

Report on the standardization landscape and applicable standards

Deliverable 8.5

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Executive Summary

The Spanish Association for Standardization, UNE, a European Standardization Body, is a partner in the ECOBULK project to provide support regarding the standardization tasks included in the project. This deliverable D8.5 *"Report on the standardization landscape and applicable standards"* has been prepared to guide the partners about the published standards and standards under development that are, or can be, applicable to ECOBULK.

This deliverable contains the fields of interest related to ECOBULK, given by its consortium, and, from this starting point, identification and analysis of the standardization technical committees (TCs) related to the project as well as of the published standards and standards under development that can be useful and relevant for the project activities. Furthermore, it can help in the future to identify standardization gaps that might be addressed – wholly or partially – by the results of the project.

There is a large number of CEN and ISO technical committees, standards and standards under development related to ECOBULK, even though none of them covers the whole scope of ECOBULK, so the dissemination efforts will have to be distributed amongst several technical committees. The planned actions will include the follow up of their activities, the presentation of the ECOBULK project to the committees, and even the proposal and drafting of normative documents bounded to the outcome of the project.

The British standard BS 8001:2017 sets a starting point for a new group of standards, focused in circular economy, to be developed at European level in the near future.

Abbreviations and acronyms

In this document the following abbreviations and acronyms are used:

CEN	European Committee for Standardization
CENELEC (CLC)	European Committee for Electrotechnical Standardization
CWA	CEN or CENELEC Workshop Agreement
EN	European Standard
hEN	Harmonised European Standard
ISO	International Organization for Standardization; International Standard
IEC	International Electrotechnical Commission
NMC	National Mirror Committee
NSB	National Standardization Body
SC	Subcommittee
TC	Technical Committee
TR	Technical Report
TS	Technical Specification
UNE	Spanish Association for Standardization; Spanish Standard
WG	Working Group
WI	Work Item



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1. Introduction

1.1. Description of the document and purpose

This report is part of Work Package 8 “Business Planning and Exploitation of Results” and specifically task 8.7 “Standardization activities”. The main objective of task 8.7 is to facilitate the acceptance and utilization by the market of the developed solutions.

Other objectives are to provide information for other WPs, ensuring compatibility and interoperability with what already exists in the market through standards, as well as to use the standardization system as a tool for dissemination of the project results and interaction with the market stakeholders.

The purpose of this report, D8.5, is to provide information on the standardization landscape and applicable standards relevant for the ECOBULK project. It assembles preliminary information for the work packages ensuring compatibility and interoperability with existing solutions by identifying published standards and standards under development at European and International levels.

This deliverable comprises a short introduction to standardization to facilitate deeper comprehension of this issue followed by the identification and analysis of relevant standards and standardization technical bodies with recommendations about interaction with them.

As ECOBULK progresses, the task will be completed by addressing how the project can contribute to ongoing and future standardization developments, promoting the inclusion of findings useful to industry, helping to achieve acceptable market solutions as outcomes of the project.

Given that the report contains an exhaustive list of standards related to the fields of application, the report could be subject to revision in the future, when the project is more advanced and the materials and products are more defined, to shorten the list and make it more specific and focused on ECOBULK.

1.2. WPs and Tasks related with the deliverable

This Deliverable covers Subtask 8.7.1 “Analysis of the applicable standardization landscape”, which is part of Task 8.7 “Standardization



activities". Task 8.7 is one of the tasks of WP 8 "Business Planning and Exploitation of Results".

This deliverable uses a two-way information flow: firstly, collecting the input from the partners and their WPs in terms of standardization; and then returning information that will serve as a starting point for the relevant WPs.

2. Short introduction to Standardization

2.1. What are standards?

Standards are voluntary technical documents that set out requirements for a specific item, material, component, system or service, or describe in detail a particular method, procedure or best practice. Standards are developed and defined through a process of sharing knowledge and building consensus among technical experts nominated by interested parties and other stakeholders - including businesses, consumers and environmental groups, among others. These experts are organized in Technical Committees (TCs), which are subdivided in Subcommittees (SCs) or Working Groups (WGs).

These TCs are included in the structure of the Standardization Organizations (National, European and International). All the TCs work following the internal regulations of their standardization organization, which are quite similar. When the work is carried out in a TC at National or European level with the same scope as an International TC they are called mirror committees.

The standardization bodies operate at different levels:

- National (UNE, AFNOR, BSI, DIN, etc.)
- Regional (CEN, CENELEC, ETSI). For the scope of ECOBULK it is European level.
- International (ISO, IEC, ITU).

Sometimes there are different standardization bodies at the same level, but covering different fields. This is the case of ISO (general), IEC (electrical) and ITU (telecommunications) at International level, or CEN, CENELEC and ETSI at European level in the same way.

There are also different standardization documents. The most widespread is the standard, which has a different code depending on the organization under which it was developed, e.g. EN for European



Standards, ISO for International standards. Other types of documents are Technical Specifications (TS), Technical Reports (TR) and Workshop Agreements (CWA). Further Amendments to the standards are identified by adding A1, A2, etc. at the end of the standard code.

As defined by ISO and IEC, a standard is a “document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context”. These include requirements and/or recommendations in relation to products, systems, processes or services. European Standards (ENs) are documents that have been ratified by one of the three European Standardization Organizations (ESOs), CEN, CENELEC or ETSI; recognized as competent in the area of voluntary technical standardization as for the EU Regulation 1025/2012.

2.2. Reasons to consider standards and standardization

Standardization activities are relevant in many projects funded by the H2020 Programme for various reasons, but mainly because standards help to increase the impact of the project and to establish a baseline of existing standards in the initial steps in order to consider interoperability and industry recognised state of the art. Standards are documents developed in an open and regulated process involving relevant stakeholders. Therefore, standards provide confidence and are often a requirement for trading of goods and services, especially in sectors like construction and information and communications technology. According to a recent study from the US Department of Commerce, standards affect around 92% of global commerce. Standards also aim to ensure compatibility and interoperability with products and services that already exist in the market.

The role of different types of standards in relation to research can be shown and explained in many different ways, such as the one shown in Figure 1.

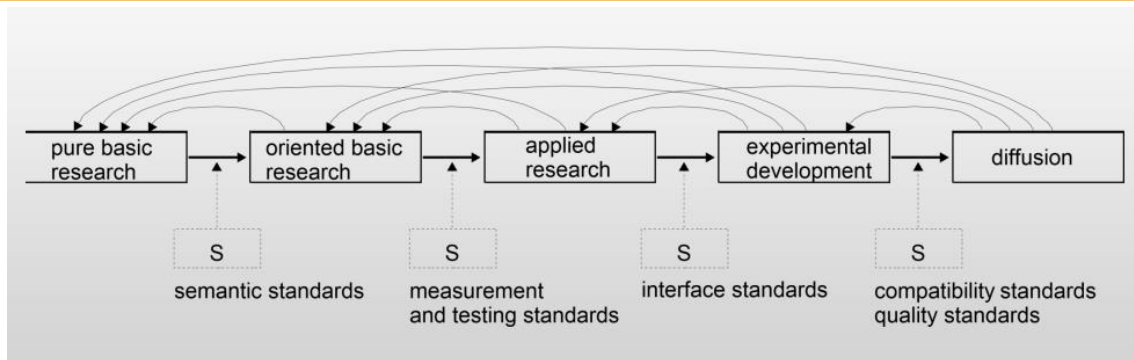


Figure 1: Relation of different types of standards to research

The use of standards and standardization is encouraged and is widely accepted, especially at European level. More details can be found in the European Commission webpage devoted to standardization policy, included as a reference.

2.3. Types of documents

At European level, all the members of CEN, the European Committee for Standardisation, shall adopt EN standards as national standards and have to withdraw any existing national standard which could conflict with them. A summary of the characteristics of the different standardization documents can be found in the following Table 1.

Table 1: Characteristics of different standardization documents

Type	International code	European code	National code	Main Characteristics
Standard	ISO IEC	EN	UNE NF BS, DIN etc. When adopting: UNE-EN NF-EN UNE-ISO NF-ISO etc.	<ul style="list-style-type: none"> - Elaboration: 3 years - 2 steps of member approval - European: compulsory national adoption - Revision: every 5 years
Technical Specification	ISO/TS IEC/TS	CEN/TS CLC/TS	When adopting: UNE-CEN/TS NF-CEN/TS UNE-ISO/TS NF-ISO/TS etc.	<ul style="list-style-type: none"> - Elaboration: 21 months - 1 step of member approval or internal approval in TC - European: optional national adoption



Type	International code	European code	National code	Main Characteristics
				<ul style="list-style-type: none"> – Revision: at 3 years (upgrading to EN or deletion)
Technical Report	ISO/TR IEC/TR	CEN/TR CLC/TR	When adopting: UNE-CEN/TR NF-CEN/TR UNE-ISO/TR NF-ISO/TR etc.	<ul style="list-style-type: none"> – Elaboration: free timeframe – Internal approval in TC – European: optional national adoption – No revision required
Workshop Agreement	IWA	CWA	Variable	<ul style="list-style-type: none"> – Elaboration: free timeframe (usually few months) – Internal approval in the Workshop – European: optional national adoption – Revision: at 3 years (upgrading to EN or deletion)

European and International Standardization Organizations (e.g. CEN and ISO) have signed formal agreements in order to avoid duplication of efforts and promote global relevance of standards. This allows adopting or developing each other's standards with the same content and code.

The technical collaboration between ISO and CEN was formalized through the Vienna Agreement. European standards developed through the Vienna Agreement have EN ISO codification while International Standards developed through the Vienna Agreement remain only with ISO code.

In a similar way, CENELEC has close cooperation with its international counterpart, the International Electrotechnical Commission (IEC) through the Frankfurt Agreement. As a result, new electrical standards projects are jointly planned between CENELEC and IEC, and where possible most are carried out at international level. This means that CENELEC will offer a New Work Item to its international counterpart, and if accepted, CENELEC will cease working on the item. If IEC



refuses, CENELEC will work on the standards content development, keeping IEC closely informed and giving IEC the opportunity to comment at the public enquiry stage.

European and international organizations (CEN and ISO or CENELEC and IEC) vote in parallel (both organizations are voting at the same time) during the standardization process. If the outcome of the parallel voting is positive, the standard will be published both at European and International level, leading at the international level. Close to 80% of CENELEC standards are identical to or based on IEC publications and a slightly lower figure is applicable for CEN and ISO.

National standards could also be proposed as a base for new European or International standards.

Figure 2 shows the possible tracks of the standards.

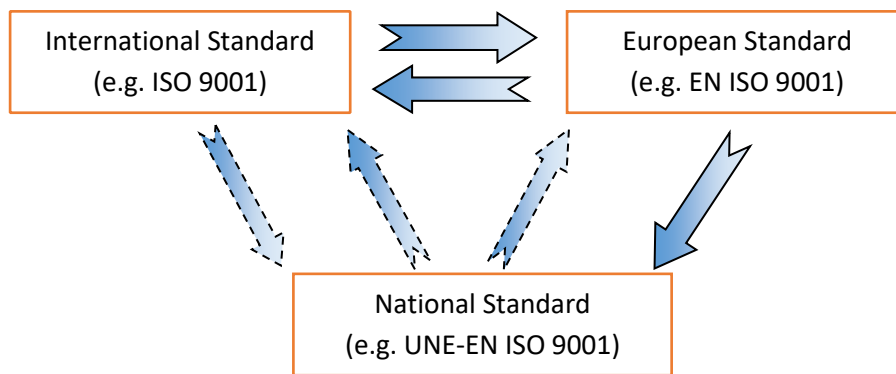


Figure 2: National standards at international level

Therefore, the code of any standard is the combination of the above mentioned issues, as explained in Figure 3.

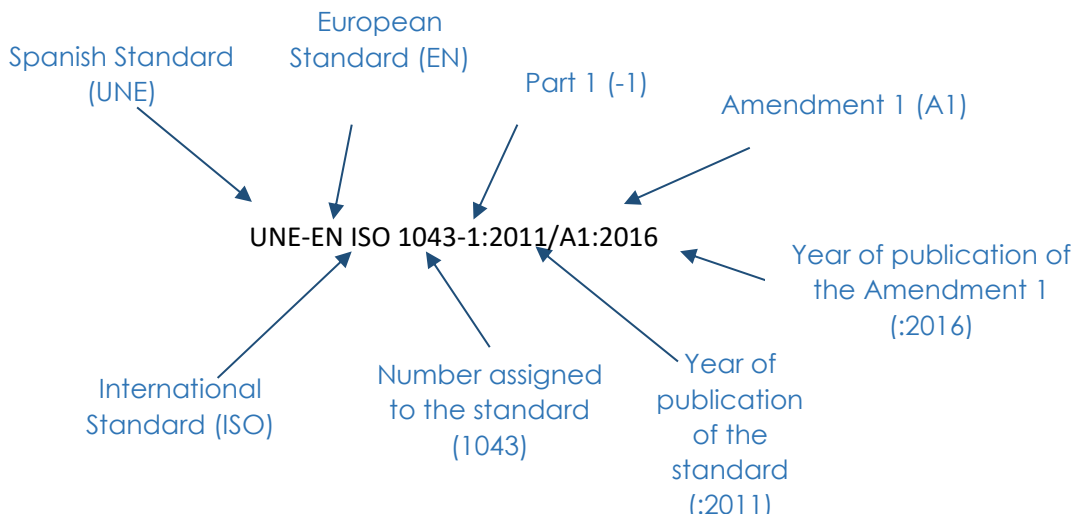


Figure 3: Example of codification for a standard



2.4. European policies, legislation and standards

Standards can be closely linked with legislation all over the world, but especially in Europe. This link is built in many ways. The first one is because standards are usually the simplest and fastest tool to fulfil most of the requirements from European Directives. Those standards are called “Harmonized standards” and fulfilling the requirements of the standards guarantees the fulfilment of the essential requirements of the related European Directives.

In Europe a large number of products are affected by Directives and Regulations. In particular the construction products related to ECOBULK are under the scope of the [Construction Products Regulation No. 305/2011](#) (which supersedes the former Construction Products Directive 89/106/EEC). This establishes harmonised conditions for the marketing of construction products (CE marking and declaration of performances) and the basic requirements for construction works. Another example is [Commission Decision \(EU\) 2016/1332](#), establishing the ecological criteria for the award of the EU Ecolabel for furniture, under [Regulation \(EC\) No. 66/2010 on the EU Ecolabel](#).

Another way to link standards and the legislative framework is by supporting public policies and technical development in certain areas: usually this is done by a *Standardization Request*, formerly known as *Mandate*. A Standardization Request is a demand from the European Commission to the European standardization organizations (ESOs), such as CEN or CENELEC, to draw up and adopt European standards in support of European policies and legislation, such as Directives and Regulations. Draft mandates are drawn up by the Commission services through a process of consultation with a wide group of interested parties (social partners, consumers, SMEs, relevant industry associations, etc.). The resulting European standards, even developed under a mandate and for European legislation, remain voluntary in their use, excepting the Annex ZA of the harmonized standards of construction products.

A database of [Standardization Requests](#) may be found in the European Commission related webpage. Some examples of request related to this project are:

- [M/113 \(rev.1\)](#): Mandate to CEN/CENELEC concerning the execution of standardisation work for harmonised standards on wood based panels.



- [M/117](#): Horizontal complement to the mandate to CEN and CENELEC concerning the execution of standardisation work for the evaluation of construction products and elements in respect of their resistance to fire.
- [M/350](#): Standardisation mandate to CEN for the development of horizontal standardised methods for the assessment of the integrated environmental performance of building.
- [M/556](#): standardisation request to CEN/CENELEC as regards compliance with maximum content criteria of Polycyclic Aromatic Hydrocarbons in rubber and plastic components of articles placed on the market for supply to the general public in support of Regulation (EC) No. 1907/2006 of the European Parliament and of the Council.

Harmonised European standards (hENs) are the harmonised normative documents developed by CEN or CENELEC following the mandates given by the European Commission. The hENs are identified by the inclusion of an Annex ZA. Manufacturers, other economic operators, or conformity assessment bodies can use harmonised standards to demonstrate that products, services, or processes comply with relevant EU legislation. The references of harmonised standards must be published in the Official Journal of the European Union.

3. Standardization related to ECOBULK

3.1. Methodology

The standardization study covers European standards developed by the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC). Moreover, the study also covers the International standards developed by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). Although there is no expectation of identifying relevant standards in the electrotechnical field, as environmental issues are considered in a similar way, some common standards could be identified in such a field. The databases and websites used for the research are included as references.

The methodology used for the identification of standards and standards under development relevant for the ECOBULK project is described as follows.



A list of key concepts was prepared to act as a starting point for the identification of standardization areas, selecting keywords related to the aims and goals of the project. The list was agreed by UNE, EXERGY as Project Coordinator and OAKDENE HOLLINS as WP 8 Coordinator. The list is shown in Table 2.

Table 2: Keywords used in the preliminary search

Keywords used in preliminary search	
1	Automotive
2	Building components
3	Bulky waste
4	Circular economy
5	Closed loop
6	Composite
7	Design
8	Ecodesign
9	Environmental impact
10	Furniture
11	Internal car parts
12	Life cycle
13	Material recovery
14	Recycling
15	Remanufacture
16	Reverse loop
17	Vehicle



A search using the aforementioned keywords yielded a substantial number of hits. The detection of these standards made the identification of the relevant technical bodies (TC, SC and WG) responsible for their drafting possible. After that, a search was made within the work program of each technical body to find standards not discovered in the initial search. Using multiple search engines gave enhanced coverage of the search space.

The most relevant aspect for ECOBULK is the technical body within CEN or ISO responsible for the standards. This is because a new deliverable with recommendations on how to link the results of ECOBULK with standardization is foreseen in the future (M36) and is most efficiently conducted by linking to the work of active technical bodies. For obvious reasons, the evolution of an existing standard requires cooperation with the technical body responsible for it.

Once the relevant technical bodies were identified, they were included in a summary table. The report is structured in standardization areas for which relevant standardization technical committees (TCs) and other technical bodies within them were found. Published standards and standards under development were identified for each standardization area, together with the technical committee responsible for the respective standards. They are included in this deliverable and listed in *Annex A: Standards to be considered*.

As explained before, ISO and CEN can publish the same standards under the Vienna Agreement. In such cases, CEN standards and TCs have been prioritized in the categorization, as CEN offers the possibility of establishing a "liaison" with a TC to facilitate the collaboration between European standardization and the research and innovation community. ISO does not offer this option.

Thanks to the liaison, a project representative may participate in the meetings of the TC and the WGs as an observer, ensuring synergies between the project and the world of standardization, even proposing the drafting of new standards.

3.2. Technical Bodies Overview

Table 3 is a list of the European and international committees, subcommittees and working groups identified as technical bodies working on subjects relevant to the ECOBULK project. Some of them cover products and materials and thus may be considered as "vertical



committees", and others cover cross-product systems or management matters as "horizontal committees".

This table includes the technical bodies responsible of drafting the standards listed in Annex A: Standards to be considered. Although some of them are currently disbanded for operative reasons, their work programme has been reassigned to other technical bodies, also included in the table.

The scope of these Technical Committees is described in Clause 4 *Technical Committees relevant for ECOBULK*.

Table 3: Technical bodies identified

Subject	Technical Body	Name
Environmental Management	CEN/SS S26	Environmental Management
Plastics	CEN/TC 249	Plastics
	CEN/TC 249/SC 1/WG 1*	Terminology, generic marking, symbols and codes
	CEN/TC 249/SC 1/WG 3*	Mechanical properties and preparation of test specimens
	CEN/TC 249/SC 1/WG 5*	Physical, chemical and rheological properties
	CEN/TC 249/SC 1/WG 6*	Ageing, chemical and rheological properties
	CEN/TC 249/SC 1/WG 7*	Polyolefin materials
	CEN/TC 249/SC 1/WG 8*	Polyvinyls
	CEN/TC 249/SC 1/WG 9*	Styrenics
	CEN/TC 249/SC 1/WG 11*	Fluoroplastics
	CEN/TC 249/SC 2/WG 1*	Reinforcements
	CEN/TC 249/SC 2/WG 3*	Prepregs - Composites with random reinforcements
	CEN/TC 249/SC 2/WG 4*	Reinforced thermoplastics composites
	CEN/TC 249/SC 2/WG 5*	Structural properties
	CEN/TC 249/SC 2/WG 6*	Pultruded profiles



Subject	Technical Body	Name
	CEN/TC 249/WG 11	Plastics recycling
	CEN/TC 249/WG 13	Wood Plastics Composites (WPC)
	CEN/TC 249/WG 15	Fibre-reinforced composites
	CEN/TC 249/WG 17	Biopolymers
	CEN/TC 249/WG 19	Light exposure
	ISO/TC 61	Plastics
	ISO/TC 61/SC 11	Products
	ISO/TC 61/SC 11/WG 11	Wood-plastic composites
	ISO/TC 61/SC 13/WG 2	Laminates and moulding compounds
Wood, wood-based panels and timber	CEN/TC 112	Wood-based panels
	CEN/TC 112/WG 1*	Particle boards
	CEN/TC 112/WG 2	Plywood
	CEN/TC 112/WG 3*	Fibreboards
	CEN/TC 112/WG 4	Test methods
	CEN/TC 112/WG 5	Regulated dangerous substances
	CEN/TC 112/WG 6*	Cement-bonded particle boards
	CEN/TC 112/WG 7	Semi-finished and finished products
	CEN/TC 112/WG 9	Solid Wood panels
	CEN/TC 112/WG 11	Particleboards and fibreboards
	CEN/TC 38	Durability of Wood and Wood-based products
	ISO/TC 89	Wood-based panels
		ISO/TC 89/SC 1



Subject	Technical Body	Name
	ISO/TC 89/SC 2	Particle boards
	ISO/TC 89/SC 3	Plywood
	ISO/TC 89/WG 5	Test methods
	ISO/TC 218	Timber
	ISO/TC 165	Timber structures
Furniture	CEN/TC 207	Furniture
	CEN/TC 207/WG 3	Office furniture
	CEN/TC 207/WG 5	Requirements for non-domestic furniture
	CEN/TC 207/WG 7	Requirements and test methods for furniture surfaces
	CEN/TC 207/WG 9	Test methods
	CEN/TC 364	High chairs
	ISO/TC 136	Furniture
	ISO/TC 136/WG 3	Storage units - Test methods for determination of strength and durability
Automobiles	ISO/TC 22	Road vehicles
	ISO/TC 45/SC 4	Rubber and rubber products/ products (other than hoses)
	ISO/TC 146/SC 6	Air quality/Indoor air
	CEN/TC 248	Textiles and textile products
	ISO/TC 38/SC 1	Textiles/ Tests for coloured textiles and colorants
	ISO/TC 38/WG 9	Textiles/ Nonwovens
Construction and construction products	CEN/TC 350	Sustainability of construction works
	CEN/TC 127	Fire safety in buildings



Subject	Technical Body	Name
	ISO/TC 92/SC 1	Fire safety/Fire initiation and growth
* Technical body that has been disbanded. The work program of a technical body disbanded is either assumed by another technical body (when the technical committee is restructured) or by a technical body of higher range (SC or TC).		

4. Technical Committees relevant for ECOBULK

4.1. Environmental Management

Standards at European level regarding environmental management are in the scope of **CEN/SS S26** "Environmental Management". It is not strictly a Technical Committee, but a sector group deciding mainly upon the adoption of the ISO standards drafted in the ISO/TC 207 "Environmental management".

At international level, standards related to "Environmental Management" are developed in the **ISO/TC 207**, covering standardization in the field of environmental management systems and tools in support of sustainable development. Test methods of pollutants, setting limit values and levels of environmental performance, and standardization of products are excluded.

BSI, the British Standards Institution, has also published a standard in this field, which has quickly become of common use in the field of environmental management: BSI 8001:2017 "Framework for implementing the principles of the circular economy in organizations. Guide".

4.2. Plastics

European standards on plastics are developed by **CEN/TC 249** "Plastics". This European Technical Committee covers the standardization of terminology, test methods and specifications in the field of plastics and plastic based materials, semi-finished products and products (thermoplastics, thermosets, cellular plastics, degradable plastics, bio-based polymers, thermoplastics elastomers, composites and reinforcement products for plastics) as well as plastics recycling.



Rubber is excluded from his scope. Specific end-product related items are also excluded if they are covered by the scope of an existing product TC.

At international level, standards on plastics are developed by **ISO/TC 61** "Plastics". This International Technical Committee covers the standardization of nomenclature, methods of testing and specifications applicable to materials and products in the field of plastics including processing (of products) by assembly in particular, but not limited to, polymeric adhesives, sealing, joining, welding. Standardization on rubber and lacquers is also excluded. By agreement with ISO/TC 45 "Rubber and rubber products", standards in relation to thermoplastic elastomers are developed by both technical committees.

4.3. Wood, wood-based panels and timber

European standards on wood-based panels are developed by **CEN/TC 112** "Wood-based panels". This European Technical Committee covers standardization related to wood-based panels and panels of other lignocellulosic materials. In particular, standardization on terminology, classification, requirements, product specifications and test methods.

European standards on durability of wood and wood-based panels are developed by **CEN/TC 38** "Durability of wood and wood-based panels". This European Technical Committee covers standardization of natural or conferred durability of wood and wood-based products against biological agents and their characteristics associated with exposure.

At international level, standards on wood-based panels are developed by **ISO/TC 89** "Wood-based panels". This International Technical Committee covers standardization in the field of panels such as fibreboards, particle boards and plywood based on lignocellulosic materials (derived from wood or other materials) including terminology, classification, dimensions, test methods and quality requirements.

Standards on timber at international level are developed by **ISO/TC 218** "Timber". This International Technical Committee covers standardization of round, sawn and processed timber, and timber materials in and for use in all applications, including terminology, specifications and test methods. Excluded from the scope of this TC are those applications of timber covered by **ISO/TC 165** "Timber structures", TC responsible for the standardization concerning structural applications of timber, wood-based panels, other wood



based products, and related lignocellulosic fibrous materials including requirements for design, structural properties, performance, and design values of materials, products, components, and assemblies and test methods and requirements to establish related structural, mechanical and physical properties and performance.

4.4. Furniture

European standards on furniture are developed by **CEN/TC 207** "Furniture". This European Technical Committee covers standardization in the field of all furniture (including mattresses, excluding transport furniture), considering, where appropriate: terminology, safety and health, test methods and requirements for end products, parts, components, surfaces, surface finishes and furniture hardware and dimensions. Standards for raw materials are excluded from its scope.

At international level, standards on furniture are developed by **ISO/TC 136** "Furniture". This International Technical Committee covers standardization in the field of furniture including terms and definitions, performance, safety and dimensional requirements, requirements for specific components (such as hardware) and test methods. Furniture is taken to mean free-standing or built-in units which are used for storing, lying, sitting, working and eating, excluding those units dealt by other ISO technical committees.

At European level, **CEN/TC 264** "Air quality" is developing horizontal standards on air quality. One of those standards, EN ISO 16900-9:2006 is relevant for furniture. This European Technical Committee cover standardization of methods for air quality characterization of emissions, ambient air, indoor air, gases in and from the ground and deposition, in particular measurement methods for air pollutants (for example particles, gases, odours, microorganisms) and methods for the determination of the efficiency of gas cleaning systems. The establishment of limit values for air pollutants, the air quality in clean rooms and radioactive substances are excluded from the scope of the TC.

4.5. Automobiles

At international level, standards on road vehicles are developed by **ISO/TC 22** "Road vehicles". This International Technical Committee covers standardization of all questions of standardization concerning



compatibility, interchangeability and safety, with particular reference to terminology and test procedures (including the characteristics of instrumentation) for evaluating the performance of road vehicles, such as mopeds, motor cycles, motor vehicles, trailers, semi-trailers, light trailers, combination vehicles and articulated vehicles.

There are other TC developing standards directly related to automobiles and the ECOBULK project. These are the European and international committees dealing with rubber, air quality and textiles.

International standards on rubber are developed by **ISO/TC 45** "Rubber and rubber products". This International Technical Committee covers standardization of terms and definitions, test methods and specifications for rubber in any form, rubber products (including their dimensional tolerances) and major rubber compounding ingredients. By agreement with ISO/TC 61, coated fabrics, flexible cellular materials, footwear and hose, whether made of rubber or plastics, are also dealt within ISO/TC 45.

At international level, standards on air quality are developed by **ISO/TC 146**, the specific ones related to automobiles are developed by **SC 6** "Indoor air". This International Technical Committee covers standardization of tools for air quality characterisation of emissions, workspace air, ambient air, indoor air, in particular measurement methods for air pollutants (particles, gases, odours, micro-organisms) and for meteorological parameters, measurement planning, procedures for Quality Assurance/Quality Control (QA/QC) and methods for the evaluation of results including the determination of uncertainty. The establishment of limit values for air pollutants, the air quality in clean rooms and radioactive substances are excluded from the scope of the TC.

European standards on textiles are developed by **CEN/TC 248** "Textiles and textile products". This European Technical Committee covers standardization of the following aspects of textiles, textile products and textile components of products: test methods, terms and definitions, specifications, and if necessary classifications, in terms of their expected behaviour, in particular where required by other CEN TC or the EU or EFTA. Also covers equipment relevant for the testing and use of textiles.

At international level, standards on textiles are developed by **ISO/TC 38** "Textiles". This International Technical Committee covers standardization of fibres, yarns, threads, cords, rope, cloth and other fabricated textile materials and the methods of testing, terminology



and definitions relating thereto, and also standardization of textile industry raw materials, auxiliaries and chemical products required for processing and testing and specifications for textile products. Especially relevant for the ECOBULK project are the standards developed by **SC 1** "Test for coloured textiles and colorants" and by **WG 9** "Nonwovens".

4.6. Construction and construction products

European standards on construction and sustainability related to ECOBULK are developed by **CEN/TC 350** "Sustainability of construction works". This European Technical Committee is responsible for the development of voluntary horizontal standardised methods for the assessment of the sustainability aspects of new and existing construction works and for standards for the environmental product declaration of construction products. The standards will be generally applicable (horizontal) and relevant for the assessment of integrated performance of buildings over its life cycle. The standards will describe a harmonized methodology for assessment of environmental performance of buildings and life cycle cost performance of buildings as well as the quantifiable performance aspects of health and comfort of buildings.

European standards on fire safety of construction products are developed by **CEN/TC 127** "Fire safety in buildings". It develops standards utilizing relevant existing work where available (e.g. in ISO, IEC, CENELEC, CEC and EFTA) assessing the fire behaviour of building products, components and elements of construction. This TC covers standardization for classification of products, components and elements of construction, appropriate to the fire risks related to their application and for assessing fire hazard and providing fire safety in buildings.

At international level, standards on fire safety of construction products are developed by **ISO/TC 92** "Fire Safety", the specific ones related to ECOBULK are developed by **SC 1** "Fire initiation and growth". This International Technical Committee covers standardization of methods of assessing fire hazards and fire risk to life and to property, the contribution of design, materials, building materials, products and components to fire safety and methods of mitigating the fire hazards and fire risks by determining the performance and behaviour of these materials, products and components, as well as of buildings and structures.



5. Conclusions

The present deliverable concerning the standardization landscape and applicable standards has identified the standardization technical bodies and the main standards relevant for the ECOBULK project.

The deliverable has identified the main topics of interest: plastics, furniture, wood-based panels, vehicles and environment, selecting more than 50 technical bodies (a few of them now disbanded) with relevant standards, from three different standards developing organizations, namely CEN, ISO and BSI. The technical bodies range from broad technical committees with hundreds of standards to very specific working groups, with just a few standards under their scope.

For each topic and each technical body, the most relevant standards and standards under development have been identified and reported in tables in Annex A: Standards to be considered.

After the analysis of the current standardization context at European and international levels, one main conclusion may be drawn: there is a large number of European and international technical committees, as well as of standards and standards under development related to ECOBULK that may be useful for its development and also for its future dissemination.

Even though a standardization technical committee with an activity directly related to the ECOBULK project has not been found, specific tasks in the project are related to standardization works. Depending on the assessment by ECOBULK partners of the impact of the identified standardization committees on their tasks and the level of contribution that their results can represent for these committees and for the development of Deliverable D8.6. (Report on the contribution to standardization) several actions can be performed, for example:

- the follow up of the standardization activity through updates reported by UNE;
- the follow up through the joining of one or more UNE representatives to these standardization committees. Standardization is an open activity and all interested parties may participate in a CEN/CENELEC/ISO/IEC technical committee through its National Mirror Committee and National Standardization Body;



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- the dissemination of the ECOBULK project progress by delivering reports to the relevant TCs Secretaries or by attending relevant technical committees meetings.
 - the participation in technical committees would allow the proposal of new normative documents and the publication of the results of the project as EN, TS or TR.

Moreover and aside from CEN and ISO, the British Standard Institution has recently published the British Standard BS 8001:2017. This standard has opened a path that will be followed in the future by other standards, not strictly restricted to a national level, but developed by European and international standardization organizations.

6. References

- CEN Website (www.cen.eu)
- CEN/CENELEC Projex Online database (projex.cen.eu) (restricted to authorized users)
- ISO Website (www.iso.org)
- ISO Project Portal (isotc.iso.org) (restricted to authorized users)
- EUR-Lex (eur-lex.europa.eu)
- European Commission Mandate database (ec.europa.eu/enterprise/standards_policy/mandates/database)
- European Commission Webpage on Standardization Policy https://ec.europa.eu/growth/single-market/european-standards/policy_es
- ISO advanced search portal <https://www.iso.org/advanced-search/x/> (open and with search by TC)



Annex A: Standards to be considered

This annex presents a compilation of the standards and standards under development relevant to the project. The information is grouped according to the subjects described in subclause 3.2 Technical Bodies Overview.

A.1. Environmental Management

Table 4: Published standards about "environmental management"

CEN/SS S26 "Environmental Management"	
Reference	Title
CEN ISO/TS 14071:2016	Environmental management - Life cycle assessment - Critical review processes and reviewer competencies: Additional requirements and guidelines to ISO 14044:2006 (ISO/TS 14071:2014)
EN ISO 14001:2015	Environmental management systems - Requirements with guidance for use (ISO 14001:2015)
EN ISO 14004:2016	Environmental management systems - General guidelines on implementation (ISO 14004:2016)
EN ISO 14006:2011	Environmental management systems - Guidelines for incorporating ecodesign (ISO 14006:2011)
EN ISO 14015:2010	Environmental management - Environmental assessment of sites and organizations (EASO) (ISO 14015:2001)
EN ISO 14020:2001	Environmental labels and declarations - General principles (ISO 14020:2000)
EN ISO 14021:2016	Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) (ISO 14021:2016)
EN ISO 14024:2000	Environmental labels and declarations - Type I environmental labelling - Principles and procedures (ISO 14024:1999)
EN ISO 14025:2010	Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025:2006)
EN ISO 14031:2013	Environmental management - Environmental performance evaluation - Guidelines (ISO 14031:2013)
EN ISO 14040:2006	Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006)



EN ISO 14044:2006	Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006)
EN ISO 14045:2012	Environmental management - Eco-efficiency assessment of product systems - Principles, requirements and guidelines (ISO 14045:2012)
EN ISO 14046:2016	Environmental management - Water footprint - Principles, requirements and guidelines (ISO 14046:2014)
EN ISO 14050:2010	Environmental management - Vocabulary (ISO 14050:2009)
EN ISO 14051:2011	Environmental management - Material flow cost accounting - General framework (ISO 14051:2011)
EN ISO 14063:2010	Environmental management - Environmental communication - Guidelines and examples (ISO 14063:2006)
Other standards	
Reference	Title
BSI 8001:2017	Framework for implementing the principles of the circular economy in organizations. Guide

Table 5: Standards under development about "environmental management"

CEN/SS S26 "Environmental Management"	
Reference	Title
FprCEN ISO/TS 14027	Environmental labels and declarations - Development of product category rules (ISO/TS 14027:2017)
prEN ISO 14006 rev	Environmental management systems - Guidelines for incorporating ecodesign
prEN ISO 14024	Environmental labels and declarations - Type I environmental labelling - Principles and procedures (ISO/FDIS 14024:2017)
prEN ISO 14034	Environmental management - Environmental technology verification (ETV) (ISO 14034:2016)
EN ISO 14044:2006/ FprA1	Environmental management - Life cycle assessment - Requirements and guidelines - Amendment 1 (ISO 14044:2006/FDAM 1:2017)



prEN ISO 14052

Environmental management - Material flow cost accounting - Guidance for practical implementation in a supply chain (ISO 14052:2017)

A.2. Plastics

Table 6: Published standards about "plastics"

CEN/TC 249 "Plastics"	
Reference	Title
CEN/TR 15353:2007	Plastics - Recycled plastics - Guidelines for the development of standards for recycled plastics
CEN/TS 15534-2:2007	Wood-plastics composites (WPC) - Part 2: Characterisation of WPC materials
CEN/TS 16010:2013	Plastics - Recycled plastics - Sampling procedures for testing plastics waste and recyclates
CEN/TS 16011:2013	Plastics - Recycled plastics - Sample preparation
CEN/TS 16137:2011	Plastics - Determination of bio-based carbon content
CEN/TS 16295:2012	Plastics - Declaration of the bio-based carbon content
CEN/TS 16398:2012	Plastics - Template for reporting and communication of bio-based carbon content and recovery options of biopolymers and bioplastics - Data sheet
CEN/TS 16861:2015	Plastics - Recycled plastics - Determination of selected marker compounds in food grade recycled polyethylene terephthalate (PET)
EN 59:2016	Glass reinforced plastics - Determination of indentation hardness by means of a Barcol hardness tester
EN 12576:1998	Plastics - Fibre reinforced composites - Preparation of compression moulded test plates of SMC, BMC and DMC
EN 13003-1:1999	Paraaramid fibre filament yarns-Part 1:Designation
EN 13417-1:2001	Reinforcement - Specifications for woven fabrics - Part 1: Designation
EN 13417-2:2001	Reinforcement - Specifications for woven fabrics - Part 2: Methods of test and general requirements
EN 13417-3:2001	Reinforcement - Specifications for woven fabrics - Part 3: Specific requirements



EN 13421:2006	Plastics - Thermoset moulding compounds - Composites and reinforcement fibres - Preparation of specimens for determining the anisotropy of the properties of compression moulding composites
EN 13473-1:2001	Reinforcement - Specifications for multi-axial multiply fabrics - Part 1: Designation
EN 13473-3:2001	Reinforcement - Specifications for multi-axial multiply fabrics - Part 3: Specific requirements
EN 13677-1:2003	Reinforced thermoplastic moulding compounds - Specification for GMT - Part 1: Designation
EN 13677-2:2003	Reinforced thermoplastic moulding compounds - Specification for GMT - Part 2: Methods of test and general requirements
EN 13677-3:2003	Reinforced thermoplastic moulding compounds - Specification for GMT - Part 3: Specific requirements
EN 13706-1:2002	Reinforced plastics composites - Specifications for pultruded profiles - Part 1: Designation
EN 13706-2:2002	Reinforced plastics composites - Specifications for pultruded profiles - Part 2: Methods of test and general requirements
EN 13706-3:2002	Reinforced plastics composites - Specifications for pultruded profiles - Part 3: Specific requirements
EN 14118-1:2003	Reinforcement - Specifications for textile glass mats (chopped strand and continuous filament mats) - Part 1: Designation
EN 14118-2:2003	Reinforcement - Specifications for textile glass mats (chopped strand and continuous filament mats) - Part 2: Methods of test and general requirements
EN 14118-3:2003	Reinforcement - Specifications for textile glass mats (chopped strand and continuous filament mats) - Part 3: Specific requirements
EN 14447:2005	Fibre reinforced plastics - Glass mat reinforced thermoplastics (GMT) - Determination of flowability and solidification
EN 14598-1:2005	Reinforced thermosetting moulding compounds - Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 1: Designation
EN 14598-2:2005	Reinforced thermosetting moulding compounds - Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 2: Methods of test and general requirements



EN 14598-2:2005/ AC:2006	Reinforced thermosetting moulding compounds - Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 2: Methods of test and general requirements
EN 14598-3:2005	Reinforced thermosetting moulding compounds - Specification for Sheet Moulding Compound (SMC) and Bulk Moulding Compound (BMC) - Part 3: Specific requirements
EN 15342:2007	Plastics - Recycled Plastics - Characterization of polystyrene (PS) recyclates
EN 15343:2007	Plastics - Recycled Plastics - Plastics recycling traceability and assessment of conformity and recycled content
EN 15344:2007	Plastics - Recycled Plastics - Characterisation of Polyethylene (PE) recyclates
EN 15345:2007	Plastics - Recycled Plastics - Characterisation of Polypropylene (PP) recyclates
EN 15346:2014	Plastics - Recycled plastics - Characterization of poly(vinyl chloride) (PVC) recyclates
EN 15347:2007	Plastics - Recycled Plastics - Characterisation of plastics wastes
EN 15348:2014	Plastics - Recycled plastics - Characterization of poly(ethylene terephthalate) (PET) recyclates
EN 15534-1:2014+ A1:2017	Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) - Part 1: Test methods for characterisation of compounds and products
EN 15534-4:2014	Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) - Part 4: Specifications for decking profiles and tiles
EN 15534-5:2014	Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) - Part 5: Specifications for cladding profiles and tiles
EN 15534-6:2015+ A1:2017	Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) - Part 6: Specifications for fencing profiles and elements
EN 15860:2010	Plastics - Thermoplastic semi-finished products for machining - Requirements and test methods



EN 16245-1:2013	Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 1: General requirements
EN 16245-2:2013	Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 2: Specific requirements for resin, curing systems, additives and modifiers
EN 16245-3:2013	Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 3: Specific requirements for fibre
EN 16245-4:2013	Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 4: Specific requirements for fabrics
EN 16245-5:2013	Fibre-reinforced plastic composites - Declaration of raw material characteristics - Part 5: Specific requirements for core materials
EN 16465:2015	Plastics - Methods for the calibration of black-standard and white-standard thermometers and black-panel and white-panel thermometers for use in natural and artificial weathering
EN ISO 60:1999	Plastics - Determination of apparent density of material that can be poured from a specified funnel (ISO 60:1977)
EN ISO 61:1999	Plastics - Determination of apparent density of moulding material that cannot be poured from a specified funnel (ISO 61:1976)
EN ISO 62:2008	Plastics - Determination of water absorption (ISO 62:2008)
EN ISO 75-1:2013	Plastics - Determination of temperature of deflection under load - Part 1: General test method (ISO 75-1:2013)
EN ISO 75-2:2013	Plastics - Determination of temperature of deflection under load - Part 2: Plastics and ebonite (ISO 75-2:2013)
EN ISO 75-3:2004	Plastics - Determination of temperature of deflection under load - Part 3: High-strength thermosetting laminates (ISO 75-3:2004)
EN ISO 75-3:2004/ AC:2006	Plastics - Determination of temperature of deflection under load - Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics (ISO 75-3:2004)
EN ISO 176:2005	Plastics - Determination of loss of plasticizers - Activated carbon method (ISO 176:2005)
EN ISO 177:2017	Plastics - Determination of migration of plasticizers (ISO 177:2016)
EN ISO 178:2010	Plastics - Determination of flexural properties (ISO 178:2010)



EN ISO 178:2010/ A1:2013	Plastics - Determination of flexural properties (ISO 178:2010/Amd 1:2013)
EN ISO 179-1:2010	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1:2010)
EN ISO 180:2000	Plastics - Determination of Izod impact strength (ISO 180:2000)
EN ISO 180:2000/ A1:2006	Plastics - Determination of Izod impact strength - Amendment 1 (ISO 180:2000/Amd 1:2006)
EN ISO 180:2000/ A2:2013	Plastics - Determination of Izod impact strength - Amendment 2: Precision data (ISO 180:2000/Amd 2:2013)
EN ISO 291:2008	Plastics - Standard atmospheres for conditioning and testing (ISO 291:2008)
EN ISO 293:2005	Plastics - Compression moulding of test specimens of thermoplastic materials (ISO 293:2004)
EN ISO 295:2004	Plastics - Compression moulding of test specimens of thermosetting materials (ISO 295:2004)
EN ISO 305:1999	Plastics - Determination of thermal stability of poly(vinyl chloride), related chlorine-containing homopolymers and copolymers and their compounds - Discoloration method (ISO 305:1990)
EN ISO 306:2013	Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST) (ISO 306:2013)
EN ISO 472:2013	Plastics - Vocabulary (ISO 472:2013)
EN ISO 489:1999	Plastics - Determination of refractive index (ISO 489:1999)
EN ISO 527-1:2012	Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:2012)
EN ISO 527-2:2012	Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:2012)
EN ISO 527-4:1997	Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (ISO 527-4:1997)
EN ISO 527-5:2009	Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:2009)
EN ISO 604:2003	Plastics - Determination of compressive properties (ISO 604:2002)
EN ISO 877-1:2010	Plastics - Methods of exposure to solar radiation - Part 1: General guidance (ISO 877-1:2009)
EN ISO 877-2:2010	Plastics - Methods of exposure to solar radiation - Part 2: Direct weathering and exposure behind window glass (ISO 877-2:2009)



EN ISO 877-3:2010	Plastics - Methods of exposure to solar radiation - Part 3: Intensified weathering using concentrated solar radiation (ISO 877-3:2009)
EN ISO 899-1:2017	Plastics - Determination of creep behaviour - Part 1: Tensile creep (ISO 899-1:2017)
EN ISO 899-2:2003	Plastics - Determination of creep behaviour - Part 2: Flexural creep by three-point loading (ISO 899-2:2003)
EN ISO 899-2:2003/ A1:2015	Plastics - Determination of creep behaviour - Part 2: Flexural creep by three-point loading - Amendment 1 (ISO 899-2:2003/Amd 1:2015)
EN ISO 1043-1:2011	Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1:2011)
EN ISO 1043-1:2011/ A1:2016	Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics - Amendment 1: New symbol ST for syndiotactic (ISO 1043-1:2011/Amd 1:2016)
EN ISO 1043-2:2011	Plastics - Symbols and abbreviated terms - Part 2: Fillers and reinforcing materials (ISO 1043-2:2011)
EN ISO 1043-3:2016	Plastics - Symbols and abbreviated terms - Part 3: Plasticizers (ISO 1043-3:2016)
EN ISO 1043-4:1999	Plastics - Symbols and abbreviated terms - Part 4: Flame retardants (ISO 1043-4:1999)
EN ISO 10352:2010	Fibre-reinforced plastics - Moulding compounds and prepregs - Determination of mass per unit area (ISO 10352:2010)
EN ISO 10548:2003	Carbon fibre - Determination of size content (ISO 10548:2002)
EN ISO 10548:2003/ AC:2009	Carbon fibre - Determination of size content (ISO 10548:2002/Cor 1:2008)
EN ISO 1060-1:1999	Plastics - Homopolymer and copolymer resins of vinyl chloride - Part 1: Designation system and basis for specifications (ISO 1060-1:1998)
EN ISO 1060-2:1999	Plastics - Homopolymer and copolymer resins of vinyl chloride - Part 2: Preparation of test samples and determination of properties (ISO 1060-2:1998)
EN ISO 1133-1:2011	Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 1: Standard method (ISO 1133-1:2011)
EN ISO 1133-2:2011	Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics - Part 2: Method for materials sensitive to time-temperature history and/or moisture (ISO 1133-2:2011)



EN ISO 1158:1998	Plastics - Vinyl chloride homopolymers and copolymers - Determination of chlorine content (ISO 1158:1998)
EN ISO 1163-1:1999	Plastics - Unplasticized poly(vinyl chloride) (PVC-U) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 1163-1:1995)
EN ISO 1163-2:1999	Plastics - Unplasticized poly(vinyl chloride) (PVC-U) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 1163-2:1995)
EN ISO 1172:1998	Textile-glass-reinforced plastics - Prepregs, moulding compounds and laminates - Determination of the textile-glass and mineral-filler content - Calcination methods (ISO 1172:1996)
EN ISO 1264:1997	Plastics - Homopolymer and copolymer resins of vinyl chloride - Determination of pH of aqueous extract (ISO 1264:1980)
EN ISO 1265:2007	Plastics - Poly(vinyl chloride) resins - Determination of number of impurities and foreign particles (ISO 1265:2007)
EN ISO 1269:2006	Plastics - Homopolymer and copolymer resins of vinyl chloride - Determination of volatile matter (including water) (ISO 1269:2006)
EN ISO 1622-1:2012	Plastics - Polystyrene (PS) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 1622-1:2012)
EN ISO 1622-2:1999	Plastics - Polystyrene (PS) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 1622-2:1995)
EN ISO 2039-1:2003	Plastics - Determination of hardness - Part 1: Ball indentation method (ISO 2039-1:2001)
EN ISO 2039-2:1999	Plastics - Determination of hardness - Part 2: Rockwell hardness (ISO 2039-2:1987)
EN ISO 2818:1996	Plastics - Preparation of test specimens by machining (ISO 2818:1994)
EN ISO 2898-1:1999	Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 2898-1:1996)
EN ISO 2898-2:2008	Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 2898-2:2008)
EN ISO 3167:2014	Plastics - Multipurpose test specimens (ISO 3167:2014)



EN ISO 3344:1997	Reinforcement products - Determination of moisture content (ISO 3344:1997)
EN ISO 4577:1999	Plastics - Polypropylene and propylene-copolymers - Determination of thermal oxidative stability in air - Oven method (ISO 4577:1983)
EN ISO 4589-1:2017	Plastics - Determination of burning behaviour by oxygen index - Part 1: General requirements (ISO 4589-1:2017)
EN ISO 4589-2:2017	Plastics - Determination of burning behaviour by oxygen index - Part 2: Ambient-temperature test (ISO 4589-2:2017)
EN ISO 4589-3:2017	Plastics - Determination of burning behaviour by oxygen index - Part 3: Elevated-temperature test (ISO 4589-3:2017)
EN ISO 4611:2010	Plastics - Determination of the effects of exposure to damp heat, water spray and salt mist (ISO 4611:2010)
EN ISO 4612:1999	Plastics - Preparation of PVC pastes for test purposes - Planetary-mixer method (ISO 4612:1999)
EN ISO 4892-1:2016	Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1:2016)
EN ISO 4892-2:2013	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2:2013)
EN ISO 4892-3:2016	Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:2016)
EN ISO 5659-2:2017	Plastics - Smoke generation - Part 2: Determination of optical density by a single-chamber test (ISO 5659-2:2017)
EN ISO 6186:1998	Plastics - Determination of pourability (ISO 6186:1998)
EN ISO 6401:2008	Plastics - Poly(vinyl chloride) - Determination of residual vinyl chloride monomer - Gas-chromatographic method (ISO 6401:2008)
EN ISO 6402-2:2003	Plastics - Acrylonitrile-styrene-acrylate (ASA), acrylonitrile-(ethylene-propylene-diene)-styrene (AEPDS) and acrylonitrile-(chlorinated polyethylene)-styrene (ACS) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 6402-2:2003)
EN ISO 6721-1:2011	Plastics - Determination of dynamic mechanical properties - Part 1: General principles (ISO 6721-1:2011)



EN ISO 6721-2:2008	Plastics - Determination of dynamic mechanical properties - Part 2: Torsion-pendulum method (ISO 6721-2:2008)
EN ISO 6721-3:1996	Plastics - Determination of dynamic mechanical properties - Part 3: Flexural vibration - Resonance-curve method (ISO 6721-3:1994, including Technical Corrigendum 1: 1995)
EN ISO 7391-1:2006	Plastics - Polycarbonate (PC) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 7391-1:2006)
EN ISO 7391-2:2006	Plastics - Polycarbonate (PC) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 7391-2:2006)
EN ISO 7808:1998	Plastics - Thermosetting moulding materials - Determination of transfer flow (ISO 7808:1992)
EN ISO 7822:1999	Textile glass reinforced plastics - Determination of void content - Loss on ignition, mechanical disintegration and statistical counting methods (ISO 7822:1990)
EN ISO 8256:2004	Plastics - Determination of tensile-impact strength (ISO 8256:2004)
EN ISO 8257-1:2006	Plastics - Poly(methyl methacrylate) (PMMA) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 8257-1:1998)
EN ISO 8257-2:2006	Plastics - Poly(methyl methacrylate) (PMMA) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 8257-2:2001)
EN ISO 8985:1998	Plastics - Ethylene/vinyl acetate copolymer (EVAC) thermoplastics - Determination of vinyl acetate content (ISO 8985:1998)
EN ISO 10210:2017	Plastics - Methods for the preparation of samples for biodegradation testing of plastic materials (ISO 10210:2012)
EN ISO 10618:2004	Carbon fibre - Determination of tensile properties of resin-impregnated yarn (ISO 10618:2004)
EN ISO 11248:1999	Plastics - Thermosetting moulding materials - Evaluation of short-term performance at elevated temperatures (ISO 11248:1993)
EN ISO 11358-1:2014	Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles (ISO 11358-1:2014)
EN ISO 11468:1999	Plastics - Preparation of PVC pastes for test purposes - Dissolver method (ISO 11468:1997)
EN ISO 11469:2016	Plastics - Generic identification and marking of plastics products (ISO 11469:2016)



EN ISO 11667:1999	Fibre-reinforced plastics - Moulding compounds and prepregs - Determination of resin, reinforced-fibre and mineral-filler content - Dissolution methods (ISO 11667:1997)
EN ISO 12058-1:2002	Plastics - Determination of viscosity using a falling-ball viscometer - Part 1: Inclined-tube method (ISO 12058-1:1997)
EN ISO 12058-1:2002/ AC:2004	Plastics - Determination of viscosity using a falling-ball viscometer - Part 1: Inclined-tube method (ISO 12058-1:1997)
EN ISO 12114:1997	Fibre-reinforced plastics - Thermosetting moulding compounds and prepregs - Determination of cure characteristics (ISO 12114:1997)
EN ISO 12115:1997	Fibre-reinforced plastics - Thermosetting moulding compounds and prepregs - Determination of flowability, maturation and shelf life (ISO 12115:1997)
EN ISO 13002:1998	Carbon fibre - Designation system for filament yarns (ISO 13002:1998)
EN ISO 14125:1998	Fibre-reinforced plastic composites - Determination of flexural properties (ISO 14125:1998)
EN ISO 14125:1998/ A1:2011	Fibre-reinforced plastic composites - Determination of flexural properties - Amendment 1 (ISO 14125:1998/Amd 1:2011)
EN ISO 14125:1998/ AC:2002	Fibre-reinforced plastic composites - Determination of flexural properties (ISO 14125:1998/Cor.1:2001)
EN ISO 14126:1999	Fibre-reinforced plastic composites - Determination of compressive properties in the in-plane direction (ISO 14126:1999)
EN ISO 14126:1999/ AC:2002	Fibre-reinforced plastic composites - Determination of compressive properties in the in-plane direction (ISO 14126:1999/Cor.1:2001)
EN ISO 14129:1997	Fibre-reinforced plastic composites - Determination of the in-plane shear stress/shear strain response, including the in-plane shear modulus and strength, by the +/- 45° tension test method (ISO 14129:1997)
EN ISO 14130:1997	Fibre-reinforced plastic composites - Determination of apparent interlaminar shear strength by short-beam method (ISO 14130:1997)
EN ISO 14896:2009	Plastics - Polyurethane raw materials - Determination of isocyanate content (ISO 14896:2009)
EN ISO 14910-1:2013	Plastics - Thermoplastic polyester/ester and polyether/ester elastomers for moulding and



	extrusion - Part 1: Designation system and basis for specification (ISO 14910-1:2013)
EN ISO 14910-2:2013	Plastics - Thermoplastic polyester/ester and polyether/ester elastomers for moulding and extrusion - Part 2: Preparation of test specimens and determination of properties (ISO 14910-2:2013, Corrected version 2015-12-15)
EN ISO 15023-1:2017	Plastics - Poly(vinyl alcohol) (PVAL) materials - Part 1: Designation system and basis for specifications (ISO 15023-1:2017)
EN ISO 15023-2:2006	Plastics - Poly(vinyl alcohol) (PVAL) materials - Part 2: Determination of properties (ISO 15023-2:2003)
EN ISO 15103-2:2007	Plastics - Poly(phenylene ether) (PPE) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 15103-2:2007)
EN ISO 15310:2005	Fibre-reinforced plastic composites - Determination of the in-plane shear modulus by the plate twist method (ISO 15310:1999)
EN ISO 15512:2016	Plastics - Determination of water content (ISO 15512:2016)
EN ISO 15791-1:2013	Plastics - Development and use of intermediate-scale fire tests for plastics products - Part 1: General guidance (ISO 15791-1:2014)
EN ISO 15985:2017	Plastics - Determination of the ultimate anaerobic biodegradation under high-solids anaerobic-digestion conditions - Method by analysis of released biogas (ISO 15985:2014)
EN ISO 16012:2015	Plastics - Determination of linear dimensions of test specimens (ISO 16012:2015)
EN ISO 16396-1:2015	Plastics - Polyamide (PA) moulding and extrusion materials - Part 1: Designation system, marking of products and basis for specifications (ISO 16396-1:2015)
EN ISO 16396-2:2017	Plastics - Polyamide (PA) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 16396-2:2017)
EN ISO 17855-1:2014	Plastics - Polyethylene (PE) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 17855-1:2014)
EN ISO 17855-2:2016	Plastics - Polyethylene (PE) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 17855-2:2016)



EN ISO 19062-1:2015	Plastics - Acrylonitrile-butadiene-styrene (ABS) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 19062-1:2015)
EN ISO 19069-1:2015	Plastics - Polypropylene (PP) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 19069-1:2015)
EN ISO 19069-2:2016	Plastics - Polypropylene (PP) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 19069-2:2016)
EN ISO 20200:2015	Plastics - Determination of the degree of disintegration of plastic materials under simulated composting conditions in a laboratory-scale test (ISO 20200:2015)
EN ISO 20568-1:2017	Plastics - Fluoropolymer dispersions and moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 20568-1:2017)
EN ISO 20568-2:2017	Plastics - Fluoropolymer dispersions and moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 20568-2:2017)
EN ISO 20753:2014	Plastics - Test specimens (ISO 20753:2008)
EN ISO 21509:2015	Plastics and ebonite - Verification of Shore durometers (ISO 21509:2006)
EN ISO 22007-4:2017	Plastics - Determination of thermal conductivity and thermal diffusivity - Part 4: Laser flash method (ISO 22007-4:2017)
EN ISO 22088-1:2006	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 1: General guidance (ISO 22088-1:2006)
EN ISO 22088-2:2006	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 2: Constant tensile load method (ISO 22088-2:2006)
EN ISO 22088-3:2006	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 3: Bent strip method (ISO 22088-3:2006)
EN ISO 22088-4:2006	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 4: Ball or pin impression method (ISO 22088-4:2006)
EN ISO 22088-5:2009	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 5: Constant tensile deformation method (ISO 22088-5:2006)



EN ISO 22088-6:2009	Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 6: Slow strain rate method (ISO 22088-6:2006)
EN ISO 25762:2012	Plastics - Guidance on the assessment of the fire characteristics and fire performance of fibre-reinforced polymer composites (ISO 25762:2009)
EN ISO 28941-1:2008	Plastics - Poly(phenylene ether) (PPE) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 28941-1:2008)
EN ISO 29664:2017	Plastics - Artificial weathering including acidic deposition (ISO 29664:2010)
ISO/TC 61 "Plastics"	
Reference	Title
ISO 19821:2017	Determination of span rating for natural fibre-reinforced plastic composite (NFC) deck boards
ISO 16616:2015	Test methods for natural fibre-reinforced plastic composite (NFC) deck boards
ISO 12815:2013	Fibre-reinforced plastic composites -- Determination of plain-pin bearing strength
ISO 12817:2013	Fibre-reinforced plastic composites -- Determination of open-hole compression strength
ISO 14125:1998	Fibre-reinforced plastic composites -- Determination of flexural properties
ISO 14127:2008	Carbon-fibre-reinforced composites -- Determination of the resin, fibre and void contents
ISO 15024:2001	Fibre-reinforced plastic composites -- Determination of mode I interlaminar fracture toughness, GIC, for unidirectionally reinforced materials
ISO 15034:1999	Composites -- Prepregs -- Determination of resin flow
ISO 15040:1999	Composites -- Prepregs -- Determination of gel time
ISO 15114:2014	Fibre-reinforced plastic composites -- Determination of the mode II fracture resistance for unidirectionally reinforced materials using the calibrated end-loaded split (C-ELS) test and an effective crack length approach
ISO 19821:2017	Determination of span rating for natural fibre-reinforced plastic composite (NFC) deck boards

Table 7: Standards under development on "plastics"

CEN/TC 249 "Plastics"	
Reference	Title
FprCEN/TS 17158	Composites made from cellulose based materials and thermoplastics (usually called wood polymer composites (WPC) or natural fibre composites (NFC)) - Determination of particle size of lignocelulosic material
prEN 17129	Continuous-fibre-reinforced plastic composites - Pultruded unidirectional rods - Determination of tensile properties in parallel to the fibre direction

A.3. Wood, wood-based panels and timber

Table 8: Standards about "wood, wood-based panels and timber"

CEN/TC 112 "Wood-based panels"	
Reference	Title
CEN/TS 1099:2007	Plywood - Biological durability - Guidance for the assessment of plywood for use in different use classes
CEN/TS 14966:2005	Wood-based panels - Small scale indicative test methods for certain mechanical properties
CEN/TS 16368:2014	Lightweight Particleboards - Specifications
CEN/TS 16526:2013	Sandwich boards for furniture (SWB-F) - Factory made products - Definition, classification and test methods for determination of performance characteristics
CEN/TS 635-4:2007	Plywood - Classification by surface appearance - Part 4: Parameters of ability for finishing, guideline
CR 213:1984	Particle boards - Determination of formaldehyde emission under specified conditions - Method called: formaldehyde emission method
EN 300:2006	Oriented Strand Boards (OSB) - Definitions, classification and specifications
EN 309:2005	Particleboards - Definition and classification



EN 310:1993	Wood-based panels - Determination of modulus of elasticity in bending and of bending strength
EN 311:2002	Wood-based panels - Surface soundness - Test method
EN 312:2010	Particleboards - Specifications
EN 313-1:1996	Plywood - Classification and terminology - Part 1: Classification
EN 313-2:1999	Plywood - Classification and terminology - Part 2: Terminology
EN 314-1:2004	Plywood - Bonding quality - Part 1: Test methods
EN 314-2:1993	Plywood - Bonding quality - Part 2: Requirements
EN 315:2000	Plywood - Tolerances for dimensions
EN 316:2009	Wood fibre boards - Definition, classification and symbols
EN 317:1993	Particleboards and fibreboards - Determination of swelling in thickness after immersion in water
EN 318:2002	Wood based panels - Determination of dimensional changes associated with changes in relative humidity
EN 319:1993	Particleboards and fibreboards - Determination of tensile strength perpendicular to the plane of the board
EN 320:2011	Particleboards and fibreboards - Determination of resistance to axial withdrawal of screws
EN 321:2001	Wood-based panels - Determination of moisture resistance under cyclic test conditions
EN 322:1993	Wood-based panels - Determination of moisture content
EN 323:1993	Wood-based panels - Determination of density
EN 324-1:1993	Wood-based panels - Determination of dimensions of boards - Part 1: Determination of thickness, width and length
EN 324-2:1993	Wood-based panels - Determination of dimensions of boards - Part 2: Determination of squareness and edge straightness
EN 325:2012	Wood-based panels - Determination of dimensions of test pieces
EN 326-1:1994	Wood-based panels - Sampling, cutting and inspection - Part 1: Sampling and cutting of test pieces and expression of test results



EN 326-2:2010+A1:2014	Wood-based panels - Sampling, cutting and inspection - Part 2: Initial type testing and factory production control
EN 326-3:2003	Wood-based panels - Sampling, cutting and inspection - Part 3: Inspection of an isolated lot of panels
EN 382-1:1993	Fibreboards - Determination of surface absorption - Part 1: Test method for dry process fibreboards
EN 382-2:1993	Fibreboards - Determination of surface absorption - Part 2: Test method for hardboards
EN 622-1:2003	Fibreboards - Specifications - Part 1: General requirements
EN 622-2:2004	Fibreboards - Specifications - Part 2: Requirements for hardboards
EN 622-2:2004/AC:2005	Fibreboards - Specifications - Part 2: Requirements for hardboards
EN 622-3:2004	Fibreboards - Specifications - Part 3: Requirements for medium boards
EN 622-4:2009	Fibreboards - Specifications - Part 4: Requirements for softboards
EN 622-5:2009	Fibreboards - Specifications - Part 5: Requirements for dry process boards (MDF)
EN 635-1:1994	Plywood - Classification by surface appearance - Part 1: General
EN 635-2:1995	Plywood - Classification by surface appearance - Part 2: Hardwood
EN 635-3:1995	Plywood - Classification by surface appearance - Part 3: Softwood
EN 635-5:1999	Plywood - Classification by surface appearance - Part 5: Methods for measuring and expressing characteristics and defects
EN 636:2012+A1:2015	Plywood - Specifications
EN 717-1:2004	Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method
EN 717-3:1996	Wood-based panels - Determination of formaldehyde release - Part 3: Formaldehyde release by the flask method
EN 1058:2009	Wood-based panels - Determination of characteristic 5-percentile values and characteristic mean values
EN 1087-1:1995	Particleboards - Determination of moisture resistance - Part 1: Boil test
EN 1128:1995	Cement-bonded particleboards - Determination of hard body impact resistance



EN 1156:2013	Wood-based panels - Determination of duration of load and creep factors
EN 12369-1:2001	Wood-based panels - Characteristic values for structural design - Part 1: OSB, particleboards and fibreboards
EN 12369-2:2011	Wood-based panels - Characteristic values for structural design - Part 2: Plywood
EN 12369-3:2008	Wood-based panels - Characteristic values for structural design - Part 3: Solid-wood panels
EN 12775:2001	Solid wood panels - Classification and terminology
EN 12871:2013	Wood-based panels - Determination of performance characteristics for load bearing panels for use in floors, roofs and walls
EN 13017-1:2000	Solid wood panels - Classification by surface appearance - Part 1: Softwood
EN 13017-2:2000	Solid wood panels - Classification by surface appearance - Part 2: Hardwood
EN 13353:2008+A1:2011	Solid wood panels (SWP) - Requirements
EN 13354:2008	Solid wood panels (SWP) - Bonding quality - Test method
EN 13810-1:2002	Wood-based panels - Floating floors - Part 1: Performance specifications and requirements
EN 13879:2002	Wood-based panels - Determination of edgewise bending properties
EN 13986:2004+A1:2015	Wood-based panels for use in construction - Characteristics, evaluation of conformity and marking
EN 14272:2011	Plywood - Calculation method for some mechanical properties
EN 14322:2017	Wood-based panels - Melamine faced board for interior uses - Definition, requirements and classification
EN 14323:2017	Wood-based panels - Melamine faced boards for interior uses - Test methods
EN 14755:2005	Extruded particleboards - Specifications
EN 15197:2007	Wood-based panels - Flaxboards - Specifications
EN ISO 12460-3:2015	Wood-based panels - Determination of formaldehyde release - Part 3: Gas analysis method (ISO 12460-3:2015)
EN ISO 12460-4:2016	Wood-based panels - Determination of formaldehyde release - Part 4: Desiccator method (ISO 12460-4:2016)



EN ISO 12460-5:2015	Wood-based panels - Determination of formaldehyde release - Part 5: Extraction method (called the perforator method) (ISO 12460-5:2015)
CEN/TC 38 "Durability of Wood and Wood-based panels"	
Reference	Title
EN 1014-2:2010	Wood preservatives - Creosote and creosoted timber - Methods of sampling and analysis - Part 2: Procedure for obtaining a sample of creosote from creosoted timber for subsequent analysis
EN 1014-3:2010	Wood preservatives - Creosote and creosoted timber - Methods of sampling and analysis - Part 3: Determination of the benzo(a)pyrene content of creosote
ISO/TC 89 "Wood-based panels"	
Reference	Title
ISO 1096:2014	Plywood -- Classification
ISO 1954:2013	Plywood -- Tolerances on dimensions
ISO 2074:2007	Plywood -- Vocabulary
ISO 2074:2007/ Amd 1:2017	Plywood -- Vocabulary -- Amendment 1
ISO 2426-1:2000	Plywood -- Classification by surface appearance -- Part 1: General
ISO 2426-2:2000	Plywood -- Classification by surface appearance -- Part 2: Hardwood
ISO 2426-3:2000	Plywood -- Classification by surface appearance -- Part 3: Softwood
ISO 27769:2016	Wood-based panels -- Wet process fibreboard
ISO 3340:1976	Fibre building boards -- Determination of sand content
ISO 9424:2003	Wood-based panels -- Determination of dimensions of test pieces
ISO 9426:2003	Wood-based panels -- Determination of dimensions of panels
ISO 9427:2003	Wood-based panels -- Determination of density



ISO 12460-1:2007	Wood-based panels -- Determination of formaldehyde release -- Part 1: Formaldehyde emission by the 1-cubic-metre chamber method
ISO 12465:2007	Plywood -- Specifications
ISO 12466-1:2007	Plywood -- Bonding quality -- Part 1: Test methods
ISO 12466-1:2007/ Amd 1:2013	Plywood -- Bonding quality -- Part 1: Test methods -- Amendment 1
ISO 12466-2:2007	Plywood -- Bonding quality -- Part 2: Requirements
ISO 13608:2014	Plywood -- Decorative veneered plywood
ISO 13609:2014	Wood-based panels -- Plywood -- Blockboards and battenboards
ISO 16893:2016	Wood-based panels -- Particleboard
ISO 16894:2009	Wood-based panels -- Oriented strand board (OSB) -- Definitions, classification and specifications
ISO 16895:2016	Wood-based panels -- Dry-process fibreboard
ISO 16978:2003	Wood-based panels -- Determination of modulus of elasticity in bending and of bending strength
ISO 16979:2003	Wood-based panels -- Determination of moisture content
ISO 16981:2003	Wood-based panels -- Determination of surface soundness
ISO 16983:2003	Wood-based panels -- Determination of swelling in thickness after immersion in water
ISO 16984:2003	Wood-based panels -- Determination of tensile strength perpendicular to the plane of the panel
ISO 16985:2003	Wood-based panels -- Determination of dimensional changes associated with changes in relative humidity
ISO 16987:2003	Wood-based panels -- Determination of moisture resistance under cyclic test conditions
ISO 16998:2003	Wood-based panels -- Determination of moisture resistance -- Boil test
ISO 16999:2003	Wood-based panels -- Sampling and cutting of test pieces
ISO 17064:2016	Wood-based panels -- Fibreboard, particleboard and oriented strand board (OSB) -- Vocabulary



CEN/TC 218 "Timber"	
Reference	Title
ISO 3129:2012	Wood -- Sampling methods and general requirements for physical and mechanical testing of small clear wood specimens
ISO 3132:1975	Wood -- Testing in compression perpendicular to grain
ISO 3347:1976	Wood -- Determination of ultimate shearing stress parallel to grain
ISO 4471:1982	Wood -- Sampling sample trees and logs for determination of physical and mechanical properties of wood in homogeneous stands
ISO 4475:1989	Coniferous and broadleaved tree sawlogs -- Visible defects -- Measurement
ISO 9086-1:1987	Wood -- Methods of physical and mechanical testing -- Vocabulary -- Part 1: General concepts and macrostructure
ISO 13061-1:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 1: Determination of moisture content for physical and mechanical tests
ISO 13061-1:2014/ Amd 1:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 1: Determination of moisture content for physical and mechanical tests -- Amendment 1
ISO 13061-2:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 2: Determination of density for physical and mechanical tests
ISO 13061-2:2014/ Amd 1:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 2: Determination of density for physical and mechanical tests -- Amendment 1
ISO 13061-3:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 3: Determination of ultimate strength in static bending
ISO 13061-3:2014/ Amd 1:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 3: Determination of ultimate strength in static bending -- Amendment 1



ISO 13061-4:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 4: Determination of modulus of elasticity in static bending
ISO 13061-4:2014/ Amd 1:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 4: Determination of modulus of elasticity in static bending -- Amendment 1
ISO 13061-6:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 6: Determination of ultimate tensile stress parallel to grain
ISO 13061-7:2014	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 7: Determination of ultimate tensile stress perpendicular to grain
ISO 13061-10:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 10: Determination of impact bending strength
ISO 13061-11:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 11: Determination of resistance to impact indentation
ISO 13061-12:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 12: Determination of static hardness
ISO 13061-13:2016	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 13: Determination of radial and tangential shrinkage
ISO 13061-14:2016	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 14: Determination of volumetric shrinkage
ISO 13061-15:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 15: Determination of radial and tangential swelling
ISO 13061-16:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 16: Determination of volumetric swelling
ISO 13061-17:2017	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 17: Determination of ultimate stress in compression parallel to grain
ISO 17959:2014	General requirements for solid wood flooring



ISO/TC 165 "Timber structures"	
Reference	Title
ISO 22157-1:2004	Bamboo -- Determination of physical and mechanical properties -- Part 1: Requirements

Table 9: Standards under development about "wood, wood-based panels and timber"

ISO/TC 89 "Wood-based panels"	
Reference	Title
ISO/DIS 12460-2	Wood-based panels -- Determination of formaldehyde release -- Part 2: Small-scale chamber method
CEN/TC 218 "Timber"	
Reference	Title
ISO/CD 3129	Wood -- Sampling methods and general requirements for physical and mechanical testing of small clear wood specimens
ISO/CD 13061-5	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 5: Determination of strength in compression perpendicular to grain
ISO 13061-6:2014/DAmd 1	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 6: Determination of ultimate tensile stress parallel to grain -- Amendment 1
ISO 13061-7:2014/DAmd 1	Physical and mechanical properties of wood -- Test methods for small clear wood specimens -- Part 7: Determination of ultimate tensile stress perpendicular to grain -- Amendment 1



ISO/TC 165 "Timber structures"

Reference	Title
ISO/DIS 22157	Bamboo structures -- Determination of physical and mechanical properties of bamboo culms -- Test methods

A.4. Furniture

Table 10: Standards published about "furniture"

CEN/TC 207 "Furniture"	
Reference	Title
CEN/TR 14073-1:2004	Office furniture - Storage furniture - Part 1: Dimensions
CEN/TR 14699:2004	Office furniture - Terminology
CEN/TS 16209:2011	Furniture - Classification for properties for furniture surfaces
CEN/TS 16611:2016	Furniture - Assessment of the surface resistance to microscratching
EN 527-1:2011	Office furniture – Work tables and desks - Part 1: dimensions
EN 527-2:2017	Office furniture – Work tables and desks - Part 2 : Mechanical safety requirements
EN 581-1:2017	Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 1 : General safety requirements
EN 581-2:2017	Outdoor furniture - Seating and tables for camping, domestic and contract use – Part 2 Mechanical safety requirements and test methods for seating
EN 581-3:2017	Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 3 : Mechanical safety requirements and test methods for tables
EN 597-1:2016	Furniture - Assessment of the ignitability of mattresses and upholstered bed bases - Part 1 : Ignition source : Smouldering cigarette
EN 597-2:2016	Furniture - Assessment of the ignitability of mattresses and upholstered bed bases - Part 2 :



	Ignition source : Match flame equivalent
EN 716-1:2018	Furniture - Children's cots and folding cots for domestic use - Part 1 : Safety requirements
EN 716-2:2018	Furniture - Children's cots and folding cots for domestic use - Part 2 : Test methods
EN 747-1:2012+A1:2015	Furniture - Bunk beds for domestic use - Part 1 : Safety, strength and durability requirements
EN 747-2:2012+A1:2015	Furniture - Bunk beds for domestic use - Part 2 : Test methods
EN 1021-1:2014	Furniture - Assessment of the ignitability of upholstered furniture - Part 1: Ignition source smouldering cigarette
EN 1021-2:2014	Furniture - Assessment of the ignitability of upholstered furniture - Part 2: Ignition source match flame equivalent
EN 1022:2005	Domestic furniture - Seating - Determination of stability
EN 1023-1:1996	Office furniture - Screens - Part 1 : Dimensions
EN 1023-2:2000	Office furniture – Screens – Part 2 : Mechanical safety requirements
EN 1023-3:2000	Office furniture – Screens – Part 3 : Test methods
EN 1129-1:1995	Furniture - Foldaway beds - Safety requirements and testing - Part 1 : Safety requirements
EN 1129-2:1995	Furniture - Foldaway beds - Safety requirements and testing - Part 2 : Test methods
EN 1130-1:1996	Furniture - Cribs and cradles for domestic use - Part 1 : Safety requirements
EN 1130-2:1996	Furniture - Cribs and cradles for domestic use - Part 2 : Test methods
EN 1334:1996	Domestic furniture - Beds and mattresses - Methods of measurement and recommended tolerances
EN 1335-1:2000	Office furniture - Office work chair - Part 1 : Dimensions determination of dimensions
EN 1335-2:2009	Office furniture – Office work chair - Part 2 : Safety requirements
EN 1335-3:2009	Office furniture – Office work chair – Part 3 : Test methods
EN 1725:1998	Domestic furniture - Beds and mattresses - Safety requirements and testing
EN 1728:2012	Furniture — Seating — Test methods for the determination of strength and durability
EN 1729-1:2016	Furniture – Chairs and tables for educational institutions. Part 1 : Functional dimensions



EN 1729-2+A1:2016	Furniture – Chairs and tables for educational institutions - Part 2 : Safety requirements and test methods
EN 1730:2012	Furniture - Tables - Test methods for the determination of stability, strength and durability
EN 12221-1:2008	Changing units for domestic use - Part 1 : Safety requirements
EN 12221-2:2008	Changing units for domestic use - Part 2 : Test methods
EN 12227:2010	Playpens for domestic use – Safety requirements and test methods
EN 12520:2016	Furniture – Strength, durability and safety – Requirements for domestic seating
EN 12521:2016	Furniture - Strength, durability and safety - Requirements for domestic tables
EN 12720:2009+A1:2013	Furniture - Assessment of surface resistance to cold liquids
EN 12721:2009+A1:2013	Furniture - Assessment of surface resistance to wet heat
EN 12722:2009+A1:2013	Furniture - Assessment of surface resistance to dry heat
EN 12727 :2016	Furniture - Ranked seating - Test methods and requirements for strength and durability
EN 13150:2001	Workbenches for laboratories - Dimensions, safety requirements and test methods
EN 13721:2004	Furniture - Assessment of the surface reflectance
EN 13722:2004	Furniture - Assessment of the surface gloss
EN 13759:2012	Furniture - Operating mechanisms for seating and sofa-beds - Test methods
EN 14073-2:2005	Office furniture — Storage furniture — Part 2: Safety requirements
EN 14073-2:2005	Office furniture - Storage furniture - Part 3: Test methods for the determination of stability and strength of the structure.
EN 14074:2004	Office furniture - Tables and desks and storage furniture - Test methods for the determination of strength and durability of moving parts
EN 14434:2010	Writing boards for educational institutions - Ergonomic, technical and safety requirements and their test methods
EN 14703:2007	Furniture - Links for non-domestic seating linked together in a row - Strength requirements and test methods



EN 14727:2005	Laboratory furniture - Storage units for laboratories - Requirements and test methods
EN 14749:2016	Domestic and kitchen storage units and worktops - Safety requirements and test methods
EN 15185:2011	Furniture - Assessment of the surface resistance to abrasion
EN 15186:2012	Furniture - Assessment of the surface resistance to scratching
EN 15187:2006	Furniture - Assessment of the effect of light exposure
EN 15372:2016	Furniture - Strength, durability and safety - Requirements for non-domestic tables
EN 16121:2013+A1:2017	Non-domestic storage furniture - Requirements for safety, strength, durability and stability
EN 16122:2012	Domestic and non-domestic storage furniture - Test methods for the determination of strength, durability and stability
EN 16122:2012/AC:2015	Domestic and non-domestic storage furniture - Test methods for the determination of strength, durability and stability
EN ISO 9241-5:1999	Ergonomic requirements for office work with visual display terminals (VDTs) - Part 5 : Workplace requirements
CEN/TC 264 "Air quality"	
Reference	Title
EN ISO 16000-9:2006	Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method (ISO 16000-9:2006)
ISO/TC 136 "Furniture"	
Reference	Title
ISO 4211:1979	Furniture -- Assessment of surface resistance to cold liquids
ISO 4211-2:2013	Furniture -- Tests for surface finishes -- Part 2: Assessment of resistance to wet heat
ISO 4211-3:2013	Furniture -- Tests for surface finishes -- Part 3: Assessment of resistance to dry heat
ISO 4211-4:1988	Furniture -- Tests for surfaces -- Part 4: Assessment of resistance to impact



ISO 5970:1979	Furniture -- Chairs and tables for educational institutions -- Functional sizes
ISO 7170:2005	Furniture -- Storage units -- Determination of strength and durability
ISO 7171:1988	Furniture - Storage units - Determination of stability
ISO 7173:1989	Furniture - Chairs and stools - Determination of strength and durability
ISO 7174-1:1988	Furniture -- Chairs -- Determination of stability -- Part 1: Upright chairs and stools
ISO 7174-2:1992	Furniture - Chairs - Determination of stability - Part 2: Chairs with tilting or reclining mechanisms when fully reclined, and rocking chairs
ISO 7175-1:1997	Children's cots and folding cots for domestic use -- Part 1: Safety requirements
ISO 7175-2:1997	Children's cots and folding cots for domestic use -- Part 2: Test methods
ISO 8191-1:1987	Furniture -- Assessment of the ignitability of upholstered furniture -- Part 1: Ignition source: smouldering cigarette
ISO 8191-2:1988	Furniture -- Assessment of ignitability of upholstered furniture -- Part 2: Ignition source: match-flame equivalent
ISO 9098-1:1994	Bunk beds for domestic use - Safety requirements and tests - Part 1: Safety requirements
ISO 9098-2:1994	Bunk beds for domestic use - Safety requirements and tests - Part 2: Test methods
ISO 9221-1:2015	Furniture - Children's high chairs - Part 1: Safety requirements
ISO 9221-1:2015	Furniture - Children's high chairs - Part 2: Test methods
ISO 10131-1:1997	Foldaway beds -- Safety requirements and tests -- Part 1: Safety requirements
ISO 10131-2:1997	Foldaway beds -- Safety requirements and tests -- Part 2: Test methods
ISO 21015:2007	Office furniture -- Office work chairs -- Test methods for the determination of stability, strength and durability
ISO 21016:2007	Office furniture - Tables and desks - Test methods for the determination of stability, strength and durability

Table 11: Standards under development about "furniture"

CEN/TC 207 "Furniture"



Reference	Title
FprCEN/TR 17202	Furniture - General safety guidelines - Entrapment of fingers
prEN 17214	Visual assessment of furniture surfaces
ISO/TC 136 "Furniture"	
Reference	Title
ISO/DIS 7170	Furniture -- Storage units -- Test methods for the determination of strength and durability
ISO/DIS 7171	Furniture -- Storage units -- Test methods for the determination of stability
ISO/FDIS 19833	Furniture -- Beds -- Test methods for the determination of stability, strength and durability

A.5. Automobiles

Table 12: Standards published about "automobiles"

ISO/TC 22 "Road vehicles"	
Reference	Title
ISO 3795:1989	Road vehicles, and tractors and machinery for agriculture and forestry -- Determination of burning behaviour of interior materials
ISO 22628:2002	Road vehicles -- Recyclability and recoverability -- Calculation method



ISO/TC 45 "Rubber"/SC 4 "Rubber products"	
Reference	Title
ISO 6452:2007	Rubber- or plastics-coated fabrics -- Determination of fogging characteristics of trim materials in the interior of automobiles
ISO/TC 146 "Air quality"/SC 6 "Indoor air"	
Reference	Title
ISO 12219-6:2017	Interior air of road vehicles -- Part 6: Method for the determination of the emissions of semi-volatile organic compounds from vehicle interior parts and materials at higher temperature -- Small chamber method
CEN/TC 248 "Textiles"	
Reference	Title
EN 29073-1:1992	Textiles - Test methods for nonwovens - Part 1: Determination of mass per unit area *Identical to ISO 9073-1:1989
EN 29073-3:1992	Textiles - Test methods for nonwovens - Part 3: Determination of tensile strength and elongation *Identical to ISO 9073-3:1989
EN ISO 9073-2:1996	Textiles - Test methods for nonwovens - Part 2: Determination of thickness
EN ISO 9073-4:1997	Textiles - Test methods for nonwovens - Part 4: Determination of tear resistance
EN ISO 9073-5:2008	Textiles - Test methods for nonwovens - Part 5: Determination of resistance to mechanical penetration (ball burst procedure)
EN ISO 9073-6:2003	Textiles - Test methods for nonwovens - Part 6: Absorption
EN ISO 9073-7:1998	Textiles - Test methods for nonwovens - Part 7: Determination of bending length
EN ISO 9073-8:1998	Textiles - Test methods for nonwovens - Part 8: Determination of liquid strike-through time (simulated urine)
EN ISO 9073-9:2008	Textiles - Test methods for nonwovens - Part 9: Determination of drapability including drape coefficient



EN ISO 9073-10:2004	Textiles - Test methods for nonwovens -Part 10: Lint and other particles generation in the dry state
EN ISO 9073-11:2004	Textiles - Test methods for nonwovens -Part 11: Run-off
EN ISO 9073-12:2004	Textiles - Test methods for nonwovens -Part 12: Demand absorbency
EN ISO 9073-13:2007	Textiles - Test methods for nonwovens -Part 13: Repeated liquid strike-through time
EN ISO 9073-14:2007	Textiles - Test methods for nonwovens - Part 14: Coverstock wetback
EN ISO 9073-15:2008	Textiles - Test methods for nonwovens -Part 15: Determination of air permeability
EN ISO 9073-16:2008	Textiles - Test methods for nonwovens -Part 16: Determination of resistance to penetration by water (hydrostatic pressure)
EN ISO 9073-17:2008	Textiles - Test methods for nonwovens -Part 17: Determination of water penetration (spray impact)
EN ISO 9073-18:2008	Textiles - Test methods for nonwovens - Part 18: Determination of breaking strength and elongation of nonwoven materials using the grab tensile test
EN ISO 12952-1:2010	Textiles — Assessment of the ignitability of bedding items — Part 1: Ignition source: smouldering cigarette
EN ISO 12952-2:2012	Textiles — Assessment of the ignitability of bedding items — Part 2: Ignition source: match-flame equivalent

ISO/TC 38 "Textiles and textiles products"

Reference	Title
ISO 105-A03:1993	Textiles -- Tests for colour fastness -- Part A03: Grey scale for assessing staining
ISO 105-A02:1993	Textiles -- Tests for colour fastness -- Part A02: Grey scale for assessing change in colour
ISO 105-B02:2014	Textiles -- Tests for colour fastness -- Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
ISO 105-F09:2009	Textiles -- Tests for colour fastness -- Part F09: Specification for cotton rubbing cloth
ISO 9073-1:1989	Textiles - Test methods for nonwovens - Part 1: Determination of mass per unit area *Identical to EN 29073-1:1992
ISO 9073-3:1989	Textiles - Test methods for nonwovens - Part 3: Determination of tensile strength and elongation *Identical to EN 29073-3:1992



A.6. Construction and construction products

Table 13: Standards published about "construction and construction products"

CEN/TC 350 "Sustainability of construction works"	
Reference	Title
EN 15804:2012+A1:2013	Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
CEN/TC 127 "Fire safety in buildings"	
Reference	Title
EN 13501-1:2007+A1:2009	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
ISO/TC 92 "Fire safety"/SC 1 "Fire initiation and growth"	
Reference	Title
ISO 5660-1:2015	Reaction-to-fire tests -- Heat release, smoke production and mass loss rate -- Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)

Table 14: Standards published under development about "construction and construction products"

CEN/TC 350 "Sustainability of construction works"	
Reference	Title
EN 15804:2012+A1:2013 /prA1	Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products



CEN/TC 127 "Fire safety in buildings"

Reference	Title
prEN 13501-1	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests