



OrganiTrust[®]

**OrganiTrust[®] Wood Food Contact
Material Products and Associated
Articles Standard**

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1. Principles of circular economy for wood food contact materials

1.1. Wood has been used throughout history as a safe and sustainable food contact material (FCM) due to its renewable and sustainable nature, light weight, high strength and unique preservation qualities.

1.2. OrganiTrust[®] approves wooden FCMs made from whole, solid, raw wood elements, with FCMs categorised as softwood or hardwood.

1.3. Wooden FCMs can include:

- a. packaging, where primary and secondary packaging layers are generally made of light wooden packaging materials, made from raw materials obtained from sustainably managed forests;
- b. utensils and equipment, such as cutlery, cutting boards, bowls, surfaces, skewers and sticks, both for single and repeated use (where the utensil or piece of equipment can be easily removed and sterilised accordingly);
- c. permanent or non-movable structures, such as surfaces, benches, tables, shelve units etc.;
- d. processing or storage equipment, such as crates, pallets, paddles and barrels, among others; tertiary packaging (e.g., crates and pallets) can be made from a wide variety of wood types according to the specific needs.

1.4. Maintaining effective hygiene levels is critical to the safe use of wood FCMs. Wood is a heterogeneous material, with anisotropic and hygroscopic characteristics. Due to the porous nature of wood, stringent hygiene and sterilisation requirements must be in place.

1.5. Wood is a renewable material. OrganiTrust[®] approves the use of sustainably sourced wood resources, and wooden materials must therefore be used and processed in a responsible and sustainable manner.

1.6. OrganiTrust[®] approves the use of organic wood materials for FCM purposes, requiring processors to ensure that wood is not contaminated with chemicals, processing aids or additives which may cause irreversible and detrimental effects on public and environmental health.

2. Wood food contact material statutory regulations

2.1. Safety

2.1.1. Wood FCMs are generally covered by Regulation (EC) No 1935/2004, stating that ‘any material or article intended to come into contact with food should be sufficiently inert to preclude substances to being transferred to food in quantities large enough to endanger human health or to bring about an unacceptable change in the composition or deterioration in its organoleptic properties’.

2.1.2. In annex I to Regulation (EC) No 1935/2004, there is a list of seventeen materials and articles, including wood, which may be subject to specific measures, although to date, specific measures have not been defined for wood FCMs. Specific measures have been established at

the European level for active and intelligent materials, although wood has been excluded from the definition of 'active and intelligent'.

2.1.3. Commission Regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food is also applicable to wood FCMs.

2.1.4. The note d'information n°2012-93 of the Direction générale de la concurrence, de la consommation et de la répression des fraudes (DGCCRF) in France lists wood species admitted for contact with all types of food and bans the use of antifungal treatment for any kind of wood intended for food-contact applications, except temporary antifungal treatment of wood used to manufacture fruit and vegetable containers. Regulation (EC) No 1907/2006 bans the use of antifungal treatments for any wood intended for FCMs. In addition, in compliance with German decree N° 94-647, wood potentially containing pentachlorophenol (PCP), arsenic or creosote must under no circumstances be used for food contact or for the manufacture of articles likely to contaminate foodstuffs, even when these are not FCMs.

2.1.5. In the absence of harmonised, specific EU regulations, various countries have legislated at the national level, and many refer to the French note d'information n°2012-93, which defines the wood species approved for contact with all types of food:

- a. birch
- b. fir
- c. douglas fir
- d. acacia
- e. poplar
- f. alder
- g. aspen
- h. hornbeam
- i. chestnut
- j. ash
- k. olive
- l. maritime pine
- m. scots pine
- n. sycamore
- o. oak species
- p. for solid foods, wooden FCMs are restricted to poplar, beech, walnut and elm.

2.1.6. Other wood species can be used provided that they comply with Regulation (EC) No 1935/2004 Art. 3 and conform to all OrganiTrust® requirements and compliance testing.

2.1.7. In the USA and EU, regulations state that surfaces in contact with milk and dairy (tools, vats etc.) should be removable, easy to clean and well-maintained. In the EU, the specific requirement is for smooth, washable and nontoxic surfaces. After use, these surfaces should be cleaned and, if necessary, disinfected, with mandatory testing of effective removal of pathogenic species.

2.1.8. While some concerns exist about the porosity of wood not fitting the requirement of 'smooth surfaces', OrganiTrust[®] approves the use of wooden FCMs, provided that these comply with all requirements and full safety testing shows that effective hygiene conditions are achievable and maintained.

2.2. Sustainability

2.2.1. OrganiTrust[®] works in line with the Council Resolution of 1998 on a Forestry Strategy for the EU, supporting its goal to increase the use of sustainably produced wood as an environmentally friendly and climate-neutral material, encouraging the certification of sustainable forest management and identification of related products via labelling.

2.2.2. OrganiTrust[®] also supports the promotion of sustainable and equitable forest management as a valuable method to contribute to the EU's sustainable development policy and sustainable development worldwide.

2.2.3. Council Directive 2000/29/EC establishes the required technical phytosanitary provisions to be met by raw materials and products, as well as the control checks required at the place of origin and upon entry to the EU. This covers energy, chemicals, virgin and recycled wood, their efficient use, all kinds of emissions (air, water and solid waste) and the implementation of cleaner processing techniques.

2.2.4. The Timber and Timber Products (Placing on the Market) Regulation 2013 prohibits the importation and use of illegally harvested timber and timber products in EU countries and requires traceability for up to five years.

2.2.5. FSC and PEFC are global, not-for-profit organisations that set standards for the responsible management of forests, both environmentally and socially. OrganiTrust[®] requires that all wood FCMs meet the standards established by either the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC). Processors must comply with either the FSC normative framework (a collection of FSC policies, standards and procedures that are mandatory for FSC accreditation) or PEFC international standards and policies. FSC and PEFC also publish guidance documents containing technical information. To find specific policies, standards or procedures, visit www.fsc-uk.org and search the FSC Document Centre or www.pefc.org to consult the PEFC technical documents.

3 Approved wood types

3.1. Any of the wood types listed below may be applied as food contact materials:

- a. birch
- b. fir
- c. douglas fir
- d. acacia
- e. poplar
- f. alder

- g. aspen
- h. hornbeam
- i. chestnut
- j. ash
- k. olive
- l. maritime pine
- m. scots pine
- n. sycamore
- o. oak species
- p. for solid foods, wooden FCMs are restricted to poplar, beech, walnut and elm.

3.2. Other wood types may be considered for approval by OrganiTrust[®], providing the processor can prove that they comply with Regulation (EC) No 1935/2004 Art. 3 and that they conform to all OrganiTrust[®] requirements and compliance testing.

3.3. For solid foods, EU guidance states that wooden FCMs should be restricted to poplar, beech, walnut and elm, although other wood types will be considered for approval by OrganiTrust[®] if full compliance testing confirms suitability and safety for the intended purpose.

4. Reusability and recyclability

4.1. For products or articles where reuse as an FCM is expected or potentially feasible, effective decontamination or sterilisation instructions should be provided to the end user with the product.

4.2. For products or articles where reuse as an FCM is expected or potentially feasible, the FCM must be of an adequately smooth surface, with the correct orientation of grain, to allow for effective cleaning and sterilisation.

5. Biodegradability

5.1. All OrganiTrust[®] approved wood FCMs are biodegradable, as OrganiTrust[®] applies rigorous organic production principles and requires processors to ensure that wood is not treated with any potentially harmful substances that might preclude biodegradation.

6. Usage restrictions

6.1. Temperature

6.1.1. To ensure that raw wood materials are sterile and safe for use as an FCM material, OrganiTrust[®] approves the use of the heat application hygiene control methods.

6.1.2. As flame retardant additives and coatings are prohibited for use in FCM applications, wooden FCMs should never be heated to over 120°C, as this may result in charring or combustion of the wooden material.

6.1.3. Due to the potential risk of fire or combustion, labels must clearly indicate the required storage and/or usage conditions to avoid such risk.

6.1.4. The temperature and relative humidity of production and storage environments must be controlled to ensure complete protection of wooden materials and FCM products. Temperatures between 12.5 and 29.5°C (55-85°F) should be maintained.

6.2. Food type

6.2.1. There are no prohibited food content items for wooden FCMs, although full conformity testing must confirm the product or article's suitability for use.

6.2.2. Wood containers used for fruit and vegetable packaging should not be reused for unpackaged and ready-to-eat foods, as they cannot be cleaned and sanitised effectively.

7. Hazard and risk assessment

7.1. Migration test

7.1.1. Critical migration tests required for all OrganiTrust[®] certified wood FCMs:

- a. specific migration testing for any intended migrating substances, with quantitative restrictions or specifications applicable to the substance(s) (e.g., SML, SML(T), QM, QM(T) and QMA);
- b. specific migration testing for any unintended migrating substances, with quantitative restrictions or specifications applicable to the substance(s) (e.g., SML, SML(T), QM, QM(T) and QMA);
- c. specific migration testing for any substances identified as potentially hazardous, with quantitative restrictions or specifications applicable to the substance(s) (e.g., SML, SML(T), QM, QM(T) and QMA);
- d. NIAS migration testing is required as mandatory;
- e. OrganiTrust[®] does not permit the use of any antifungal substance applied (including non-direct contact) to wood FCMs that is not present on the OrganiTrust[®] Approved Substance List; any approved substance must be applied to a minimum level and ensuring that migration levels are within the prescribed limits;
- f. organoleptic testing is required, as to comply with current legislations, wood must not transfer compounds in any amount that negatively affect the composition or the taste of food or that are likely to pose a risk to human health. Although properties and exchange of wood components may be desirable or purposeful as part of the product design, when wood is applied, its safety and suitability must be established through full-compliance organoleptic testing.

7.1.2. Migration testing guidance:

- a. OrganiTrust[®] approves the use of reference methods cited in DGCCRF note d'information n°2012-93 for general migration and extraction procedures;
- b. OrganiTrust[®] does not exclude the use of other suitable and validated methods for migration compliance check, subject to prior approval by OrganiTrust[®];

- c. for all wood FCMs, migration levels must be established where those substances are found to be present in the course of mandatory tests on non-intentionally added substances:
 - i. antifungal substances
 - ii. VOCs
 - iii. PCP
 - iv. PCB
 - v. Pb
 - vi. Cd
 - vii. Hg
 - viii. As
 - ix. Cr
 - x. Cd
 - xi. creosote
 - xii. formaldehyde.

7.1.3. OrganiTrust[®] approved standards for assessment of overall migration in wood FCMs:

- a. migration testing conformity should be ensured by following Regulation (EU) No 10/2011;
- b. testing with olive oil at low temperatures may result in partial crystallisation and solidification of fats; therefore, a more unsaturated oil such as sunflower oil may be used for testing at low temperatures (5°C and 20°C) in accordance with EN 1186-12;
- c. for repeated-use articles, EN 1186-12 and EN 13130-1 state that migration tests must be carried out three times on the same test sample, using a fresh sample of the food simulant on each occasion; the compliance of the material is then checked on the basis of the level of migration found during the third test;
- d. repeated-use and long-term storage migration tests are required for all non-single-use wood FCMs, with specific migration testing repeated following the simulation of intended usage conditions to ensure complete safety for the intended purpose, including but not limited to:
 - i. dishwasher safety;
 - ii. long-term food storage safety;
 - iii. repeated wash and reuse safety;
 - iv. or any other use as relevant;
- e. organoleptic testing should be performed under the guidance of ISO 13302 or equivalent, subject to OrganiTrust[®] prior approval.

7.2. Microbial contamination test

7.2.1. Critical microbial contamination tests required for wood FCMs:

- a. OrganiTrust[®] requires microbial compliance testing confirming that no detectable pathogenic organisms are present, with testing at an absolute minimum for:

- i. campylobacter
 - ii. salmonella
 - iii. listeria
 - iv. verocytotoxigenic Escherichia coli
 - v. brucella
 - vi. trichinella;
- b. OrganiTrust[®] requires conformity testing on samples from each batch or at regular intervals, as deemed appropriate.

7.2.2. Microbial contamination testing guidance:

- a. OrganiTrust[®] approves microbial contamination testing using either agar contact plates or swabbing methods;
- b. testing must show, for quality control:
 - i. total count of bacteria, mould and yeast
 - ii. number of colonies of bacteria, mould and yeast
 - iii. identification of bacteria, mould and yeast;
- c. OrganiTrust[®] approves the use of quantitative methods to analyse the microbial contamination of wooden surfaces in accordance with the international standard ISO 18593:2004.

8. Specific product requirements

8.1. Wood as an active and intelligent material

8.1.1. Wood is formed of a porous structure with a number of free low-molecular-weight organic compounds that are easily extractable. However, wood FCMs are not designed to deliberately incorporate components that would release substances into the food. Therefore, this type of material is not considered as active and is excluded from the category of 'active and intelligent materials' as defined by both the Organics Council[®] and EU regulations.

8.1.2. As per OrganiTrust[®] migration testing requirements, manufacturers must perform full compliance testing to confirm that the concentration of migrating substances is safe and suitable for use.

8.2. Multi-material wood food contact materials

8.2.1. Wooden components of multi-material FCM products must meet the requirements established in this Standard, with all components, whether in direct contact with food contents or not, meeting the requirements established in this Standard.

8.2.2. Fixed coatings and layers are considered secondary FCMs. Manufacturers must confirm that any materials applied as an outer, non-direct-contact wooden FCM are OrganiTrust[®] approved and contain only substances approved by the Organics Council[®]. Conformity testing must confirm that the material is fit for purpose.

8.2.3. Removable outer labels and wrapping for wood FCMs are classed as tertiary FCMs and may be made from any OrganiTrust[®] approved material type, providing that conformity testing confirms the material is fit for purpose and does not transfer any potentially harmful substances to the food product.

8.2.4. Adhesives, sealants, inks or any other accessory or associated component of wood FCMs must meet the requirements established in this Standard, using only substances included in the Organics Council[®] Approved Substance List.

8.3. Wood composite materials as food contact material

8.3.1. Composite wood packing materials, also known as solid wood packing material and non-manufactured wood packing, are not approved for use by OrganiTrust[®], as they contain potentially harmful substances and additives, such as urea-formaldehyde and phenol formaldehyde resins used as adhesives in the production of particle board and plywood.

8.4. Wood surfaces and permanent structures in industrial, commercial and domestic applications

8.4.1. Permanently fixed surfaces and structures made of solid wood are approved for use by OrganiTrust[®] in domestic applications without restriction.

8.4.2. Permanently fixed surfaces and structures made of solid wood are approved for use by OrganiTrust[®] in food industry applications as primary FCM applications with the following restrictions:

- a. separation of use for food types and products to avoid cross-contamination;
- b. working surfaces need to be constantly maintained and monitored for cleaning and disinfecting.

8.5. Wood tertiary food contact materials and packaging for import and export

8.5.1. The licensee must ensure all tertiary FCM packaging and other wood FCMs intended for international import and export meet the relevant international regulations for pest control on wood packaging materials. EU Directive 2005/15/EC (amending Directive 2004/102/EC), based on the 2002 FAO International Standard for Phytosanitary Measures (ISPM) No 15, covers all solid coniferous wood packaging materials (pallets, boxes and containers). Regulations state that for materials shipped to the EU from the United States, Canada, China or Japan, these must be treated with one of the following methods:

- a. heat treated to a core temperature of 132.8°F (56°C) for a minimum of thirty minutes and marked to indicate where the pallet or wood packing was treated;
- b. pressure treated and marked to indicate the location of treatment.

8.5.2. OrganiTrust[®] requires the adoption of ISPM 15 protocols into the manufacturing processes to 'reduce the risk of introduction and spread of quarantine pests associated with the

movement in international trade of wood packaging material made from raw wood', ensuring that the non-chemical methods are applied.

8.5.3. The licensee must not use chemical hygiene control methods for wood FCMs. In any scenario where chemical hygiene control methods have been implemented to avoid catastrophic loss of stock or materials, subject to prior OrganiTrust[®] approval, effective control measures must be in place to ensure that the treated stock is isolated and removed until declared safe, ensuring that wood FCM materials are not contaminated by chemical methods such as:

- a. fumigation;
- b. chemical pressure impregnation of wood;
- c. chemical dipping.