



**INTERNATIONAL STANDARDS FOR  
PHYTOSANITARY MEASURES**

**ISPM No. 15**

***GUIDELINES FOR REGULATING WOOD PACKAGING  
MATERIAL IN INTERNATIONAL TRADE***

**(2002)**

**with modifications to Annex I (2006)**

Produced by the Secretariat of the International Plant Protection Convention





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## ENDORSEMENT

This standard was endorsed by the Interim Commission on Phytosanitary Measures in March 2002. Modifications to Annex I were endorsed by the Commission on Phytosanitary Measures in April 2006.

## INTRODUCTION

### SCOPE

This standard describes phytosanitary measures to reduce the risk of introduction and/or spread of quarantine pests associated with wood packaging material (including dunnage), made of coniferous and non-coniferous raw wood, in use in international trade.

### REFERENCES

- Agreement on the Application of Sanitary and Phytosanitary Measures*, 1994. World Trade Organization, Geneva.  
*Export certification system*, 1997. ISPM No. 7, FAO, Rome.  
*Glossary of phytosanitary terms*, 2001. ISPM No. 5, FAO, Rome.  
*Guidelines for phytosanitary certificates*, 2001. ISPM No. 12, FAO, Rome.  
*Guidelines on notification of non-compliance and emergency action*, 2001. ISPM No. 13, FAO, Rome.  
ISO 3166-1-ALPHA-2 CODE ELEMENTS ([http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/en\\_listp1.html](http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/en_listp1.html))  
*International Plant Protection Convention*, 1997. FAO, Rome.  
*Principles of plant quarantine as related to international trade*, 1995. ISPM No. 1, FAO, Rome.

### DEFINITIONS

Definitions of phytosanitary terms used in the present standard can be found in ISPM No. 5 (*Glossary of phytosanitary terms*).

### OUTLINE OF REQUIREMENTS

Wood packaging material made of unprocessed raw wood is a pathway for the introduction and spread of pests. Because the origin of wood packaging material is often difficult to determine, globally approved measures that significantly reduce the risk of pest spread are described. NPPOs are encouraged to accept wood packaging material that has been subjected to an approved measure without further requirements. Such wood packaging material includes dunnage, but excludes processed wood packaging material.

Procedures to verify that an approved measure, including the application of a globally recognized mark, has been applied should be in place in both exporting and importing countries. Other measures agreed to under a bilateral arrangement are also considered in this standard. Wood packaging material that does not comply with the requirements of this standard should be disposed of in an approved manner.

## REGULATORY REQUIREMENTS

### 1. Basis for Regulating

Wood packaging material is frequently made of raw wood that may not have undergone sufficient processing or treatment to remove or kill pests and therefore becomes a pathway for the introduction and spread of pests. Furthermore, wood packaging material is very often re-used, recycled or re-manufactured (in that packaging received with an imported consignment may be re-used to accompany another consignment for export). The true origin of any piece of wood packaging material is difficult to determine and thus its phytosanitary status cannot be ascertained. Therefore the normal process of undertaking risk analysis to determine if measures are necessary and the strength of such measures is frequently not possible for wood packaging material because its origin and phytosanitary status may not be known. For this reason, this standard describes globally accepted measures that are approved and that may be applied to wood packaging material by all countries to practically eliminate the risk for most quarantine pests and significantly reduce the risk from a number of other pests that may be associated with that material.

Countries should have technical justification for requiring the application of the approved measures as described in this standard for imported wood packaging material. Requiring phytosanitary measures beyond an approved measure as described in this standard also requires technical justification.

### 2. Regulated Wood Packaging Material

These guidelines are for coniferous and non-coniferous raw wood packaging material that may serve as a pathway for plant pests posing a threat mainly to living trees. They cover wood packaging material such as pallets, dunnage, crating, packing blocks, drums, cases, load boards, pallet collars, and skids which can be present in almost any imported consignment, including consignments which would not normally be the target of phytosanitary inspection.

Wood packaging made wholly of wood-based products such as plywood, particle board, oriented strand board or veneer that have been created using glue, heat and pressure or a combination thereof should be considered sufficiently processed to have eliminated the risk associated with the raw wood. It is unlikely to be infested by raw wood pests during its use and therefore should not be regulated for these pests.

Wood packaging material such as veneer peeler cores<sup>1</sup>, sawdust, wood wool, and shavings, and raw wood cut into thin<sup>2</sup> pieces may not be pathways for introduction of quarantine pests and should not be regulated unless technically justified.

### 3. Measures for Wood Packaging Material

#### 3.1 Approved measures

Any treatment, process, or a combination of these that is significantly effective against most pests should be considered effective in mitigating pest risks associated with wood packaging material used in transport. The choice of a measure for wood packaging material is based on consideration of:

- the range of pests that may be affected
- the efficacy of the measure
- the technical and/or commercial feasibility.

Approved measures should be accepted by all NPPOs as the basis for authorizing the entry of wood packaging material without further requirements except where it is determined through interceptions and/or PRA that specific quarantine pests associated with certain types of wood packaging material from specific sources require more rigorous measures.

Approved measures are specified in Annex I.

Wood packaging material subjected to these approved measures should display a specified mark shown in Annex II.

The use of marks addresses the operational difficulties associated with the verification of compliance with treatment for wood packaging material. A universally recognized, non-language specific mark facilitates verification during inspection at the point of export, at the point of entry or elsewhere.

References for supporting documentation on approved measures are available from the IPPC Secretariat.

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<sup>1</sup> Veneer peeler cores are a by-product of veneer production involving high temperatures and comprising the center of a log remaining after the peeling process.

<sup>2</sup> Thin wood is considered to be 6mm thickness or less according to the Customs Harmonized Commodity Description and Coding System (the Harmonized System or HS).

### 3.2 Measures pending approval

Other treatments or processes for wood packaging material will be approved when it can be demonstrated that they provide an appropriate level of phytosanitary protection (Annex III). The currently measures identified in Annex I continue to be under review, and new research may point, for example, to other temperature/time combinations. New measures may also reduce risk by changing the character of the wood packaging material. NPPOs should be aware that measures may be added or changed and should have sufficiently flexible import requirements for wood packaging to accommodate changes as they are approved.

### 3.3 Other measures

NPPOs may accept any measures other than those listed in Annex I by arrangement with their trading partners, especially in cases where the measures listed in Annex I cannot be applied or verified in the exporting country. Such measures should be technically justified and respect the principles of transparency, non-discrimination and equivalence.

The NPPOs of importing countries should consider other arrangements for wood packaging material associated with exports from any country (or particular source) where evidence is provided which demonstrates that the pest risk is adequately managed or absent (e.g. areas with similar phytosanitary situations or pest free areas).

Certain movements of wood packaging material (e.g. tropical hardwoods associated with exports to temperate countries) may be considered by the importing NPPO not to carry a phytosanitary risk and thus can be exempted from measures.

Subject to technical justification, countries may require that imported wood packaging material subjected to an approved measure be made from debarked wood and display a mark as shown in Annex II.

### 3.4 Review of measures

The approved measures specified in Annex I and the list of measures under consideration in Annex III should be reviewed based on new information provided to the Secretariat by NPPOs. This standard should be amended appropriately by the ICPM.

## OPERATIONAL REQUIREMENTS

To meet the objective of preventing the spread of pests, both exporting and importing countries should verify that the requirements of this standard have been met.

### 4. Dunnage

Ideally, dunnage should also be marked in accordance with Annex II of this standard as having been subjected to an approved measure. If not, it requires special consideration and should, as a minimum, be made from bark-free wood that is free from pests and signs of live pests. Otherwise it should be refused entry or immediately disposed of in authorized manner (see section 6).

### 5. Procedures Used Prior to Export

#### 5.1 Compliance checks on procedures applied prior to export

The NPPO of the exporting country has responsibility for ensuring that systems for exports meet the requirements set out in this standard. It includes monitoring certification and marking systems that verify compliance, and establishing inspection procedures (see also ISPM No. 7: *Export certification system*), *registration or accreditation and auditing of commercial companies that apply the measures*, etc.

#### 5.2 Transit arrangements

Where consignments moving in transit have exposed wood packaging material that has not met the requirements for approved measures, the NPPOs of the transit countries may require measures in addition to those of the importing country to ensure that wood packaging material does not present an unacceptable risk.

### 6. Procedures upon Import

The regulation of wood packaging material requires that NPPOs have policies and procedures for other aspects of their responsibilities related to wood packaging material.

Since wood packaging materials are associated with almost all shipments, including those not normally the target of phytosanitary inspections, cooperation with agencies, organizations, etc. not normally involved with meeting phytosanitary export conditions or import requirements is important. For example, cooperation with Customs

organizations should be reviewed to ensure effectiveness in detecting potential non-compliance of wood packaging material. Cooperation with the producers of wood packaging material also needs to be developed.

### **6.1 Measures for non-compliance at point of entry**

Where wood packaging material does not carry the required mark, action may be taken unless other bilateral arrangements are in place. This action may take the form of treatment, disposal or refused entry. The NPPO of the exporting country may be notified (see ISPM No. 13: *Guidelines on notification of non-compliance and emergency action*). Where the wood packaging material does carry the required mark, and evidence of live pests is found, action can be taken. These actions may take the form of treatment, disposal or refused entry. The NPPO of the exporting country should be notified in cases where live pests are found, and may be notified in other cases (see ISPM No. 13: *Guidelines on notification of non-compliance and emergency action*).

### **6.2 Disposal**

Disposal of wood packaging material is a risk management option that may be used by the NPPO of the importing country upon arrival of the wood packaging material where treatment is not available or desirable. The following methods are recommended for the disposal of wood packaging material where this is required. Wood packaging material that requires emergency action should be appropriately safeguarded prior to treatment or disposal to prevent escape of any pest between the time of the detection of the pest posing the threat and the time of treatment or disposal.

#### **Incineration**

Complete burning

#### **Burial**

Deep burial in sites approved by appropriate authorities. (Note: not a suitable disposal option for wood infested with termites). The depth of the burial may depend on climatic conditions and the pest, but is recommended to be at least 1 metre. The material should be covered immediately after burial and should remain buried.

#### **Processing**

Chipping and further processing in a manner approved by the NPPO of the importing country for the elimination of pests of concern (e.g. manufacture of oriented strand board).

#### **Other methods**

Procedures endorsed by the NPPO as effective for the pests of concern.

The methods should be applied with the least possible delay.



## ANNEX I (modified in 2006)

## APPROVED MEASURES ASSOCIATED WITH WOOD PACKAGING MATERIAL

**Heat treatment (HT)**

Wood packaging material should be heated in accordance with a specific time-temperature schedule that achieves a minimum wood core temperature of 56°C for a minimum of 30 minutes<sup>3</sup>.

Kiln-drying (KD), chemical pressure impregnation (CPI), or other treatments may be considered HT treatments to the extent that these meet the HT specifications. For example, CPI may meet the HT specification through the use of steam, hot water, or dry heat.

Heat treatment is indicated by the mark HT. (see Annex II)

**Methyl bromide (MB) fumigation for wood packaging material (modified in 2006<sup>4</sup>)**

The wood packaging material should be fumigated with methyl bromide. The treatment is indicated by the mark MB. The minimum standard for methyl bromide fumigation treatment for wood packaging material is as follows:

Temperature	Dosage (g/m <sup>3</sup> )	Minimum concentration (g/m <sup>3</sup> ) at:			
		2hrs.	4hrs.	12hrs.	24hrs.
21°C or above	48	36	31	28	24
16°C or above	56	42	36	32	28
10°C or above	64	48	42	36	32

The minimum temperature should not be less than 10°C and the minimum exposure time should be 24 hours. Monitoring of concentrations should be carried out at a minimum at 2, 4 and 24 hrs.

**List of most significant pests targeted by HT and MB**

Members of the following pest groups associated with wood packaging material are practically eliminated by HT and MB treatment in accordance with the specifications listed above:

Pest group
Insects
Anobiidae
Bostrichidae
Buprestidae
Cerambycidae
Curculionidae
Isoptera
Lyctidae (with some exceptions for HT)
Oedemeridae
Scolytidae
Siricidae
Nematodes
<i>Bursaphelenchus xylophilus</i>

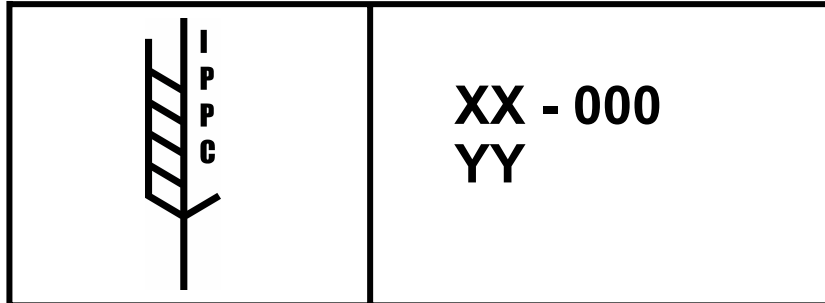
<sup>3</sup> A minimum core temperature of 56° C for a minimum of 30 min. is chosen in consideration of the wide range of pests for which this combination is documented to be lethal and a commercially feasible treatment. Although it is recognized that some pests are known to have a higher thermal tolerance, quarantine pests in this category are managed by NPPOs on a case by case basis.

<sup>4</sup> When a revised schedule is adopted for treatment of wood packaging, material treated under the previous treatment schedule does not need to be retreated, remarked or recertified.

## ANNEX II

## MARKING FOR APPROVED MEASURES

The mark shown below is to certify that the wood packaging material that bears the mark has been subjected to an approved measure.



The mark should at minimum include the:

- symbol
- ISO two letter country code followed by a unique number assigned by the NPPO to the producer of the wood packaging material, who is responsible for ensuring appropriate wood is used and properly marked
- IPPC abbreviation according to Annex I for the approved measure used (e.g. HT, MB).

NPPOs, producers or suppliers may at their discretion add control numbers or other information used for identifying specific lots. Where debarking is required the letters DB should be added to the abbreviation of the approved measure. Other information may also be included provided it is not confusing, misleading, or deceptive.

Markings should be:

- according to the model shown here
- legible
- permanent and not transferable
- placed in a visible location, preferably on at least two opposite sides of the article being certified.

The use of red or orange should be avoided since these colors are used in the labeling of dangerous goods.

Recycled, remanufactured or repaired wood packaging material should be re-certified and re-marked. All components of such material should have been treated.

Shippers should be encouraged to use appropriately marked wood for dunnage.

ANNEX III

**MEASURES BEING CONSIDERED FOR APPROVAL UNDER THIS STANDARD**

Treatments<sup>5</sup> being considered and which may be approved when appropriate data becomes available, include but are not limited to:

**Fumigation**

Phosphine  
Sulfuryl fluoride  
Carbonyl sulphide

**CPI**

High-pressure/vacuum process  
Double vacuum process  
Hot and cold open tank process  
Sap displacement method

**Irradiation**

Gamma radiation  
X-rays  
Microwaves  
Infra red  
Electron beam treatment

**Controlled atmosphere**

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<sup>5</sup> Certain treatments such as phosphine fumigation and some CPI treatments are generally believed to be very effective but at present lack experimental data concerning efficacy which would allow them to be approved measures. This present lack of data is specifically in relation to the elimination of raw wood pests present at the time of application of the treatment.