

# WOOD

## 1 Scope

This concerns wooden materials and articles intended as finished products to come into direct or indirect contact (proximity) with foodstuffs. The wood can be in the form of raw timber, reconstituted wood panels, varnished, lacquered or painted.

The main examples of applications are as follows:

- Primary packaging in direct contact

Many food trade branches are concerned. For example: fruit and vegetables (crates and baskets), fish and seafood (crates, boxes and baskets), dairy products (boxes, bases), bakery and cakes (baskets and bowls), confectionery (sweet packaging).

- Packaging for transport (crates, pallets).

The main foodstuffs concerned are fruit and vegetables (crates, pallets), and conditioned foodstuffs stored at room temperatures (indirect contact).

- Supports used during manufacture, technological additives and equipment.

The different applications concerned in the latter case are:

- boards and wooden pails used for cheese-making,
- barrels used for making wine and spirits,
- skewers for meat, fish, vegetables and fruit,
- lollipop and ice-cream sticks,
- butcher's blocks used for cutting up meat,
- worktops and kitchen utensils for all types of foodstuffs.

The construction and outfitting of premises used in the food distribution sector, canteens, and in the various branches of the agri-food industry are also concerned.

The following are excluded:

- basketwork items,
- cork and objects made from cork,
- wooden pallets for the transport of conditioned foodstuffs,
- applications for which the use of wood is mandatory for other reasons (example - AOC labels).

## **2 Restrictions on the use of materials**

Except for anti-fungal treatments for fruit and vegetable containers, wooden items in direct contact with food, or likely to come into contact with foodstuffs, must not have undergone chemical preservation treatment.

The regulations for all other applications of chemicals are described in section 3.1.4 of this document.

## **3 Definition of suitability criteria for contact with foodstuffs**

### **3.1 Texts to be used**

There are no formal authorisations for the use of certain species of timber, particularly tropical, for direct contact with foodstuffs.

#### **3.1.1 Materials in contact with foodstuffs:**

##### ***Statutory texts***

- European Parliament and Council (EU) regulation N° 1935/2004 dated 27 October 2004 concerning materials and articles intended to come into contact with food, repealing directives 80/590/EEC and 89/109/EEC, published in the Official Journal of the European Union on 13 November 2004;
- Consumer code (Legislative Part) – Volume II – Part 1:
  - Compliance with Chapter II – General requirement to comply with Article L212-1: Requirement for self-checks and to provide proof of checks and tests carried out.
  - Compliance with Chapter IV – Measures for applying Article L214-1: Enforcement measures; Paragraphs 2 and 3 Sanctions in the event of failure to comply with the orders contained in Articles L.214-1 and L214-3 and in the event of putting on sale before the results of analysis of goods recognized as unlawful.
- Consumer code (Legislative Part) – Volume II – Section 2:
  - Safety – Chapter 1 – Risk prevention Article L221-1: General safety requirements concerning products and services applicable to professionals, requirement to inform the consumer of a product's inherent risks, requirement for the person responsible for offering the item for sale to adopt measures which, given the characteristics of the products that he is supplying, allow him to keep himself informed of the risks that the products that he is selling may pose and to take all the necessary measures to handle these risks;
- Decree N° 92-631 dated 8 July 1992, as amended, concerning materials and articles intended to come into contact with foodstuffs, products and drinks for consumption by humans and animals;
- Decree N° 73-138 dated 13 February 1973, in application of the law dated 1 August 1905 [codified law (Consumer Code)] concerning the punishment of fraud relating to chemical products in human foodstuffs, and to materials and articles in contact with foods, products or drinks intended for consumption by humans or animals, and to the processes and products used for cleaning these materials and articles.

### **3.1.2 Timber species:**

#### **Statutory texts**

- Order dated 15 November 1945 giving the list of materials suitable for use in the manufacture of measuring instruments and not having any ill effects for public health.

#### **Other texts**

- Circular dated 28 November 1980: *d) the provisions of the Order dated 15 November 1945 giving the list of materials suitable for use in the manufacture of measuring instruments and not having any ill-effects for public health, have been extended to containers intended for the storage and preservation of drinks and foodstuffs*
- ;
- Administrative Notices published in the BID: particularly notices Nos. 81-046, 82-331, 83-341, 87-168, 88-497, 90-387, 92-338, 97-132 and 97-306

### **3.1.3 Treatment products**

#### **Statutory texts**

- Council Directive N° 76/769/EEC dated 27 July 1976, as amended, concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (in particular, see the specific modifications in 91/173 and those concerning arsenic in 2003/2/EU);
- European Parliament and Council Directive N° 98/8/EC dated 16 February 1998, amendment dated 08/06/2002 concerning concerning the placing of biocidal products on the market .
- Decree N° 94-647 dated 27 July 1994, modified, concerning the placing on the market and the use of pentachlorophenol, cadmium and their compounds.
- Order dated 17 November 2004, concerning the conditions for labelling wood treated with arsenic compounds.
- Order dated 7 August 1997, concerning the limitations for offering for sale and the use of some products containing dangerous substances (creosote).

#### **Other texts**

- List of active materials permitted in anti-fungal treatment products for wood intended for the manufacture of fruit and vegetable containers (see list included).

### **3.1.4 Glues, coatings, paints, inks:**

#### **Statutory texts**

- Commission Directive N° 2002/72/EC dated 6 August 2002, amendment 13/02/2003 concerning plastic materials and articles intended for contact with foodstuffs;
- Council Directive N° 85/572/EEC dated 16 December 1985, laying down the list of simulants to be used for testing migration of the constituents of plastic materials and articles intended to come into contact with foodstuffs;

- Council Directive N° 82/711/EEC dated 18 October 1982, laying down the basic rules necessary for testing migration of the constituents of plastic materials and objects intended to come into contact with foodstuffs;

*[Note: In the terms of the order dated 2 April 2003 – see below – concerning the use of some epoxyde derivatives in materials or objects placed, or intended to be placed, in contact with foodstuffs, the migration of BADGE and BFDGE, and some related products, is calculated in accordance with the rules given in these directives]*

- Order dated 2 January 2003, as amended, concerning plastic materials and objects placed, or intended to be placed, in contact with foodstuffs, drinks and food products;
- Order dated 2 April 2003, as amended, concerning the use of some epoxyde derivatives in materials or objects placed, or intended to be placed, in contact with foodstuffs

### **Other texts**

- Resolution of the European Council AP(2004)1 on coatings intended to come into contact with foodstuffs;
- Resolution of the European Council AP(92)2 on control of aids to polymerisation (technological coadjuvants) for plastics materials and articles intended to come into contact with foodstuffs;
- Resolution of the European Council AP(89)1 on the use of colourant in plastic materials coming into contact with foodstuffs;
- CSHPF (French Public Health Authority) Notice dated 7 November 1995 concerning inks and coatings;
- Other texts (circulars, circular-letters, instructions, etc.) grouped in the French Republic Official Journal brochure N° 1227

## **3.2 Criteria to be used**

Wood is likely to interact with foodstuffs both bacteriologically and chemically. However, very few problems have been encountered up till now in actual use. Wood is also a material that can have a desired effect in agri-food technology (aging of spirits in barrels, maturing of cheese in contact with wooden churns, etc.).

The assessment of the suitability of wooden equipment or articles for food contact must therefore take into account their use, and the interactions desired.

### **3.2.1 Timber species:**

In the absence of specific regulations concerning wood, the timber species listed in the order dated 15 November 1945 are permitted, by extension, for all types of food contact, under the food contact conditions stipulated in this order:

- *for all types of food:* oak, hornbeam, sweet chestnut, ash, acacia
- *for food solids:* walnut, beech, elm and poplar.

However, other timber species, either traditionally used in France for food contact, and/or, which have been assessed, have since been approved as suitable for food contact:

- *for all types of food:* Silver fir, Norway Spruce, Douglas Fir, Maritime Pine, Scots Pine, Poplar, Beech, Plane, Aspen, Alder, Olive and Birch.

### **3.2.2 Products for treating and preserving wood**

Wood likely to, or intended for, contact with foodstuffs must not be treated, except in the exceptional cases detailed below.

In particular, in compliance with decree N° 94-647 dated 27 July 1994, wood treated with pentachlorophenol (PCP), or compounds containing PCP, must under no circumstances be used for food contact or for the manufacture of articles likely to contaminate foodstuffs, even when these do not come into direct contact with the food. This is also the case for wood treated with products containing arsenic or creosote.

Wood intended for the manufacture of fruit and vegetable containers may be treated with some anti-fungal compounds, on condition that the active ingredients they contain have been approved exceptionally for this use. Some timber species require anti-fungal treatment (called “anti-blue”), generally at the sawmill stage. The active ingredients used must undergo risk assessment by the AFSSA (French Food Safety Authority). The table given in annex lists the active ingredients that have already been assessed, and which can therefore be used for the “anti-blue” treatment of wood likely to, or intended for, contact with foodstuffs.

### **3.2.3 Undesirable compound content**

If necessary, check the pentachlorophenol content.

### **3.2.4 Specific migrations**

Depending on the manufacture of the finished article and the treatments applied to the wood (particularly solvents, glues, lacquers, varnishes and paints).

## **4 Limit of acceptability**

### **4.1 Case of pentachlorophenol**

Pentachlorophenol is a universal environmental contaminant. This may lead to observing actual and accidental contamination of some wood placed on sale. The suitability of this wood for contact with foodstuffs must be assessed on a case-by-case basis, after eliminating any possibility that the wood may have been treated.

### **4.2 Limits of specific migration**

The types and thresholds for the substances to be studied must depend on the manufacture of the finished article and the treatments applied to the wood (particularly solvents, glues, coatings and paint).

In particular, green-coloured wood (green throughout), should be checked for traces of treatment using copper-chrome-arsenic.

### **4.2.1 Products for treating and preserving wood**

The chemical compound content found in the wood depends on three factors:

- the natural levels, generally found in untreated timber, which are due to environmental pollution;
- specific contaminants;
- treatment of the timber.

The presence of trace quantities does not necessarily mean that the wood has been treated or contaminated. There is a significant difference between the natural levels and the levels after treatment or contamination.

In the context of materials impregnated with approved anti-fungal compounds, intended for contact with foodstuffs (fruit and vegetables), the concentration of the active substances must correspond to the conditions of use given in the summary list of substances and compounds permitted in France (Annex 1).

### **4.2.2 Glues, lacquers, varnishes, paints, inks and other added products**

- Composition: permitted original substances, monomers and additives (recommendation: inscription in the directives concerning plastic materials for food contact, in lists 1.1, 1.2, 2.1, 2.2 in Resolution AP(2004)1, in the Scientific Committee for Human Foodstuffs lists 0 to 4, or in the list of substances assessed by authorities in other countries);
- Specific migration of these constituents depending on their assessment.

### **4.2.3 Microbial criteria**

Work pending

### **4.2.4 Organoleptic criteria**

Work pending

## **5 Rules for checking the criteria defined in paragraph 3**

Standard NF B 51-297; assessment of the natural level of PCP in timber – result expressed in mg/kg of wood.

## **6 Annex**

Summary lists of substances and compounds approved in France in the context of products for preserving wood (“anti-blue” protection), intended to come into contact with foodstuffs (fruit and vegetables).

LIST I: substances and compounds approved in France in the context of products for preserving wood ("anti-blue" protection), intended for contact with foodstuffs (fruit and vegetables):

Chemical name for the active substances	Conditions for use	Remarks	CSHPF Notice	BOCCRF Publication
Alkyl trimethyl ammonium chloride (C8-18)	1.7% max. in preparation ready for use	Used singly or mixed	Favourable 02/07/1991	06/11/1996
Sodium 2-ethyl hexanate	2.5% ditto			
Sodium tetraborate	0.6% ditto			
Copper oxyquinolate CAS N° 10380-28-6	10% aqueous suspension		Favourable 09/06/1992	18/12/1992
Didecyl dimethyl ammonium chloride (= CDDA) CAS N° 7153-51-5	Permitted at 3% in the concentrated preparation		11/07/1995	15/12/1995
Alpha-tert-butyl-alpha (parachlorophenethyl)-1H-1,2,4-triazol-1-ethanol (tebucanazole)	Maximum concentration for use: 0.5% <b>Fruit and vegetables in which the tebucanazole MLR is greater than or equal to 0.2 mg/kg (in 1999: apples, apricots, grapes)</b>	Tebucanazole migration less than 0.3 mg/dm <sup>3</sup>	14/09/1999	
3-iodo-2-propynyl-N-butyl carbamate (IPBC)	0.9 g/l	Migration less than the detection threshold	09/11/1999	
propiconazole	0.9 g/l	Migration less than the MRL of 0.05 mg/kg		

LIST II: expires on 1 September 2006 due to the application of the Biocide directive (Non-notified substances are shaded).

Chemical name for the active substances	Conditions for use	Remarks	CSHPF Notice	BOCCRF Publication
Methyl-benzimidazol-2-yl-carbamate (= Carbendazime)  prochloraz	In compliance with the limits already fixed.  Permitted at 1g/l in treatment bath	Migrations of these substances less than the maximum limits for residual concentrations of 0.05 mg/l	16/03/2001	
carbendazime	0.24 g/l	Migration less than the MRL of 0.1 mg/l	09/11/1999	
1-((2-(2,4 dichlorophenyl)1-3-dioxolan-2-yl)methyl)-1H-1,2,4-triazole (= Azaconazole)  CAS N° 60207-31-0	0.4 g/m <sup>2</sup>	Reserves concerning the direct contact with fragile fruit, global dose < 4 g/m <sup>2</sup>	05/10/1993	24/06/1994
Chloride of "coco" alkyl-benzyl-dimethyl ammonium (= benzalconium)	4 g/m <sup>2</sup>	With protective sheet		
Methyl-benzimidazol-2-yl-carbamate (= Carbendazime)	0.03 g/m <sup>2</sup>	Used singly or mixed		
2,4,5,6 Tetrachloro-isophthalonitrile (= Chlorothalonil)	0.75 g/m <sup>2</sup>	Migrations of these substances less than the maximum limits for residual concentrations of 0.05 mg/l	09/07/1996	06/11/1996
Methyl-benzimidazol-2-yl-carbamate (= Carbendazime)	0.15 g/m <sup>2</sup>			
Copper oxyquinolate CAS N° 10380-28-6		Notice concerning the preparation	11/07/1995	15/12/1995
1-((2-(2,4 dichlorophenyl)1-3-dioxolan-2-yl)methyl)-1H-1,2,4-triazole (= Azaconazole)  CAS N° 60207-31-0	In compliance with the limits already fixed.			