



Certification standard

Flexible WC waste connector

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I. GENERAL INFORMATION

Based on the EN45550 series of standards, and consistent with EN45552 and EN45554, the LONGTIME® specific standards specify elements relating to the study of the robustness, reliability and repairability of the associated product family.

All qualitative, semi-quantitative and quantitative data are derived from a research and consultation process, as required by current standards, and take into account bibliographical references (scientific studies, regulations, standards, etc.) and all stakeholders involved.) and all stakeholders, i.e.: marketers (manufacturers, importers, distributors), their suppliers and/or subcontractors, product experts (repairers, installers, professional testers), spare parts professionals, reconditioners, consumers, consumer associations, environmental associations and any other stakeholder who can contribute, subject to added value and the availability of networks and information.

LONGTIME® vision

This project is part of a dynamic social movement, with the aim of moving ahead of regulations. This label is made by citizens, for citizens. It provides the certainty that the product bearing the label is manufactured for long-term use, as desired by the majority of consumers, and that it is economically repairable.

LONGTIME® is a simple, powerful and effective tool, designed to inform consumers who are concerned about the overall impact of their purchases, as well as those who wish to acquire a product with a fair longevity/price ratio. It also aims to put the spotlight on manufacturers keen to offer products with an optimized lifespan.

Label objectives

The aim is to encourage a different kind of consumption, with a view to producing differently. Virtually all citizens would like to see a transformation of the consumer society, with a real paradigm shift in technical and economic thinking, in order to consume better and more sustainably.

As studies « [Modélisation et évaluation environnementale de produits de consommation et biens d'équipement](#) » and « [Évaluation environnementale et économique de l'allongement de la durée d'usage de biens d'équipements électriques et électroniques à l'échelle d'un foyer](#) » from the Agence De l'Environnement et de la Maîtrise de l'Énergie Française (ADEME) show, the ecological interest is major: in the space of a few decades, we have multiplied our consumption of raw materials to over 60 billion tonnes a year.

The label helps to preserve the planet's resources by making better use of them and reducing waste.

Intuitively, then, buying a product with an optimized lifespan encourages the rational use of our planet's resources, reduces over-consumption and helps us to move away from disposable and wasteful products. It's not a question of looking for "immortal" products, but rather of fighting against the short lifespan of products.

Impact of the durability of flexible WC waste connectors

Within a functional unit defined as the evacuation of wastewater from a domestic sanitary appliance such as a toilet, for a household of 2.5 people over a period of 10 years of daily use, extending the service life of a flexible waste connector is a key lever for reducing its environmental impact.

The manufacturing phase accounts for the majority of the product's environmental impacts. A flexible waste connector is primarily made from polymers (PVC, polypropylene or elastomers). The production of these plastics, combined with the transformation processes (extrusion, moulding, assembly), generates greenhouse gas emissions (global warming potential – GWP), fossil energy consumption (cumulative energy demand – CED), and significant material flows (material input per service unit – MIPS) on an aggregated scale.

The usage phase is passive, with no direct environmental impact. However, premature failure may lead to early replacement and, in some cases, indirect material damage (leaks, excessive water consumption).

At end-of-life, these connectors are generally sent to incineration or landfill, with no material recovery. Their mixed-material composition, low unit volume, and the absence of a dedicated recycling stream significantly limit their recyclability.

Extending the service life therefore allows the fixed impacts of production to be spread over a longer period of use. Some models include metallic reinforcements (e.g. embedded spiral), which significantly improve longevity but complicate end-of-life treatment. Their inclusion should therefore be justified by a tangible gain in durability that outweighs the additional impact incurred.

In a context where neither repair nor reuse is realistic, structural reliability and robustness in use are the main levers for limiting the environmental footprint of these products.

Fields of application

The label applies to various product categories, provided they consist of an assembly of parts. LONGTIME® aims to cover household appliances, electronic devices, portable electrical tools, furniture, leisure equipment, and professional equipment. The range of products is therefore very broad, but excludes complex technological sectors (such as automotive and aerospace), textile products (except leather goods), foodstuffs, cosmetics, and chemical products.

Reference system organization

The criteria are broken down into 3 main families and grouped into 9 categories. The criteria are presented as follows:

Criteria category
Criteria subcategory

1. Criteria number and name

Each criterion is identified by a number and a name corresponding to its specific theme. In all, there are 38 criteria.

Time marker (Associated with each criterion Cf table below)

Criteria T0	These criteria must be met to qualify for certification after the initial audit (year N).
Criteria T1	These criteria must be met by at least 70% at the time of the audit. Corrective action will be taken to achieve 100% compliance by year N+1.

CROSS-CUTTING CRITERIA

Criterion applicable to all product categories

❖ Product Specific Requirement (PSR)

- Specific criterion whose scope is adapted to the product category of the standard.

Means of proof: Details of the means of proof required and/or relevant to the assessment of the criterion and its PSR.

Control system

Compliance with the standard's criteria is assessed by an independent, accredited inspection body.

Each criterion is assessed according to a compliant/non-compliant approach. Assessment of compliance with the criteria is carried out by an approved, independent inspection body, using auditors who must be qualified by the label manager and who have received initial training in the entire LONGTIME® programme in order to ensure efficient control.

For more details on the control system used in the labeling process, click here:

<https://www.longtimelabel.com/conditionslongtime>

Standards and regulations

The standards and regulations cited in the standard are based on the most recent versions and/or equivalents published in the Official Journal of the European Union.

General mode of proof

A series of documents and administrative procedures are useful for establishing proof of compliance with various criteria:

- Visual inspection by mandated third-party auditor during in-situ audit
- All European legislation applicable to the product family, in particular: technical specifications referred to in article 12, paragraph 5 of the [REGULATION \(UE\) 2017/1369](#) present in the European Commission's product conformity database (CE marking database), EMC, ROHS, WEEE, machine safety directives

- › Technical specifications for components, materials, coatings and internal or supplier processes
- › Quality certification and type 1 or 2 label (Iso 9001, Iso 14001)
- › Quality assurance
- › Test data
- › After-sales service data
- › Any documentation/software to support compliance, such as :
 - › Internal product data sheet
 - › Functional analysis tool
 - › Design study (function, materials, usage constraints)
 - › Performance and endurance testing
 - › Qualification phase and test
 - › Failure rate study
 - › Operating instructions
 - › Maintenance manual
- › Terms and conditions of sale

II. PRODUCT SCOPE DEFINITION

The "flexible discharge connection" standard focuses on sanitary plumbing components designed to ensure the gravity drainage of domestic wastewater, particularly in WC and washbasin installations. They allow the outlet of a sanitary appliance to be connected to the drainage system, particularly in configurations where rigid pipe alignment is difficult. The flexible, extendable structure makes them easy to install and adapt to any dimensional or corner constraints.

Product scope

- Flexible WC waste connectors (extendable flexible pipe type)

Outside product scope

- Flexible waste connectors for washbasins (extendable type)
- Rigid waste fittings (PVC, copper, galvanised steel, etc.)
- Flexible water supply hoses (e.g. tap hoses)
- Waste systems integrated into wall frames or devices combining flush mechanisms and connectors
- Technical hoses for industrial applications (pressure, temperature, chemical)
- Motorised or electrified systems (e.g. lifting pumps)
- Any type of duct, pipework or fitting used to transport fluids other than water

In the remainder of the standard, "**Flexible waste connectors for WCs**" is replaced with "**Waste connectors**".

III. NOMENCLATURE OF PARTS

This chapter details a typical nomenclature, representative of the target product group but not exhaustive. The various parts present in the BOM will then be prioritized by type of part.

- › **Connection body assembly**
 - › Flexible tube (bellows, spiral or smooth)
 - › Male or female outlet (conical or smooth)
 - › Threaded spigot (or glue-on spigot)
 - › Connecting sleeve (if present)
 - › Multi-diameter cutting zone
- › **Sealing and stabilisation of mechanical connections**
 - › Sealing mechanism (O-ring, lips, etc.)
 - › Holding mechanism (tightening nut, ring if present)

IV. PRIORITIZATION BY PARTY CATEGORY

Product housing

This covers all the parts used to protect the product's internal components from the outside world.

- Not identified according to the definition in the LONGTIME® reference framework

Functional parts

Parts related to the operation or use of the product without additional features.

- **Sealing and stabilisation of mechanical connections**
 - Holding mechanism (tightening nut, ring if present)

Priority parts

Parts that are functional but critical in the event of malfunction or breakdown (sometimes called critical parts).

- **Connection body assembly**
 - Flexible tube (bellows, spiral or smooth)
 - Male or female outlet (conical or smooth)
 - Threaded spigot (or glue-on spigot)
 - Connecting sleeve (if present)
 - Multi-diameter cutting zone
- **Sealing and stabilisation of mechanical connections**
 - Sealing mechanism (O-ring, lips, etc.)

Vulnerable parts

Parts exposed to a high rate of accidental user breakage.

- Not identified according to the definition in the LONGTIME® reference framework

Consumable or maintenance parts

Consumable parts are those parts that need to be replaced more or less frequently, depending on the pattern of deterioration over the product's lifetime. Maintenance parts require regular servicing to keep the product in optimum working order.

- Not identified according to the definition in the LONGTIME® reference framework

Aesthetic parts or accessories

Aesthetic parts that do not interfere with product operation. Elements that may be useful for the operation of an object or for adding additional functions without being part of it.

- Not identified according to the definition in the LONGTIME® reference framework

V. CLASS OF REPARABILITY CRITERIA

1. Class system

The criteria in the "Repairability" family use a system of classes to prioritize the level of requirement for each type of part.

These classes range from A to E.

Class A represents best practice in reparability. The lower classes (B, C, up to D or E) reflect a decreasing level of relevance of practices, but should always be considered in relation to market practices.

The definition of classes is the subject of a study for each repository, in order to identify best market practices.

2. Disassembly depth of parts

The dismantling step count starts when the safety conditions for the user are met. A step is an operation leading to the removal of a part or a tool change. Example:

- › Remove cover by sliding with hand = 1 step
- › Remove cover by unscrewing 4 Phillips screws = 1 step
- › Remove cover by unscrewing 2 Phillips and 2 Torx screws = 2 steps

VI. EXPOSURE TO EXOGENOUS FAILURES

Definition

An exogenous failure refers to a defect or problem in the manufactured product that occurs due to external factors or conditions beyond the control of the manufacturer or producer.

As opposed to an endogenous failure, which is linked to internal problems (design, manufacturing, quality), an exogenous failure is generally the result of unforeseeable external circumstances (e.g. extreme environmental conditions, transport accidents, inappropriate handling by the end-user, component failures from third-party suppliers, etc.).

Managing exogenous failures in product manufacturing may involve implementing quality control measures, rigorous testing, supply chain management, warranties and return policies to deal with problems that may arise due to these external factors.

Exogenous failure criteria

User risk:

Reflects the ability to respect conditions of use in the face of the weight of the constraints of use.

Associated levels:

- **Low:** the user scrupulously respects the product's rules of use, particularly for quality and safety reasons.
- **Medium:** the user generally respects the product's rules of use
- **High:** the user rarely respects the product's rules of use

Product handling:

Reflects the possibility of false handling, shocks, falls.

Associated levels :

- **Low:** Not handled
- **Medium:** Handling without moving or dismantling
- **High:** Handling with moving or dismantling

Weather exposure:

Refers to exposure to rain, hail, frost, wind, sand, lightning, dust, salt spray...

Associated levels:

- **Low:** No exposure (indoors)
- **Medium:** Indirect exposure (hold, station concourse)
- **High:** Direct exposure (outdoors)

Definition of the different phases

- **Installation:** Phase of installing the product, involving its mechanical connection to the existing plumbing. It is carried out by a professional or a private individual.

- **Use:** Period during which the fitting is in service, performing its evacuation function without direct human intervention.
- **Indirect exposure:** Passive but regular phase during which the product is exposed to its immediate environment with risks of accidental impact (broom, mop, Hoover), stored products (detergents, solvents, heavy, rigid, pointed or sharp objects) or even domestic animals.
- **Servicing / Maintenance:** One-off phase, triggered by the need for action to restore nominal drainage functions (partial or total blockage). It may involve handling the fitting or using unsuitable products or tools.

Phase	User risk	Product handling	Weather exposure	Overall risk
Installation	Medium	High	Low	Medium
Use	Low	Low	Low	Low
Indirect exposure	High	Medium	Low	Medium
Servicing / Maintenance	High	High	Low	High

Assessment of the overall risk of exogenous failure:

LOW/MEDIUM/HIGH

This product category is subject to a moderate risk of exogenous failures.

Flexible waste connectors contain neither electronics nor motorised components, and have few internal vulnerabilities. However, environmental factors or improper use may lead to premature degradation of the product.

The main risks identified at different stages of use are as follows:

Installation phase:

- Risks associated with incorrect assembly, poor adaptation to existing fittings or excessive bending. Incorrect installation can lead to leaks or permanent mechanical stress on the fitting.

Use phase:

- This phase presents few risks, as the product is passive. However, exposure to extreme temperatures (installation in unheated premises) can lead to premature ageing.

Indirect exposure phase:

- Frequent risks of accidental impact (particularly for WC fittings during cleaning) or prolonged contact with heavy objects or corrosive products (in the sink unit for washbasins). These stresses can alter the structure or cause micro-cracks.

Maintenance phase :

- › One-off interventions, often in response to a blockage. The use of unsuitable chemical products or aggressive tools (metal ferret, excessive pressure) represents a high risk of deterioration of the fitting, particularly in the joints or folds.

VII. LABEL CRITERIA

Reliability
Conception

1. Stress resistance

T0 Criteria

The producer identifies the functions of the product and its components, as well as the associated critical use constraints. He demonstrates sustainable design choices, optimized by reliability and/or repairability strategies.

Mode of proof : Supplemented by a set of evidence appropriate to the sub-criteria including the application of testing standards relevant to the product (list of modes of evidence representative, but not exhaustive. It is not required to present all of this evidence to meet the criteria; it is provided for guidance). :

- *In-warranty and out-of-warranty failure rates: The product must have failure rates below the industry average.*
- *Accelerated life testing: Given the limited duration of the test, scientific and robust projection calculations (acceleration factor) are used to extrapolate the results to the maximum total life of the product, demonstrating stress resistance above the industry average.*
- *The methodologies used may be based on general standards, mandatory standards linked to safety directives that include elements of stress resistance in use, or voluntary standards.*
 - *EN 45552 : General method for assessing the durability of energy-related products*
 - *EN 60721 : Classification of environmental conditions*
 - *IEC 60605: Reliability testing of equipment*
 - *IEC 61123: Reliability testing - Compliance test plans for pass rate*
 - *EN 61124: Reliability testing - Compliance test plans for constant failure rate and constant failure intensity*
 - *EN 61649: Weibull analysis*
 - *EN 62506 : Accelerated product test methods*
- *Instruments used for testing: all instruments used for testing must be calibrated and a valid calibration report must be available. Calibration must be carried out prior to testing. Calibrations must be traceable to national standards.*

- ❖ The elastomer gaskets used to seal the drain connection meet the requirements of standards EN 681-1 & 681-2.

General mode of proof

❖ Resistance to mechanical stress

- Tensile strength
 - The product withstands a tensile force of at least 450N without tearing or breaking the sheath, and retains its sealing properties.

- The flexible sheath material has a minimum thickness of 0.2 mm and must be reinforced by a moulded reinforcement with a cross-section greater than :
 - 1 mm for metallic materials
 - 3 mm for synthetic materials

Mode of proof: A vertical tensile force equivalent to 350N is applied to the end of the product for one minute at room temperature (20°).

- Resistance of the flexible membrane to localised perforation, without rupture, perforation or crack initiation

Mode of proof: Conclusive test report of puncture resistance using a 3 × 0.20 mm flat tip indenter, tip Ra ≤ 0.2 µm, moved at a speed of 100 (± 10) mm/min⁻¹ under an applied load of 25 N and held for 5 s.

- Drop and impact resistance of materials
 - Selection of materials demonstrating mechanical properties of resistance to falls and impacts, in particular with a protection index of IK06 in accordance with standard IEC 62262 and/or
 - The product does not show cracks or permanent deformation after a series of 80 cm drops onto a concrete surface on each side.

Mode of proof: Assessed by the inspection body appointed during the on-site audit. Technical characteristics of materials, impact, drop and puncture resistance tests in accordance with IEC 60068-2-75.

- Wear resistance of materials
 - The product withstands a series of 200,000 flush discharge cycles and retains its nominal dimensional and sealing characteristics.
 - Resistance to repeated bending and extension, with preservation of functional and dimensional integrity after 25 full extension/retraction cycles.

Mode of proof:

- *Wear test conducted under the flush testing conditions defined by standard EN 14055.*
- *Extension/retraction test carried out according to the maximum range specified by the manufacturer, at a rate of 3 cycles per minute at ambient temperature. The test may be performed in accordance with the mechanical endurance requirements for flexible connectors as defined in ISO 3994 or equivalent. No cracks, tears, loss of air or water tightness, or permanent deformation shall be observed at the end of the test.*

❖ **Resistance to sealing stress**

- Resistance to air leakage
 - The product demonstrates resistance to air leakage thanks to pressure-resistant materials and assemblies, whether in axial alignment or under axial deflection.

Mode of proof:

- *Conclusive test report in accordance with specification DT076-06 §4.3.2 or BS 5627 §9.2 and BS 5627 §9.3 under 5° axial deflection with product constraint.*

- *Conclusive test report in accordance with DIN 1389 §6.5 or other applicable or compatible standards.*

- Resistance to water leaks
 - Sealing systems compliant with the performance requirements of technical document DT076-06 §4.3.1 in axial position or under axial deflection.

Mode of proof: DT076-06 §4.1 and DIN 1389 §5.4 – Hydraulic test under static pressure

❖ **Resistance to corrosion and chemicals**

- Resistance to sanitary cleaning and intervention products
 - The product uses only materials that are resistant to wastewater and to chemicals commonly used in sanitary applications (sodium hypochlorite, acid, caustic soda).
 - After exposure, the product shows no visual defects or deformation and retains its sealing properties
 - The core of the reinforcement exhibits high corrosion resistance through the use of the following materials:
 - Uncoated stainless steel core
 - Synthetic material core
 - Metal core with synthetic sheath

Mode of proof:

- *Technical characteristics of materials must be compatible only with the requirements of standards DIN 1986-4, BS 5627, DIN 1389, or demonstrated under the test conditions of ISO 175.*
- *Conclusive test report in accordance with specification DT076-06 or other compatible standards.*
- *Evaluated by the designated control body during the in-situ audit.*

Production

2. Production line

T0 Criteria

The manufacturer has the processes in place to control and maintain consistently high manufacturing and assembly quality during the production phase.

- ❖ The main site(s) involved in the production of the product is/are certified to an international quality management standard.
 - Site of the manufacturer involved in the production of flexible membranes
 - Site of the manufacturer involved in the production of sealing gaskets

Mode of proof: Annual quality control of the production site and its production line by a third party, at minimum. Demonstration of compliance with ISO 9001 principles through verification of quality procedures or by equivalence with other certifications. For companies with more than 250 employees and for sub-systems identified in the PSR (in the case of subcontracting), ISO 9001 certification must be issued by an accredited third-party control body.

3. Logistics

T0 Criteria

The manufacturer reduces risks to the reliability of components and assemblies through efficient quality processes for managing supply, packaging, storage, handling and transport conditions.

- ❖ Inventory control and management
 - The condition of products in stock and of materials intended for transformation is subject to regular monitoring.
 - Storage conditions for items and materials are periodically measured and controlled, with clearly defined specifications and control limits.
- ❖ Handling and transport procedures
 - Specific handling procedures are defined and monitored to prevent any damage to the product during handling and transport phases.
 - The conditions for handling, storage, packaging and preservation are codified.
- ❖ Product traceability and protection
 - Comprehensive traceability makes it possible to identify and understand the history of the product, including its components and the documentation associated with its lifecycle.
 - Genuine conformity checks on finished products are carried out before storage, and are formally described and validated by an independent authority.

General mode of proof

4. Supply chain

T0 Criteria

Within its value chain, the producer details the performance of its quality management linked to the reliability of its suppliers' goods or services in direct relation to its manufacturing phases.

- ❖ Particular attention will be paid to the following elements:
 - Site(s) of the supplier(s) involved in the production of flexible membranes
 - Site(s) of the supplier(s) involved in the production of sealing gaskets

Mode of proof: For companies with more than 250 employees and for subsystems identified in PSR (in the case of subcontracting), ISO9001 certification is in place, issued by an accredited 3rd party. If not, annual inspection demonstrating compliance with ISO 9001 principles by verification of quality procedures or equivalence with other certifications is needed.

Quality control

5. Reliability plan

T0 Criteria

The producer provides a history of product versions and identifies the changes implemented to improve product durability.

- ❖ The manufacturer is able to demonstrate the following points:
 - Identification and monitoring of failures by the technical departments of the manufacturer or its subsidiaries, with supporting statistics
 - Documented reporting of failures according to structured and systematic processes to central departments (Technical/Quality/R&D)
 - Handling and processing of reports by R&D departments, with concrete modifications made to products to constantly improve their reliability and durability.
 - Tracking of modifications made, and for major modifications involving the product's primary function : statistical measurement of their impact to attest to the effectiveness of the improvements made.

Mode of proof: demonstration of quality management to the appointed inspection body during the on-site audit.

6. Breakthrough technology

T0 Criteria

The manufacturer provides information on the share of breakthrough technology embodied in the product, and identifies the functions associated with it. He demonstrates the reliability of this technology, all the more so if it concerns a primary function. This applies to both hardware and software innovations.

General mode of proof

7. Breakdown rate

T1 Criteria

The producer tracks actual failure rates and/or indicators by product part in order to monitor product reliability at least until the last unit of the model concerned has been put on the market.

- ❖ Particular attention will be paid to failures in the following parts:
 - Loss of tightness
 - Heterogeneous membrane
 - Poorly sized seal

General mode of proof

User information

8. Product identification

T0 Criteria

The producer uses a method that allows unequivocal identification of the product and its version by interested parties in order to maximize maintenance and failure management processes.

9. Completeness of usage information

T0 Criteria

The manufacturer publishes a [manual](#) detailing the product's use and care instructions, and provides the user with a maintenance plan. This information, which is also available online, must be exhaustive and relevant in order to reduce exogenous failure rates and encourage responsible use.

- ❖ The manufacturer clearly informs the user how to properly maintain his product, providing the following information:
 - Unpacking precautions and installation instructions
 - Recommendations for tightening if necessary, and compatibility of sealing and bonding products
 - Recommendations in the event of mechanical or chemical intervention on the pipes
 - Recommendations in the event of chemical intervention on pipes

10. Usage information format

T1 Criteria

The manufacturer publishes a clear, simple and accessible user and maintenance [manual](#) (font size, vocabulary, language and print quality), so that it can be easily understood by end-users.

- ❖ The maintenance manual must be accessible to everyone, free of charge, and must set out the rules for use, maintenance, hygiene and safety

11. Prolonged immobilization

T0 Criteria

The manufacturer identifies the risks of failure associated with prolonged product downtime. He informs the end user of the conditions of use necessary to prevent these risks.

- ❖ Non Applicable

Repairability
Technical repairability

12. Disassembly of parts

T0 Criteria

The disassembly depth is adapted to the category of product parts and the disassembly time is consistent with the type of profile normally capable of carrying out the process.

- Class A: ≤ 3 steps and less than 5 minutes
- Class B: between 3 and 5 steps and less than 10 minutes
- Class C: between 5 and x7 steps and less than 15 minutes
- Class D: between 7 and 10 steps and less than 20 minutes
- Class E : > 10 steps

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

General mode of proof

13. Part fasteners and connectors

T0 Criteria

Fasteners and connectors have removability and reusability characteristics appropriate to the category of product parts. A system is in place for locating these non-visible fasteners.

- Class A : Removable and reusable
- Class B : Removable but non reusable
- Class C : Neither removable nor reusable

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	B
Vulnerable	Non applicable
Consumable	Non applicable

General mode of proof

14. Tools

T0 Criteria

The tools required for repair and/or disassembly must be suitable for the category of product parts.

- Class A: repairs feasible without the use of tools, with tools supplied or with [General-purpose tools](#)
- Class B: repairs feasible with tools specific to the product family

- Class C: repairs feasible with other commercially available tools
- Class D: repairs feasible with proprietary tools
- Class E: repair not feasible with any existing tool

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

- ❖ Tolerance allowed for proprietary tools supplied or loaned on request, at no extra cost, with spare part.

General mode of proof

15. Working environment

T0 Criteria

Product-specific repair scenarios are carried out in a working environment adapted to the product part category.

- Class A: use environment
- Class B: workshop environment
- Class C: production environment

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

General mode of proof

16. Competence level

T1 Criteria

The level of technical skill required to carry out a repair is consistent with the category of parties involved.

- Class A: Novice skills
- Class B: Generalist skills
- Class C: Expert skills
- Class D: Manufacturer or approved expert
- Class E: Impossible to achieve with existing skills

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

General mode of proof

17. Spare parts interface

T0 Criteria

The various parts of the product and their connection interfaces are standardized to meet the reparability expectations of the product family.

- Class A: Standard part with standard interface
- Class B: Standard or proprietary part with standard interface
- Class C: Proprietary part with non-standard interface

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	B
Vulnerable	Non applicable
Consumable	Non applicable

- ❖ [Replacement parts](#) need to be adaptable or compatible spare parts, second-hand parts, reconditioned parts, reused parts or parts from the circular economy, without preventing the product from functioning properly once the part has been integrated into it.

General mode of proof

Organizational reparability

18. Spare parts availability time

T0 Criteria

The availability time for spare parts is at least equal to the expected service life of the product category and its individual parts. The availability period is measured from the time the last unit of the model concerned is put on the market.

- Class A: Long-term accessibility - minimum 7 years
- Class B: Medium-term accessibility - between 3 and 7 years
- Class C: Short-term accessibility - maximum 3 years
- Class D: No information on duration of accessibility

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

- ❖ In the event that a replacement part is not available from the manufacturer or his distribution network, the manufacturer shall clearly provide the user, via the documentation made available to him, with the information and/or characteristics of the parts enabling him to use instead an adaptable or compatible replacement part available on the market for a period at least equal to that specified in the above table.

General mode of proof

19. Accessibility of spare parts to target audiences

T1 Criteria

The producer ensures the availability of spare parts for the target groups normally suited to the category of parts..

- Class A: Accessible to end users
- Class B: Accessible to independent repair service providers
- Class C: Accessible to service providers approved by the manufacturer
- Class D: Accessible only to the manufacturer

Types of parts	Class
Product housing	Non applicable
Functional	Non applicable
Priority	A
Vulnerable	Non applicable
Consumable	Non applicable

- ❖ The spare parts and the procedure for ordering them shall be publicly available on the free access website of the manufacturer, until the end of the period of availability of these spare parts.

General mode of proof

20. Terms and conditions for the sale of spare parts

T1 Criteria

The manufacturer details the terms of sale of its spare parts. They reflect the product nomenclature and are not sold as a group, unless justified by coherent and verifiable design, calibration and/or economic reasons.

- ❖ Particular attention will be paid to items in the following categories:
 - Consumable parts

General mode of proof

21. Spare parts prices

T1 Criteria

The value of a spare part may not exceed a maximum percentage of the recommended selling price excluding VAT. A tolerance is allowed for parts whose PRU exceeds the specified percentage.

- ❖ Maximum percentage of the [price](#) of one of the parts in relation to the price of the product : 20%..

General mode of proof

22. Shipping costs for spare parts

T1 Criteria

The producer delivers the spare parts at the actual cost of shipping and preparation, or offers alternative solutions that reduce the cost of receiving the parts.

General mode of proof

23. Spare parts delivery times

T1 Criteria

The manufacturer demonstrates its ability to supply spare parts to interested parties within 5 working days.

General mode of proof

24. Documentation of failure scenarios

T1 Criteria

The manufacturer makes available relevant information and instructions for resolving failure scenarios and/or implementing the maintenance plan.

These are also adapted to the product category and target audience groups. The minimum duration of information availability is specified below.

- Class A = Accessible to all without restriction
- Class B = Accessible to independent repair service providers
- Class C = Accessible to repair service providers authorised by the manufacturer
- Class D = Accessible to the manufacturer only

Documentation	Class	Documentation availability time
Dismantling diagrams, reassembly if necessary or exploded views	A	10 years

Documentation	Class	Documentation availability time
Connection diagrams	A	10 years
A technical manual with instructions for resolving failure scenarios	A	10 years
A list of the repair and test equipment required	A	10 years
Technical bulletins	B	10 years
Instructions on how to contact customer service and specific associated contacts	A	10 years
Spare parts price information	A	10 years

General mode of proof

25. Support for fault diagnosis

T0 Criteria

The producer communicates information and/or deploys diagnostic support mechanisms to help identify failure scenarios.

- Class A = Intuitive interface
- Class B = Coded interface with public reference table
- Class C = publicly accessible hardware/software interface
- Class D = Proprietary interface
- Class E = Impossible, whatever the type of interface

❖ Class A :

Diagnostic support system with intuitive or coded interface and public access to the reference table.

OR

The sales website of the product's manufacturer or distribution partners features a fault-tree diagnostic interface.

General mode of proof

Scalability

26. Reset settings and passwords

T0 Criteria

In the event of repair or transfer to a third party, the product's user data management processes enable secure, high-performance reuse.

- Class A = Integrated reset
- Class B = External reset
- Class C = Service reset
- Class D = No reset

❖ Non applicable

General mode of proof

27. Software

T0 Criteria

The manufacturer ensures that the original performance of its product is maintained when updating the operating system and/or firmware, and differentiates between evolutionary and [corrective updates](#). Users are informed of the consequences of updates, and their consent is required.

❖ Non applicable

General mode of proof

Quality of after-sales service

28. Internal failure resolution policy

T1 Criteria

In the event of product failure, the manufacturer pursues a policy of repair or reconditioning rather than replacement, unless repair is more expensive than replacement, taking into account the wishes of users.

General mode of proof

29. Service contact

T1 Criteria

The producer demonstrates that the opening of an after-sales service file does not exceed 2 working days and that the average time taken to resolve the file encourages repairs.

General mode of proof

30. Return services

T0 Criteria

The manufacturer provides end-users with return services adapted to the product category and consistent with its distribution network, regardless of the status of warranties.

- Class A = Complete return options
- Class B = Basic return options
- Class C = No return option

❖ Class B: Basic return service with minimum return conditions by post or distribution/collection point

General mode of proof

31. Return condition

T0 Criteria

The return of the original packaging cannot be demanded for the repair of the product, as long as it is packaged and protected as much as it could have been at the time of purchase.

General mode of proof

32. Useful product

T1 Criteria

In its network, and for product categories considered "highly useful", the manufacturer minimizes the repair process time until the product is returned to the end-user.

❖ Non Applicable

General mode of proof

33. Warranty time

T0 Criteria

The warranty period with presumed anteriority of defect may not be less than 24 months.

❖ Minimum 5-year warranty.

General mode of proof

34. Warranty exclusions

T0 Criteria

In its general warranty conditions, the manufacturer does not introduce any abusive exclusion(s) with regard to the normal use of the product.

Examples of abusive exclusions identified:

- ❖ Surface micro-scratches
- ❖ Dust marks

General mode of proof

Lifecycle
Sustainability

By having a type 1 ecolabel certification for its product, the manufacturer automatically validates compliance with all the Life cycle category criteria.

Mode of proof: Type 1 certification to ISO 14024 from the list below

- Blue Angel
- Eco-rating
- Ecolabel Européen

35. Health, safety and environmental protection

T0 Criteria

With regard to human health, the safety of people and installations, and environmental protection, the manufacturer proves that it is taking action at a level that complies at least with the requirements of European directives 2011/65/EU and (EC) No 1907/2006 on the restriction of the use of certain hazardous substances in equipment, and/or action to preserve the ecosystems that are most affected.

Mode of proof: For products distributed in geographical areas potentially covered by regulatory prerogatives establishing requirements similar to the European market in terms of limiting the use of certain hazardous substances in EEE, proof of compliance with these regulatory requirements will be used as a method of proof in compliance with the RSPs of this criterion if necessary.

General mode of proof

- ❖ Pour les grandes entreprises (effectif > 5000 personnes), le(s) site(s) principal(aux) impliqué(s) dans la production du produit possède(nt) une certification liée à une norme internationale de gestion environnementale.

Mode of proof: ISO 14001 certification issued by an accredited third-party inspection body.

- ❖ In order to reduce the impact of the manufacturing phase, the manufacturer deploys at least two of the following features:
 - The site responsible for the production phase of the flexible membrane has third-party quality certification linked to environmental management, such as ISO 14001.

Mode of proof: Third-party quality certification

- Rigid rings are made from at least 50% recycled materials.

Mode of proof: Proof of origin of the materials used to make up the parts.

- Fairly extracted material and/or recycled material: The characteristics of the product and the manufacturer's practices make it possible to obtain a minimum class D among the classes listed below:
 - Class A: minimum 40% of weight
 - Class B: 35% minimum weight
 - Class C: 30% minimum weight
 - Class D: 25% minimum weight
 - Class E: 20% minimum weight
 - Class F: <20% of minimum weight

Mode of proof: Proof of origin of the materials used to make up the parts.

- At least 50% of the product's components are identical in design to other products from the same manufacturer and to products in the same performance and generation category.

Mode of proof: proof of the origin of the materials used to manufacture the product

- ❖ Life Cycle Assessment (LCA) : The characteristics of the product and the manufacturer's practices result in a minimum **class D** among the classes listed below.

Requirements	Class					
	A	B	C	D	E	F
The product's LCA is critically reviewed by a third party. The review report must include at least : <ul style="list-style-type: none"> - The number of years of experience in the field of LCA/PCF - Number of carbon footprints reviewed - Number of carbon footprints completed 	x					
The product LCA is based on the specific product mode.	x	x				
The product LCA is based on the product's family of models, but not the specific product model			x	x	x	
The full LCA report including all assumptions is publicly available and based at least partially based on real material data (Full Material Declarations)	x	x	x			
Concrete actions are taken to reduce the impact of the most impacting phase(s) of the life cycle	x	x	x	x		

Mode of proof: LCA report produced by a qualified consultancy. Public commitment to carry out an LCA corresponding to the Class indicated below, within 12 months of the LONGTIME audit.

36. Energy and/or environmental performance

T0 Criteria

To reduce the impact of energy consumption or pollution emissions, the manufacturer demonstrates the environmental and/or energy performance of its products.

It proves that it is taking action at a level that complies, as a minimum, with the prerogatives of European directives and/or regulations :

- (EU) 2009/125/EC (including its implementing measures) on the eco-design of energy-related products
- (EU) 2017/1369 (including delegated regulations) on the energy labeling of products if the product claiming the LONGTIME® label is concerned
- ESPR - The Ecodesign for Sustainable Products Regulation (EU) 2024/1781

Mode of proof: for products distributed in geographical areas potentially covered by regulatory prerogatives establishing requirements for energy efficiency, eco-design and energy labelling similar to the European market, proof of compliance with these regulatory requirements will be used as a method of proof in compliance with the RSPs of this criterion if necessary.

General mode of proof

- ❖ The variety of materials used for plastic components serving the same function is limited to a single material.

- ❖ Components made from the same type of plastic are coloured uniformly or in compatible shades.
- ❖ The coating of plastic components is restricted to the minimum level required. Galvanised coatings are not permitted.

Mode of proof: Eco-design measures are assessed by the designated control body during the audit and supplemented by the documentation and technical specifications referred to in Article 12(5) of Regulation (EU) 2017/1369, as included in the European Commission database relating to product compliance.

- ❖ Each final assembly plant manufacturing the product and with an annual energy consumption exceeding 1 GWh is ISO 50001 certified

Ou

The company has a greenhouse gas (GHG) reduction strategy in place that targets at least a 35% reduction in absolute scope 1 & 2 emissions by 2030, and implements concrete measures related to energy efficiency, energy sufficiency, and the use of renewable energy sources.

Mode of proof:

- ISO 50001 certification by a third party
- Bilan GES score 1,2,3, compliant with a recognised standard (e.g. Bilan Carbone®, GHG Protocol, ISO 14064, BEGES regulatory) less than 3 years old.

37. Equipment end-of-life management

T0 Criteria

As part of the management of end-of-life equipment, the manufacturer proves that it deploys actions for the collection, recovery and effective treatment of used products according to a level of requirement that complies at least with the prerogatives of European directives 2012/19/EU of July 4, 2012 on waste prevention and treatment depending on the target product group.

- ❖ Identification des matériaux des pièces du produit qui sont principalement en plastique et pèsent plus de 5 grammes.

Mode of proof: compliance with ISO 11469 and ISO 1043-1-2-3-4 standards.

- ❖ Extended Producer Responsibility (EPR) and reuse, refurbishment and/or recycling of parts and products : the characteristics of the product and the manufacturer's practices result in a minimum **class B** among the classes listed below.

Class A	For the main markets (> 10% of sales of certified product) where certified products are sold, the brand owner provides a take back scheme which demonstrably promotes and puts into practice reuse and/or refurbishment of parts and products, as opposed to recycling only, while being legally compliant with applicable EPR regulations
Class B	For all markets where certified products are sold and where EPR regulations apply, the brand owner participates in accredited EPR schemes or provides a reuse/recycling scheme which fulfills the requirements to be exempted from participation in EPR

	schemes. In all markets without EPR regulations, the brand owner provides voluntarily a take back possibility involving accredited reuse/recycling facilities
Class C	For all markets where certified products are sold and where EPR regulations apply, the manufacturer participates in accredited EPR schemes or operates a reuse/recycling scheme which fulfills the requirements to be exempted from participation in EPR schemes (legal compliance)

Mode of proof: In geographic distribution areas covered by regulatory prerogatives establishing product collection and recycling requirements, proof of compliance with these regulatory requirements will be used as a method of proof in compliance with the RSPs of this criterion if necessary. Use of EPR and/or reuse/recycling facilities certified to internationally accredited standards (R2, e-Stewards, EN50625 or equivalent)

38. Packaging management

T1 Criteria

As part of the fight against waste production, the manufacturer is making efforts to eliminate the proportion of non-recyclable plastic waste from its packaging through :

- ❖ At least 95% of the weight of packaging waste consists of recycled and/or recyclable and/or reusable materials
- ❖ Manual separability of non-reusable and non-valorizable packaging components weighing more than 25 grams in a single component
- ❖ Product packaging must not contain lead (Pb), cadmium (Cd), mercury (Hg) or hexavalent chromium (Cr6).
- ❖ Plastic packaging material must not contain halogens bound to organic substances

Mode of proof: Composition and characterization of packaging.

VIII. TERMS, DEFINITIONS, CLARIFICATIONS

Depending on the sector, specific definitions for different product categories (parts, functions, etc.) may be added to the recurring definitions below.

Actual failure

Failure that is effectively linked to a malfunction of the product and not to an exogenous problem (e.g. unpowered socket, incorrectly connected power cable, poorly locked lid, etc.).

Adaptable or compatible spare part

These are parts that can be adapted to several models and brands of the same product, more or less faithful copies of original parts that are not manufactured to the original manufacturer's specifications and are not sold in the original manufacturers' packaging.

After-sales service file

An After Sales Service File is a record documenting the handling of a customer request or issue following the purchase of a product. It includes all relevant information about the customer interaction, the issue reported, steps taken to resolve it, and any communication between the customer and the company. In cases where customer support teams manage the initial contact, the file may be passed on to the after-sales service team for further handling when needed, ensuring that all necessary actions are taken to resolve the issue.

The response time for handling such requests does not exceed an average of duration described in [criteria](#) 29. There may be flexibility for periods of high demand (e.g., during product launches or holidays) that are justifiable in relation to market practices.

An automated email confirming receipt of the request is not considered sufficient for compliance to [criteria](#) 29.

AMDEC / FMEA

Tools for Failure Mode and Effect Analysis / Analyse des Modes de Défaillance, de leurs Effets et de leur Criticité.

Breakthrough technology

A technology that introduces a major advance over existing solutions or practices. It is distinguished by its significant impact on performance, functionality or efficiency, and can change standards or redefine an industry. Unlike incremental improvements, a breakthrough technology often disrupts the market or the field of application, offering substantial benefits or opening up new possibilities. This can apply to both hardware and software innovations.

Circular economy part (CEP)

PIEC are second-hand goods within the meaning of art. L. 321-1 of the French Commercial Code, and cannot be universally defined, but are defined on a case-by-case, sector-by-sector basis.

For the time being, CEIPs are defined in consumer law for the following sectors: automobiles, household appliances, electronics, motorized DIY and gardening tools, sports and leisure equipment and motorized personal transport devices.

For household electrical and electronic equipment, art. R. 224-30 code de la consommation states: "For the application of article L. 224-109, parts from the circular economy are understood to be components and elements resulting from an operation of preparation with a view to their reuse" where article 541.1.1 defines "preparation with a view to reuse" as any operation of control, cleaning or repair with a view to recovery by which substances, materials or products that have become waste are prepared in such a way as to be reused without any further operation.

Competence level

Solving a failure scenario may require skills such as the ability to identify and locate the failure, access the affected area in the product, handle the appropriate tools, and manage any risks associated with the product, the environment and the operator. Depending on the level of technical skill required to carry out the repair, several levels are defined:

- **Novice:** When no specific repair experience or qualifications are required to carry out the failure scenario resolution process.
- **Generalist:** When the resolution of a scenario is not achievable by a novice, but can be achieved by a person with general knowledge of basic repair techniques and necessary safety measures
- **Expert:** When a scenario cannot be solved by a novice or generalist, but can be solved by people with specific expertise or experience related to the product group in question.
- **Manufacturer:** When the resolution of a scenario is not feasible by a novice, generalist or expert, but can be performed by the manufacturer or a person specifically trained and accredited by the manufacturer.
- **Unfeasible:** When a scenario cannot be solved by any of the defined profiles.

Compostable packaging

Container designed with materials capable of decomposing naturally under the action of micro-organisms present in the composter to become a natural or organic component of the substrate.

Corrective update :

A corrective software update is a modification or set of modifications made to a software or operating system or functionality in order to correct defects, errors or malfunctions identified after it has been put into service. These corrections aim to restore or improve the correct operation of the product or system without introducing major new functionalities. It may include corrections relating to :

- Technical errors (bugs) in software
- Design errors or user biases
- Security flaws identified after deployment

This type of update is often distinct from an evolutionary update (which adds functionality) or a preventive update (which aims to anticipate future problems).

Criticality

The criticality of a failure refers to the importance or impact of this failure on the correct operation of a product. It is assessed on the basis of the severity of the consequences the failure could have, particularly in terms of safety/costs, and the frequency of occurrence.

Data management process

Refers to the set of practices and procedures put in place by an organization to collect, store, process, protect and manage the personal information of individuals using their products.

Disassembly depth

Corresponds to the sum of the steps required to access each part individually and to separate it from the equipment, with a view to its replacement.

Electrodomestic

Product powered by electrical energy and intended for domestic use only.

EOS

An acronym for Electrical Overstress, meaning an undesirable state of electrical overload that could lead to product damage or failure.

Expected service life

Period during which the user expects the product to perform as intended. This expected lifetime is defined on the basis of scientific literature and/or consumer surveys. When the data is not available or is insufficiently robust, the expected lifetime is defined by the author of the standard, based on the expertise of the LONGTIME® teams and its network.

Experienced tools

Tools that require skill to use and whose cost can be a barrier (torque wrench, soldering iron, etc.).

External source parts

Parts external to the manufacturer's production facility, sourced from an identified supplier.

Fair Mined Material

Fair Mined Material refers to raw materials used in the device for which the manufacturer can credibly demonstrate active efforts to improve at least one of the following aspects during the extraction stage: working conditions, workers' income, or environmental protection. This means that the manufacturer is committed to ethical practices by ensuring better labor conditions, fair compensation for workers, and/or implementing measures to minimize environmental impact in the sourcing of these materials.

Full Material Declarations

Full Material Declarations (FMD) in the context of a Product Life Cycle Assessment (LCA) refer to comprehensive and detailed disclosures of all materials and substances used in a product. This includes a complete list of every material, chemical, and component that makes up the product, along with relevant information about their quantities, sources, and potential environmental or health impacts.

General-purpose tools

Common, general-purpose tools available to the general public in standard distribution and as specified in the EN 45554 tool list: screwdrivers (slotted head, cross-head, 6-lobe internal screws), wrenches (hexagon socket, combination wrenches), pliers (universal, half-round nose, diagonal cutting, multi-socket, vice, for stripping and crimping terminals), pry bar, tweezers, steel-headed hammer, universal knife (cutting pliers with retractable blade), multimeter, voltage tester, soldering iron, glue gun, magnifying glass.

High-utility product

A product that is used very frequently and which, in the event of failure, causes a significant disruption to day-to-day management: refrigerator, washing machine, boiler/water heater, telephone, computer, hob, etc.

HS

Out of order; corresponds to the end of the functional state.

IOT

Internet of Things; this function refers to the ability to connect a product to the Internet for additional remote control and/or regulation functions.

Manual

Comprehensive guide or instructional resource that provides detailed information on how to use, operate, maintain, or assemble a product, system, or process. It can take various forms, including printed booklets, digital documents (such as PDFs), illustrated tutorials, or video instructions. Its purpose is to offer clear, step-by-step guidance to users, ensuring they can correctly and efficiently engage with the product or service it accompanies.

No use

Corresponds to a state of non-operation of the device.

Non-recyclable packaging

Packaging that cannot be effectively recovered, recycled or reused after use.

Non-recoverable packaging

Refers to a type of packaging that cannot be effectively recovered, recycled or reused after use.

O.S

Operating System is a set of programs that direct the use of a computer's resources by application software.

Permanent assembly

This is an assembly of components forming a single part or component of a product, which cannot be disassembled without destroying or altering its intended use.

To remove the connection between two assemblies or parts, it is necessary to deform, degrade or destroy at least one of the parts forming the assembly. Examples: welding, crimping, clinching, stamping, gluing and adhesives.

Primary data or information

Information directly measured or collected by the professional in one or more installations representative of the professional's activities.

Product/part unit cost price (PRU)

Understood as the sum of the price of the parts making up a product/of the components of a part.

Professional tools

Tools requiring special knowledge or conditions of use, and whose acquisition cost represents an investment.

Professional user

Means any natural or legal person, to whom a product has been made available for use in the course of their industrial or professional activities

Proprietary tool

A specific tool, not commercially available, belonging exclusively to one party or company, by virtue of which its use by another party (end user, customer, repairer) involves copyright, a license and/or a cost.

PSR

"Product Specific Requirement, corresponds to the criterion specifications applicable to the types of equipment specified within the scope of the standard.

Reconditioned part

A second-hand product or spare part, within the meaning of Article L. 321-1 of the French Commercial Code, may be qualified as a "reconditioned product" or be accompanied by the term "reconditioned", provided the following conditions are met:

- The product or spare part has undergone tests on all its functionalities in order to establish that it complies with legal safety requirements and the use to which the consumer can legitimately expect it to be put.
- If necessary, the product or spare part has undergone one or more operations to restore its functionality. This intervention includes the deletion of all data recorded or stored in connection with a previous use or a previous user, before the product or part changes ownership."

Recyclable material or product

Characteristic of a product, packaging or associated component that can be taken from the waste stream by available processes and programs, and which can be collected, processed and put back into use as raw materials or products.(based on ISO 14021).

Recycled material or product

Product or material that is manufactured entirely or partially from recovered or reused materials, diverted from the waste stream after their initial use. These materials have undergone a transformation process, such as mechanical, chemical, or other forms of recycling, to be reintroduced into the production chain for creating new products or materials.

Recycling excludes the direct reuse of products or components without prior transformation and focuses on reducing the use of new raw materials.

Regular maintenance

Maintenance recommended by the manufacturer to keep the product in optimum working order.

Removable fastener

Corresponds to an original fastening system which can be removed during disassembly without damaging the product, but which cannot be reused during reassembly (e.g. plastic clamp, rivet).

Replacement or spare part

A replacement part is a separate part intended to replace a defective or degraded part having the same or a similar function of a good in operation; (Source: Annexes to the European Regulations laying down ecodesign requirements in accordance with Directive 2009/125/EC).

Return conditions for a repair process

- Complete returns conditions: special arrangements are in place to encourage the return of the product for a repair process, whether to the manufacturer, a partner or a repairer: free shipping, home pick-up, free replacement product during the repair process, free repair. These special arrangements are available both under warranty and out-of-warranty.
- Basic return conditions: users wishing to repair their product have the option of returning it for repair, but there are no special arrangements in place to facilitate this process (charges, etc.).
- No return solution: the end-user has no way of returning the product to the manufacturer or one of its partners for repair.

Reusable packaging

Container designed to be used over and over again, reducing the need for disposable packaging.

Reusable fastener

Corresponds to an original fastening system removed during disassembly without altering the product, and which can be reused during reassembly (e.g. screws, clips).

Reused parts

To date, there is no official definition of "re-use parts", but a definition of "re-use" provided in Article L. 541-1-1 of the French Environment Code, which defines it as follows:

Reuse: "an operation by which products or components that are not waste, are used again for a use identical to that for which they were designed".

Selling price of a spare part

Deduction of delivery costs: The principle adopted is to calculate without including transport or delivery costs. If these costs are included in the pricing of the general sales conditions, it

is the responsibility of the producer or importer to deduct them for the calculation of the ratio. Specifically, for the price of spare parts, two methods are possible for deducting transport or delivery costs: individually for each part on list 2 or as a flat rate (in absolute value or as a percentage). The same applies to the price of new equipment.

Spare part(s) included in a set: If one or more parts are included in a set offered for sale or any other inseparable sub-assembly of parts, the price of the relevant part is the price of that sub-assembly.

Parts not managed by the producer or importer: If parts from list 2 are not managed by the producer or importer, the price of the parts to be considered is the price listed in the supplier's general sales conditions at the time of the index calculation.

Product options with the same reference: If options are offered for the same reference and do not affect the technical characteristics, then the price ratio calculation should be based on the price of the spare parts and the price of the most common version of the product concerned.

Criterion 21 is established by calculating the ratio between: the ex-tax price of the spare part and the ex-tax price of the relevant equipment model, where each price is understood as the ex-tax price from the current price list at the time of the certification process and listed in the general sales conditions of the manufacturer or importer, or in any other relevant contractual document if not available.

If a manufacturer or importer has, for the parts or equipment concerned, several price lists depending on the different categories of distributors or sellers, the prices used for the index calculation are those from the price list that accounted for the highest share of the manufacturer's or importer's turnover for the type of parts or equipment concerned during the last closed fiscal year.

Serialization

Practice by which the manufacturer limits the use of spare parts to only those original parts that it approves, in particular by means of software.

Example: associating the serial numbers of a product's components with the product's overall serial number.

Spare part

A spare part is a distinct part that is an integral part of a product, essential to fulfill its primary function. It is not supposed to be replaced as part of normal use of the product, but may be replaced following accidental damage, long-term wear and tear, premature wear due to incorrect use or maintenance, or misplacement. In such cases, the spare part is exchanged for a replacement part.

Spare parts interface

Refers to the way in which parts connect or integrate with the existing components of a product. Depending on the type of part and the type of interface used to connect them, a classification is established: A standard part is a component, a part, manufactured to

recognized specifications and standards, commonly used and compatible with various products or systems.

- **Standard part with standard interface:** Designates a standard part, manufactured according to recognized specifications and standards, commonly used and compatible with various products or systems, and whose connection or interaction with other components, devices or systems is based on standardized or widely used and accepted specifications.
- **Standard part with proprietary interface:** Refers to a standard part, manufactured according to recognized specifications and standards, commonly used and compatible with various products or systems, and whose connection or interaction with other components, devices or systems is based on specifications specific to a particular manufacturer or company.
- **Proprietary part with non-standard interface:** Refers to a non-standard part, exclusive to a product or company, usually produced in-house or under license. This type of part may have unique specifications that make it incompatible with other products or brands. In addition, it may be designed with a specific connection to other components, devices or systems, also based on specifications specific to a particular manufacturer or company.

Step (disassembly)

Operation leading to part removal or tool change.

Sub-assembly

A set of inseparably connected components that form a block and perform a function. The sub-assembly may be separate from the product.

Example: Soldered motor and electronic board

Usage stress

This corresponds to the forces applied to the part.

Used parts

Used goods are goods which, at any stage of production or distribution, have come into the possession of a person for his or her own use, by the effect of any act for valuable consideration or free of charge, or have undergone alterations which do not allow them to be offered for sale as new (Source: Article L321-1 of the French Commercial Code).

Waste

Any substance or object, or more generally any movable asset, which the holder discards or intends or is required to discard. (Source: Directive n°2008/98/CE of November 19, 2008 on waste)

Working environment

When solving failure scenarios, a number of different working environments can be identified.

- **Operating environment:** Corresponds to the environment in which the product is used and does not express any specific requirements relating to the working environment for the resolution of failure scenarios.

- **Workshop environment:** Corresponds to an environment which does not require a production environment (class C), but where failure resolution scenarios cannot be carried out in the operating environment.
- **Production environment:** Corresponds to an environment necessary for the resolution of failure scenarios which is comparable to that in which the product was manufactured.

IX. BIBLIOGRAPHICAL RESOURCES

This paragraph lists the main bibliographical resources used to draw up the sector reference guide, which are likely to evolve according to the target product groups.

REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

DIRECTIVE 2012/19/EU on waste electrical and electronic equipment (WEEE)

Standard EN 45552 General method for assessing the durability of energy-related products

Standard EN 45554 General methods for assessing the reparability, reusability and upgradability of energy related products

EN 14124 Inlet valves for cisterns with internal overflow

EN 14055 Cisterns for WCs and urinals

EN 1253-1 Drains and traps for buildings - Part 1: floor drains with a minimum depth of seal of 50 mm

EN 681-1 Elastomeric seals - Materials requirements for pipe joint seals used in water supply and drainage applications - Part 1: Vulcanised rubber

EN 681-2 Elastomeric seals - Materials requirements for pipe joints used in water supply and sewerage applications - Part 2: Thermoplastic elastomers

BS 5627 Specification for plastic fittings for use with horizontal outlet vitreous china WC bowls

DIN 1389 WC connectors - Requirements and testing

DIN 1986-4 Sewage systems on private land - Part 4: Fields of application of sewage pipes and fittings in various materials

ISO175 Plastics - Test methods for the determination of the effects of immersion in liquid chemicals

EN 997 Toilet bowls and cisterns with integral siphon

X. VERSION UPDATE

Implemented in 2025, the LONGTIME V2 base reference system is scheduled to be valid for 5 years before its next revision in 2030, with the exception of minor changes.

Version number	Date of release	Summary of action	Editor
Référentiel V2 Raccord flexible d'évacuation	23/06/2025	Publication of the final version	F Preguesuelo
Référentiel V2 Raccord flexible d'évacuation	12/05/2025	Draft version issued and consultation opened	F Preguesuelo
Référentiel V2 Raccord flexible d'évacuation	01/03/2025	Opening of the editing process	F Preguesuelo

XI. ACKNOWLEDGEMENTS

Given the type of product, it was difficult to identify the quantified data usually sought. The LONGTIME® label teams have capitalised on their expertise in extending product life. We would like to thank the manufacturers and building professionals who agreed to take part in the development of the standards.