classification of final use (recycling and recovery rate) of the fraction in the treatment technology (it may be estimated based on the final treatment technology).