



Biological Federal Institute
for Agriculture and Forestry,
Department of national and international
Plant Health Matters

Guideline

for the application of the IPPC standard, ISPM No. 15

*“Policy governing
Wood packaging material
in international trade”,*

*„Guidelines for regulating
wood packaging material
in international trade”,*

in Germany

Part A: "Packaging material for export"

In cooperation with: the plant protection services of the Bundesländer and
the Federal Research Center for Forestry
and Timber Management Hamburg, Institute
for Wood Physics and Mechanical
Technology of Wood.

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Application of the IPPC standard, ISPM No. 15

The present document is a guideline for the procedure for the implementation of the "International Standard for Phytosanitary Measures" (ISPM) adopted within the framework of the International Plant Protection Convention (IPPC) of the FAO.

No. 15 for packaging wood in international trade. In particular, the document describes the procedure used in Germany to implement the requirements of ISPM No. 15 in the manufacture of wooden packaging, in order to serve as a guideline for practice in Germany and to guarantee other countries the desired transparency.

Grundlagen

- FAO, 2003: Guidelines for regulating wood packaging material in international trade, ISPM No. 15, FAO Rome: 17 S.

English text version:

<http://www.ippc.int/servlet/BinaryDownloaderServlet/GGTSPU-styx.bba.de/21803-256036->

[DAT/ISPM_15_English.pdf?filename=1055161712885_ISPM15_e.pdf](http://www.ippc.int/servlet/BinaryDownloaderServlet/GGTSPU-styx.bba.de/21803-256036-DAT/ISPM_15_English.pdf?filename=1055161712885_ISPM15_e.pdf)

German text version:

<http://www.bba.de/ag/gesund/internat/ippc/texte/ispm15de.pdf>

- BGBl, 2004: Plant Inspection Ordinance last amended by the eleventh ordinance amending the Plant Inspection Ordinance of 9 August 2004 (BGBl. I No. 43, p. 2110). • Federal Law

Gazette, 1998: Law on the Protection of Crops, Federal Law Gazette I, 971 ff
valid reading version posted at: <http://www.bvl.bund.de>.

Definitions

The definitions of ISPM No. 15, which have been translated into German (see Appendix 1), apply as a matter of principle. The following additional definitions result in particular from the application of the standard regarding the registration and recognition of companies in Germany.

authority (competent)

The competent authorities responsible for implementing ISPM No. 15 are the plant protection services of the respective federal state in which the relevant packaging wood manufacturing or processing company is located. The addresses of the competent authorities at <http://www.bba.de/ag/gesund/kontakt.pdf> to find. are

Company According to the Plant Inspection Ordinance, anyone who wants to place wooden packaging material on the market according to ISPM No. 15 requires a permit from the responsible authority. Businesses within the meaning of this requirement are businesses that subject wood intended for use as packaging or finished wood packaging to a phytosanitary treatment or that process phytosanitarilly treated wood into wood packaging or that produce containers with dunnage for export to countries that use wood for this purpose in accordance with ISPM No 15 demand, stow.

Third

countries This includes all non-European and European countries (except Switzerland) that are not member states of the European Union.

Verification The procedure of verification is the same as that of calibration. In contrast to calibration, however, verification is carried out by employees of the verification office with officially verified devices.

Calibration

Adjustment of a sensor or measuring device to a defined measured value. The implementation takes place without officially calibrated devices.

Packaging wood

Packaging wood within the meaning of this guideline is packaging material made from raw wood with a minimum thickness of more than 6 mm. Packaging material also includes dunnage in containers, but also in ships or other transport vehicles themselves. Processed wood (e.g. plywood, chipboard, OSB board, MDF board, etc.) that has already undergone heat treatment in its manufacturing process is not to be regarded as packaging within the meaning of this guideline. According to the wording, moldy or blue-stained wood does not represent any negative criteria within the meaning of ISPM No. 15. In principle, insect boreholes are also permitted. However, such wooden packaging often leads to complaints. It is therefore recommended to use higher quality wood. A corresponding waiver recommendation is also provided with regard to the presence of "Waldkante".

wane Part

of the trunk surface remaining on the trimmed sawn timber. The wane is not identical to bark or bast, but indicates how much wood is missing from the rectangular cross-section in the case of trimmed sawn timber.

Background

Wood packaging material made from raw wood that has not been phytosanitarily treated is a transmission route for the introduction and spread of harmful organisms. The type of tree/wood is irrelevant, since each type harbors its own harmful organisms. Since the country or region of origin of the wood packaging material has often been difficult to determine up to now, it is hardly possible to assess the risk of introducing new harmful organisms. It is therefore necessary to remove harmful organisms from the packaging wood before sending it to other countries. As part of the International Plant Protection Convention (IPPC) of the FAO, a "Guideline for the regulation of wood packaging material in international trade" was passed, which describes globally recognized measures for plant health treatment (FAO 2003). 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 from raw wood of coniferous and deciduous trees used in international trade. The plant protection services of the applying countries are requested to accept wood packaging material that has undergone an approved measure without further requirements.

The basic requirements according to ISPM No. 15 are listed below: (the description corresponds to the wording of the German working translation of ISPM No. 15) • **Heat treatment (HT)**

Wood packaging material must be heated according to a specific time temperature schedule and reach a minimum core temperature of 56°C for at least 30 minutes.

Other processes involving heat treatment that meet the criteria of ISPM No. 15 may also be accepted. The prerequisite is that the core temperature has reached 56°C for at least 30 minutes.

A completed heat treatment is indicated by the marking "HT".

• Methylbromid (MB) Begasung

The wood packaging material must be fumigated with methyl bromide. There is currently no recognized alternative treatment process available, so fumigated wood is marked with "MB". When treating wood packaging material, the minimum standard for methyl bromide fumigation is as follows:

Temperature	Dosage (g/ m ³) 48	Minimum concentration (g/m ³) at:			
		0,5 h	2 h	4 h	16 h
210 C or more 17 160 C or more 20 110 C or more 22	48	48	32	24	14
temperature must not be lower than 10 °C and the minimum treatment time must	48	48	32	24	17
be 16 hours1 .	48	48	32	24	19

It can be assumed for the future that the treatment duration will be increased to at least 24 hours.

- **Entrindung (Debarked, DB)**

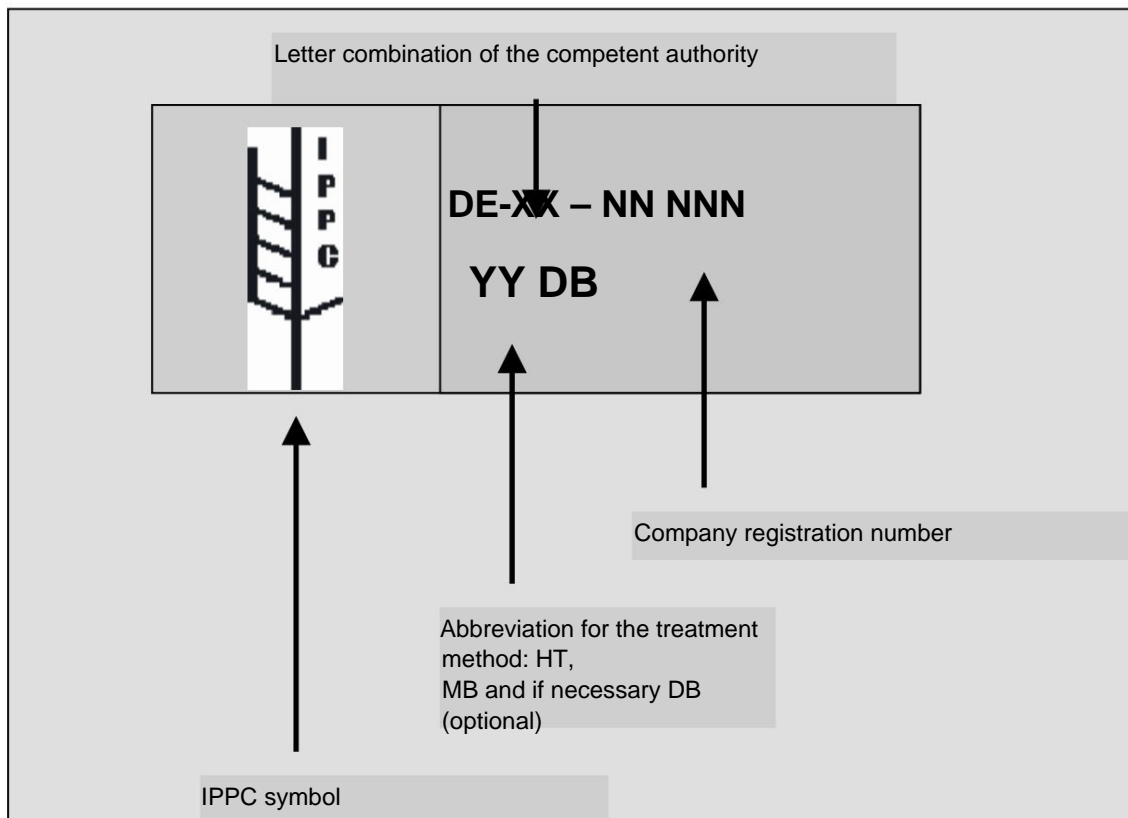
Some importing countries require the packaging wood to be debarked.

Debarking in this context is not synonymous with bark-free. When debarking, there must be no coarse bark residue left on the wood. However, small pockets of bark or ingrown bark are acceptable. Likewise, remains of the bast (thin zone between the bark and the body of the wood), which can remain when the wood is peeled, are permissible. In addition to the phytosanitary treatment, wooden packaging made from debarked wood is treated with marked "DB".

- **Marking** The

implementation of recognized treatment processes must be documented on each wooden packaging by attaching a mark. The aim of this marking is to be able to trace the origin of the wooden packaging back to the manufacturer in the event of discrepancies, in addition to providing information about the type of treatment via the registered registration number. The requirements listed below correspond to the text of the Plant Inspection Ordinance (Federal Law Gazette, 2003).

The marking corresponds to the following pattern:



The marking must contain the following information:

1. Information about the country code according to the ISO code: "DE" for Germany
2. An officially published identification of the authority responsible for the permit (phytosanitary service),
3. The registration number of the company that manufactures or treats the wood used for packaging or otherwise circulated
4. the combination of letters defined by ISPM No. 15 for the treatment method used
 - HT for heat treatment or
 - MB for methyl bromide fumigation and
 - DB for use of debarked wood
5. the symbol of the IPPC as defined in Annex II of ISPM No. 15

The information must be enclosed in a regular rectangle. The symbol of the IPPC shall be to the left of the other information and separated from them by a line.

The marking must be legible, permanent and indelible, preferably on at least two opposite, clearly visible places on the packaging material. The use of red and orange paint for marking is not permitted as these colors are intended for warning purposes.

1 requirements

According to ISPM No. 15, packaging wood for export to third countries must be subjected to phytosanitary treatment and marked. It is therefore necessary for the treatment companies or the companies that apply the marking to be inspected and registered by the responsible plant protection service in the federal state.

1.1 General requirements for companies It must be ensured that wood treated in accordance with the requirements of ISPM No. 15 is stored in the company separately from untreated wood. The same applies to packaging boxes or pallets made from treated packaging material, as long as they are not marked.

A person must be named in each company who can provide information to the plant protection service about the treatment measures and the wood stored in the company.

In order to better prepare for a company audit, the relevant companies should provide the plant protection service with data in advance, which will enable the planning of the audit to be rational. The following data can be used in this context, e.g. B. be helpful in HT treatment, since they are also included in the following subchapters stuffs.

- o Type of treatment chamber
- o Size and useful capacity
- o Type of

- heating
- o Existence of humidification equipment
- o Number and location of temperature sensors in the chamber
- o Information on measurement accuracy and internal testing of the measurement equipment

1.2 Approval / registration of companies The plant protection services of the federal states are responsible for compliance with the requirements of IPPC Standard No. 15 for exports of packaging wood. The legal basis is Articles 13p and 13q of the Plant Inspection Ordinance, last amended by the Fourth Ordinance to Amend Plant Protection Regulations of November 26, 2003 (BGBl. I No. 57S. 2438).

Anyone who wants to market wood as defined by ISPM No. 15 for packaging or packaging wood marked according to ISPM No. 15 requires the approval of the relevant plant protection service (<http://www.bba.de/ag/gesund/kontakt.pdf>). This permit is granted to companies upon application if an examination of the company has shown that the wood used meets the requirements of ISPM No. 15 and it is ensured that these requirements will also be met in the future. Companies that treat the wood themselves or that process wood that has been treated by third parties (also registered) can be registered. The approval can (even retrospectively) be linked to conditions. It is granted for an indefinite period, but is subject to a positive examination at least once a year. A permit that has been granted can also be revoked. Registered companies must keep records of the type of treatment and the associated treatment parameters and keep them for three years. Treatment plants that do not produce the end pro-

duct wood packaging, but only the treated, unmarked wood, must provide these records together with the delivery note. They are also to be kept in the "finishing plant". The final processing company must use suitable documentation to ensure that the export packaging and the supplier of the phytosanitarily treated wood can be clearly assigned.

If the plant protection service in charge of a registered operation finds that the requirements for registration are no longer met, it will order that the permit be suspended until the deficiencies identified have been remedied.

1.3 Procedure for the approval of a company and follow-up inspections, heat treatment

In principle, the

test points for the first approval of a company or the annual inspection of an already approved company are the same. The test includes the areas set out below, which are then explained individually in the following sub-chapters. Attachments 3a to 3c contain checklists that contain the main points in tabular form.

- Type of treatment: heat treatment either as a phytosanitary measure or as part of a technical drying
- Inspection of the treatment rooms
- Inspection of the measuring devices in the treatment rooms
- Evaluation of the treatment/operational process
- Inspection of the documentation
- Inspection of the proper marking

The review of the requirements, including the calibration of the chamber measuring devices, must be carried out at least once a year. A calibration of the sensors is sufficient for the inspection and approval of the chambers, a calibration is not necessary. The calibration of the sensors does not necessarily have to be carried out by the plant protection service itself. However, it must be ensured that the calibration is carried out by an independent body. The criterion here is that the plant protection service decides for itself that the measurements have been carried out reliably. As test facilities z. B. the TÜV, DEKRA, ö.bv experts or possibly also service personnel of the respective chamber manufacturer in question.

Furthermore, wood research institutions, material testing institutes, etc. can be entrusted with this task, provided they have the appropriate testing facilities and "know-how" and are accepted by the responsible plant protection service.

Appropriate approval by the plant protection service must therefore be carried out before an inspection company is commissioned.

Following the inspection, the inspected company receives an official decision stating that the company has been registered in accordance with the requirements of ISPM No. 15, the approved treatment process, the registration number and the date the registration expires (max. 1 year).

1.3.1 Type of treatment: Heat treatment either as a phytosanitary measure or as part of technical drying

For the assessment of heat treatment chambers in the sense of ISPM No. 15 it is of essential importance how the requirements of the standard are met. There are basically two methods for this: • the heat treatment with a core temperature of 56°C for 30 minutes is achieved as part of

regular wood drying or • the heat treatment is carried out exclusively for phytosanitary treatment

leads.

In many cases, wood is dried over such a long period of time and at such high chamber temperatures that the requirements of ISPM No. 15 are automatically met. The prerequisite, however, is that a correspondingly high chamber temperature (over 56°C) is used, which e.g. This is not always the case, for example, when drying hardwood. The functionality of the chamber temperature sensors and their proper attachment is therefore important for testing the chamber for drying.

In the case of heat treatment solely for phytosanitary purposes, the aim is to achieve the required parameters of 56°C / 30 minutes in the center of the largest cross-sections. This means that you are moving within much narrower time windows and the risk that the required parameters will not be achieved if the measurement technology is subject to fluctuations is much higher. The most important test criterion here is the exact fulfillment (minimum values) of the chamber temperature parameters, e.g. B. according to the table developed by the French Phytosanitary Service (Annex 2) or by measuring the temperature actually reached in the wood.

When checking the required chamber temperatures, it must be ensured that the time is not measured until the target temperature has been reached, ie the heating-up phase is not included in the treatment time.

Since the heat treatment tables available (e.g. from France, Annex 2) show the duration of the treatment as a function of the initial temperature of the wood, this must be taken into account during the operational test, both in the control measurement and in the examination of the documentation of the treatment in the company.

Process to reach 56°C for 30 minutes in the core of the wood	content of the procedure	test criterion
Technical drying	ISPM No. 15 parameters are part of technical wood drying and are exceeded	Checking the chamber temperature and duration of treatment based, for example, on the table in the French PSD (Appendix
Phytosanitary heat treatment	Treatment has the sole aim of improving the parameters of ISPM No. 15 (56°C for 30 minutes in to reach the core of the wood)	2) a) Measurement of the core temperature actually achieved or b) checking the chamber temperature and treatment time based on, for example, the table of the French PSD (Appendix 2)

1.3.2 Inspection of the treatment rooms

Regardless of how the heat treatment parameters are met, certain requirements of the chambers and when using the chambers must be observed.

- The wood to be treated must be battened so that the air circulating in the chamber can flow around each board individually. The slats must lie in the direction of air flow. • If it is necessary not to fill the chamber completely, care must be taken to ensure that the cross-section of the chamber is stacked with the goods to be treated.
- The aim of the treatment must be that the goods in the thickest cross-section at the coldest point in the chamber reliably meet the required criteria with regard to time and temperature.

1.3.3 Testing of the measuring devices in the treatment rooms for technical drying

Prior to a temperature test, the chamber temperature sensor must be calibrated. When measuring the air temperature, the sensors should be accurate to +/- 1°C. When arranging the temperature sensors of the room air, the guiding principle is the search for the coldest point during the treatment.

Process to reach 56°C for 30 minutes in the core of the wood	content of the procedure	test criterion
Technical drying	ISPM No. 15 parameters are part of technical wood drying and are exceeded	Checking the chamber temperature and treatment time based on, for example, the table of the French PSD (Annex 2)

In technical drying according to the fresh air/exhaust air principle, there are two types of Distinguish drying chambers:

- **Chambers with fans in the false ceiling:** the heater as well as the blower sit above a false ceiling of the chamber. The circulating air flow passes through the drying material only once along the drying depth. In order to ensure that the goods are heated evenly, the direction of the air flow is changed at regular intervals (reversal). Since the chamber air temperature is to be measured on the exhaust air side, with this technology the air temperature must be measured on both sides with two sensors each. The time credited for the necessary treatment duration begins when the e.g. B. required chamber temperature on the exhaust air side (e.g. according to the table of the French plant protection service in Appendix 2).
- **Chamber with fans arranged on the side:** the heating and the blower are attached to a chamber wall next to the drying goods. The heated circulating air first flows through the material in the lower half of the chamber cross section, is deflected and then flows through

the items to be dried in the top half of the stack. The exhaust air side is constant with this type of chamber. The chamber temperature is also measured here with 2 sensors on the exhaust air side. The time credited for the necessary treatment time begins when the required chamber temperature is reached on the exhaust air side (use data from the table in Annex 2 if necessary).

1.3.4 Testing of the measuring devices in the treatment rooms during heat treatment as a purely phytosanitary measure

Prior to a temperature test, the chamber temperature sensor must be calibrated. When measuring the air temperature, the measuring chain (consisting of sensor, cable, measuring device) must be accurate to $\pm 1^\circ\text{C}$, and when measuring the core temperature $\pm 0.5^\circ\text{C}$. When arranging the temperature sensors for both the room air and the core temperature in the wood, the guiding principle is to look for the coldest point during the treatment. Closing the ventilation flaps is a sensible phytosanitary measure during heat treatment. This creates a high level of humidity in the chamber, which on the one hand promotes energy transfer and on the other hand largely prevents cooling effects caused by drying of moist surfaces.

Process to reach 56°C for 30 minutes in the core of the wood	content of the procedure	test criterion
Phytosanitary heat treatment	Treatment aims exclusively to achieve the parameters of ISPM No. 15 (56°C for 30 minutes)	a) Checking the chamber temperature and treatment duration based on, for example, the table of the French PSD (annex) or b) Measuring the core temperature actually reached

a) Measurement of the chamber

temperature For the measurement of the air temperature in the chamber, the comments in paragraph 1.3.4 apply accordingly.

b) Measurement of the wood temperature

in the core 2 measuring sensors must be installed on the exhaust air side. The sensors must be installed in the thickest wooden blocks to be heated. To insert the sensor, a hole must be pre-drilled in the middle of the block so that the sensor head can be inserted halfway down the length of the block. The drill hole may only be slightly larger than the sensor. The shrinkage of the wood results in a closure of the drill channel towards the sensor, at least on the surface of the block. The sensor should be as thin as possible to avoid measurement inaccuracies. The probe must have the sensing element at the tip, the rest of the probe must be insulated. The accuracy of the measuring chain consisting of sensor, cable and measuring device should be $\pm 0.5^\circ\text{C}$.

1.3.5 Evaluation of the treatment/operational process

By reviewing the operational process, it should be clarified whether it is ensured that all wood that is intended for treatment is also treated accordingly. The following criteria could be used as a test criterion:

- Separation of treated and untreated wood
- Storage after treatment? The recommendation is that undried wood that has only been treated with phytosanitary treatment should be slatted and stored in an airy place away from rain to prevent unnecessary mold growth or blue staining.

- Allocation of treated wood to treatment protocols (heat recorder protocol, marking of treated wood)
- Time of marking. Example: In the manufacture of pallets, the HT stamp is applied in individual cases during the manufacturing process, the HT treatment only takes place afterwards. Does the operating procedure ensure that all pallets must undergo HT treatment, or is there intermediate storage for marked goods?
untreated but

->Risk assessment.

1.3.6 Review of Documentation

- How is the documentation done? Treatment protocols should include the following contain:

- o Clear numbering of the treatment batch
- o Description of the type of treated goods (type of wood, boards, crates, etc.)
- o Maximum wood diameter (thickness)
- o Wood temperature at the beginning of the treatment
- o EDP heat log (start and end of the treatment, duration until the treatment temperature is reached)

- How and for how long are the documents kept? (in analogy to the plant passport regulation according to PBVO at least 3 years) •

Can be traced back to treated consignments that have already been sold were carried out?

- If the treatment documents are sent by the pure practitioner to the packaging company manufacturer supplied?

1.3.7 Checking for proper marking The criterion for proper marking is that it must not be transferrable. This means it must be clear and indicate a professional application. Therefore, markings drawn with felt-tip pens are not permitted, even if they meet the "non-transferrable" criterion. Stapled notes are also not permitted. In the broadest sense, the criterion should be that the marking cannot be removed non-destructively. Therefore, in exceptional cases, plastic signs (similar to the numbering plates in the forest) are permitted. Overall, however, it is recommended to use a branding stamp or a color stamp. The size of the marking must be proportionate to the size of the packaging. The following criteria must also be met:

- Does the attached marking meet the requirements of ISPM No. 15 or the provisions of the PBVO?
- Application of the marking clearly visible on two opposite sides ten.
- Use of colors other than red or orange. • Overall, it is recommended that all dunnage be individually marked. Depending on the requirements of the importing country, each piece of dunnage must be marked individually. In exceptional cases, where this is not possible, the dunnage must be marked in such a way that it is clearly recognizable that the unmarked parts of the dunnage of a container have also been treated.

If necessary, as in the case of Canada, a PGZ must be attached stating that unmarked dunnage has also been phytosanitarily treated.

1.3.8 Obligations of companies to report

If there are any changes in relation to the basis for approval of a company (e.g. change in the technical requirements), the company concerned must inform the responsible plant protection service immediately.

1.4 Procedure for the approval of a company and follow-up checks Fumigation with methyl bromide

Criteria for fumigation with methyl

bromide When fumigation with methyl bromide,

minimum requirements according to the following table taken from ISPM No. 15 must be observed.

Temperature	Dosage (g/ m ³) 48	Minimum concentration (g/m ³) at:			
		0,5 h	2 h	4 h	16 h
210C or more	56	36	24	17	14
160C or more	64	42	28	20	17
110C or more		48	32	22	19

Registered companies that carry out fumigation as part of ISPM No. 15 are checked at least once a year by the responsible plant protection service. The technical inspection of the fumigation can be carried out by specialist companies, ö.bv experts etc. who have suitable measuring devices. As with the technical inspection of the heat treatment chambers, the inspection company must be recognized by the plant protection service, which is why an agreement in advance of the inspection is necessary.

For the purpose of control, the companies must have measuring devices available with which the temperature and the methyl bromide concentration in the fumigation room (container, fumigation chamber) can be determined at any time during the fumigation. The gas concentration should be measured in g/m³. The measuring devices must be calibrated at least once a year by independent bodies. This can e.g. B. the TÜV, ö.bv experts or employees of the device manufacturers. Before commissioning a testing company, the plant protection service must be consulted.

The temperature in the fumigation room must be measured for each fumigation over the entire fumigation period and documented by the companies.

The companies must have suitable scales in order to be able to determine the required amount of active ingredient in combination with the temperature. The companies must ensure that the above-mentioned measuring devices are available and can be read at every inspection by the plant protection service.

The documentation on fumigation (fumigation certificates, temperature measurements) must be retained for a period of three years.

1.5 Inspections outside of the approval or annual inspections Random

inspections are to be provided for, particularly in treatment companies that carry out the heat treatment as a phytosanitary treatment. Overall, use should be made of the possibility of additional audits of the companies, especially when the system is being established. For cost reasons, it is not necessary to calibrate the measuring sensors in each case. Another way to verify proper treatment is to take wood samples (immediately after treatment) and test for the presence of woody nematodes. These organisms can be used as indicators as they do not survive proper treatment according to ISPM 15.

1.6 Repair of wooden packaging In

principle, only treated material should be used for the repair of wooden packaging in accordance with ISPM No. 15. This must be labeled separately unless the entire packaging is re-treated. This process can result in multiple marks being found on a package. If packaging that has already been marked is treated again in this context, the former marking must be removed/made unrecognizable and a new one must be attached. Repairing treated wooden packaging with untreated material will result in the loss of the approval for this product; the packaging must then be treated as a whole and re-marked after removing the old marking. If untreated pallets are repaired during the transition period, which is still to be defined by the importing countries, they must also be automatically treated and marked in accordance with ISPM No. 15 in order to reduce the pool of untreated pallets in circulation

ren.

1.7 Purchase of wood packaging or wood for wood packaging from third countries

Deliveries of wood treated according to ISPM No. 15 (without marking) should be accompanied by a treatment protocol and official confirmation from the plant protection service, from which the official establishment of the procedure according to IPPC standard ISPM No. 15.

If the wooden packaging is already marked according to ISPM No. 15, there is no need for special confirmations about the application of ISPM 15.

The usual requirements according to Annex V, Part B of the RL 2000/29 EG apply independently of this.

1.8 Purchase of unmarked wooden packaging or wood for wooden packaging from other service areas in Germany or other EU member states

The PBVO § 13q (3) stipulates that "the person who [...] has been registered [...] must keep records of the way in which the wood has been treated [...]."

"If the treatment has been carried out by third parties, the records must be provided by them and kept in the registered company" which buys this unmarked, treated wood for the production of wooden packaging.

1.9 Treatment of wood for export to European member states (so far only required by the Netherlands)

If sawn timber is treated in accordance with the provisions of ISPM No. 15 and exported to an EU member country, the following documents must be enclosed with the delivery

documents:

- A declaration from the company including its registration number and a statement that the wood is in accordance with ISPM No. 15 (specify type) was dealt with (sample in Appendix 4).

- A copy of a declaration from the responsible plant protection service that the relevant company is registered in accordance with ISPM No. 15, stating the registration number and information on the period of validity of the registration (sample in Appendix 5). Alternatively, a copy of the notification of registration can also be used.

1.10 Special packaging crates

Packaging crates that are already on the market and are used for high-quality special equipment and may be in the warehouse with the goods must be assessed on a case-by-case basis. If it is e.g. B. is boxes, which due to the requirements placed on them (dimensional accuracy, strength, tightness, etc.) rather suggest that it is more about high-quality carpentry work (e.g. for aircraft spare parts) than mass-produced goods suggests that the requirements of ISPM No. 15 regarding heat treatment during technical drying have been met during the manufacturing process. In the case of crates that have been stored for a longer period of time, however, a test for infestation with dry wood insects should be provided. In any case, an individual assessment by the responsible plant protection service is necessary.

1.11 Procedure in the event of misuse/

fraud The responsible plant protection service is responsible for prosecuting misuse of the labeling or when carrying out the treatments of companies in Germany. The Plant Inspection Ordinance (Federal Law Gazette 2003) and the Plant Protection Act (Federal Law Gazette 1998) form the basis for measures.

2 additional comments

2.1 Heat treatment protocols

It can be assumed that in the course of the implementation of ISPM No. 15 other countries will also draw up heat treatment protocols, similar to the French plant protection service (Annex 2). These can also be used by the companies after consultation and examination by the responsible plant protection service.

The current Australian regulations regarding the heat treatment of the requirements of ISPM Packaging wood include 15 (<http://www.noaffa.gov.au/content/publications.cfm?ObjectID=90AE2E1C-BD98-406F914BECBE8EF22C37>) and can also be used as

an alternative to the requirements of ISPM No. 15. However, the required heat treatment goes well beyond the requirements of ISPM No. 15 and includes reaching 74 °C in the core of the wood for at least 4 hours, depending on the dimension, and drying the wood to a moisture content of less than 12% based on the Dry wood substance.

2.2 Documentation of all registered companies in Germany

The central office where all registered companies in Germany are recorded with their registration number is the Department for National and International Plant Health Affairs of the Federal Biological Institute for Agriculture and Forestry, Messeweg 11/12, D- 38104 Braunschweig, AG.BS@bba.de. In justified control cases, the plant protection service of a federal state, an EU member state, a European or non-European third country can obtain information on registered companies via this office. Information is not given to private companies.

In addition, the registration numbers are not published. Registered companies will be published on the department's website with their consent without mentioning their registration number. The list of registered companies is updated by the plant protection services of the federal states through quarterly notifications of changes.

2.3 Contact addresses

The contact persons for questions about registration and for submitting a registration application are the plant protection offices of the federal states. The current addresses are at <http://www.bba.de/ag/gesund/kontakt.pdf> listed.

Contact person for crop protection services in relation to questions as to whether an operation is in accordance with ISPM No. 15 registered in Germany is:

Federal Biological Institute for Agriculture and Forestry
Department for national and international plant health issues Messeweg 11/12 D-38104
Braunschweig
Tel.: 0049 (0) 531/ 299
3371 Fax: 0049 (0) 531/299
3007 Email: [AG.BS @
bba.de](mailto:AG.BS@bba.de)

Attachments

- 1 German version of ISPM No. 15
- 2 French Phytosanitary Service heat treatment table
- 3 test scheme
 - a) Treatment facility HT*
 - b) Treatment facility MB* • c)
Manufacturer of packaging materials*
- 4 sample declaration of operations
- 5 templates for confirmation by the plant protection service

Annex 1

**German version of ISPM No. 15
working translation of the BBA**

Publication #15

March 2002

INTERNATIONAL STANDARD FOR PLANT HEALTH MEASURES

**Working translation of the BBA, Dept. Plant Health, Unger/
Vogt-Arndt**

REGULATORY POLICY OF WOOD PACKING MATERIAL IN INTERNATIONAL TRADE

Secretariat of the International Plant Protection Convention
Food and Agriculture Organization of the United Nations
Rom, 2002

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Note

International standards for phytosanitary measures are being developed by the Secretariat of the International Plant Protection Convention as part of the Food and Agriculture Organization (FAO) Global Program for Plant Quarantine Practices and Technical Assistance. This program makes these standards, guidelines and recommendations available to FAO members and other interested parties in order to achieve international harmonization of phytosanitary measures with the aim of facilitating trade and avoiding the use of unjustified measures as barriers to trade. This standard was approved by the Interim Commission on Phytosanitary Measures in March 2002.

Jacques Diouf
general director

Food and Agriculture Organization of the United Nations

Application

International Standards for Phytosanitary Measures (ISPMs) are adopted by the Parties to the IPPC and by non-Party members of the FAO through the Interim Commission on Phytosanitary Measures. ISPMs are the standards, guidelines and recommendations that serve as the basis for the recognized phytosanitary measures Measures applied by members of the World Trade Organization in accordance with the Convention on the Application of Sanitary and Phytosanitary Measures. Non-parties to the IPPC are requested to observe these standards.

Review and amendment

International standards for phytosanitary measures are regularly reviewed and amended. The next review of this standard will be in 2004 or at a date to be determined by the Commission on Phytosanitary Measures.

When necessary, standards are updated and republished. Users of the standard should ensure that the current version of this standard is used.

distribution

International standards for phytosanitary measures are distributed by the Secretariat of the International Plant Protection Convention to all FAO members and the Secretariats of Regional Plant Protection Organizations:

- Asia and Pacific Plant Protection Commission -
- Caribbean Plant Protection Commission -
- Comité Regional de Sanidad Vegetal para el Cono Sur -
- Comunidad Andina -
- European and Mediterranean Plant Protection Organization -
- Inter-African Phytosanitary Council -
- North American Plant Protection Organization -
- Organismo Internacional Regional de Sanidad Agropecuaria -
- Pacific Plant Protection Organization.

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 from raw timber of conifers and other trees used in international trade.

HINTS

Convention on the Application of Sanitary and Phytosanitary Measures, 1994.

World Trade Organization, Geneva.

Export Certification Scheme, 1997. ISPM Pub. No. 7, FAO, Rome.

Glossary of Phytosanitary Terms, 2001. ISPM Pub. No. 5, FAO, Rome.

Phytosanitary Certificate Guidelines, 2001. ISPM Pub. No. 12, FAO, Rome.

Guidelines for Notification of Non-Conformity and Emergency Action, 2001. ISPM Pub. No. 13, FAO, Rom.

ISO 3166-1-ALPHA-2 CODE ELEMENTS

(http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/en_listp1.html)

International Plant Protection Convention, 1997. FAO, Rome.

Plant Quarantine Principles in International Trade, 1995. ISPM Pub. No. 1, FAO, Rome.

DEFINITIONS AND ABBREVIATIONS

bark-free wood	Wood stripped of all bark except the vascular cambium, ingrown bark around knots and pockets of bark between annual rings [ISPM Pub. No. 15, 2002]
chemical pressure impregnation	Treatment of wood with a chemical preservative, by a pressure treatment according to an officially recognized technical specification [ISPM Pub. No. 15, 2002]
certificate	An official document confirming the phytosanitary status of any shipment subject to phytosanitary regulations. [FAO, 1990]
Warenart (commodity)	Plants, plant products or other objects of the same kind obtained for marketing or other purposes reasons [FAO, 1990; revised ICPM, 2001]
consignment	A quantity of plants, plant products and/or other objects to be moved from one country to another accompanied, where required, by a single phytosanitary certificate (a consignment may consist of one or more types of goods exist) [FAO, 1990; revised ICPM, 2001]
debarking	Removing the bark from logs (by debarking

(debarking)	the wood does not necessarily become bark-free) [FAO, 1990]
Stauholz (dunnage)	Wood packaging material used to secure or support an article but which does not remain attached to the article [FAO, 1990; revised ISPM Pub. No. 15, 2002]
Nothandlung (emergency action)	Immediate phytosanitary action resulting in a new or unexpected phytosanitary situation [ICPM, 2001]
Notmaßnahme (emergency measure)	Phytosanitary regulation or phytosanitary procedure established as a matter of urgency in a new or unexpected phytosanitary situation. An emergency measure can, but does not have to be, a temporary measure. [ICPM, 2001]
Free from (related to a shipment, field or place of production) in a number or quantity that can be or place of production)) detected [FAO, 1990; revised FAO, 1995;	Without infestation with harmful organisms (or a specific field or place of production) (free from (of a consignment, field or place of production)) detected [FAO, 1990; revised FAO, 1995; CEPM, 1999]
Begasung (fumigation)	Treatment of a type of goods with a chemical agent that is completely or mainly in the gaseous state [FAO, 1990; revised FAO, 1995]
heat treatment	Process in which a commodity is heated until it reaches a minimum temperature according to an officially recognized professional specification for a minimum period of time [ISPM Pub. No. 15, 2002]

infestation (of a commodity)	Occurrence of a living pest on a commodity species of the plants or plant products concerned. Infestation includes infection. [CEPM, 1997; revised CEPM, 1999]
Interception (of a pest)	Detection of a harmful organism upon inspection or testing of an imported consignment [FAO, 1990; revised CEPM, 1996]
Ofentrocknung (kiln-drying)	Process of drying wood in a closed chamber under heat and/or humidity control to achieve the required moisture content [ISPM Pub. No. 15, 2002]
mark	An official internationally recognized stamp or mark affixed to a regulated object to certify its phytosanitary status [ISPM Pub. No. 15, 2002]
NPPO	Abbreviation for National Plant Protection Organization (National Plant Protection Organization) [FAO, 1990; ICPM, 2001]
official	Established, authorized or implemented by a National Plant Protection Organization [FAO, 1990]
Risk analysis of a harmful organism go (pest risk analysis)	The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be controlled and to determine the intensity of the phytosanitary measures to be taken against it [FAO, 1990; revised IPPC, 1997]
Phytosanitary action	Official activity such as inspection, testing, surveillance or treatment performed to implement phytosanitary regulations or practices [ICPM, 2001]
phytosanitary measure interpretation (phytosanitary measure (agreed in and/or spread of quarantine pests interpretation)) or to limit the economic impact of regulated non-quarantine pests	Any legislation, regulation or official (agreed Procedures that serve to prevent the introduction [FAO, 1995; revised IPPC, 1997; ISC, 2001] <i>The agreed interpretation of the term phytosanitary measure explains the relationship to phytosanitary measures for non-quarantine pests. This relationship is not explicitly clear in the definition given in Article II of the IPPC (1997).</i>

Phytosanitary procedure All officially prescribed methods for implementation

(phytosanitary procedure)	phytosanitary regulations including the Carrying out inspections, tests, monitoring or treatments in connection with regulated Harmful organisms [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001]
Phytosanitary regulation	Official regulation to prevent the introduction and/or spread of quarantine pests or to limit the economic impact from Not quarantine pests, includes establishing procedures for issuing phytosanitary certificates [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001]
plant products	Unprocessed products of plant origin (including cereals and legumes) and those processed products which, by their nature or the way they are processed, present a risk of introduction and spread of harmful organisms [FAO, 1990; revised IPPC, 1997; early plant product]
FOR	Abbreviation for risk analysis of a harmful organism (Pest Risk Assessment)[FAO, 1995]
Processed wood material	Articles made of wood and assembled using glue, heat and pressure, or a combination thereof [ISPM Pub. No. 15, 2002]
Quarantine pest (quarantine pest)	A harmful organism of potential economic Importance to the area it threatens, not yet occurring in that area, or occurring but not widespread and subject to official surveillance and control measures [FAO, 1990; revised FAO, 1995; IPPC, 1997]
Rohholz (raw wood)	Wood that has not undergone any processing or treatment [ISPM Pub. No. 15, 2002]
regulated article	Any plant, plant product, store, packaging, means of transport, container, soil, and any organism, object or material capable of harboring or spreading pests for which phytosanitary measures are considered necessary, particularly when transported internationally [CEPM, 1996; revised CEPM, 1999; ICPM, 2001]
Test (test)	Official examination, with the exception of visual, for Detection or determination of harmful organisms

	[FAO, 1990]
treatment	Officially approved process for the destruction, elimination or sterilization of harmful organisms [FAO, 1990; revised FAO, 1995; ISPM Pub. No. 15, 2002]
wood	A commodity group for logs, sawn timber, wood chips or dunnage with or without bark [FAO, 1990; revised ICPM, 2001]
wooden packaging material	Wood or wood products (other than paper products) used to support, protect or carry a commodity (includes dunnage) [ISPM Pub. No. 15, 2002]

BASIC ELEMENTS OF THE REQUIREMENTS

Wood packaging material made from unprocessed raw wood is a transmission route for the introduction and spread of harmful organisms. Since the origin of the wood packaging material is often difficult to determine, globally recognized measures are described that significantly reduce the risk of the spread of harmful organisms. NPPOs are encouraged to accept wood packaging material that has undergone an approved measure without further requirements. Such wood packaging material includes dunnage but not processed wood packaging material.

Procedures for verifying that a recognized measure has been applied, including the affixing of a globally recognized mark, should be in place in both the exporting and importing country. Other measures taken in a bilateral agreement are also considered in this standard. Wood packaging material that does not meet the requirements of this standard should be disposed of in an approved manner.

IMPLEMENTATION REGULATIONS

1. Basics for the regulation

Wood packaging material often consists of raw wood that may not have undergone adequate processing or treatment to remove or kill harmful organisms and therefore represents a transmission route for the introduction and spread of harmful organisms. In addition, wood packaging material is often reused, recycled or reprocessed (packaging received with an imported consignment may be reused to accompany another export consignment). The true origin of individual pieces of wood packaging material is difficult to ascertain and therefore the phytosanitary status cannot be determined. Therefore, the normal approach to performing a risk analysis to determine the need for action and the severity of such action is often not possible for wood packaging material because its origin and phytosanitary status may be unknown. For this reason, this standard describes globally adopted measures that are recognized and can be applied by all countries to wood packaging material to virtually eliminate the risk to most quarantine pests and to significantly reduce the risk to a number of other harmful organisms that may adhere to the material to reduce.

Countries need technical justification for requiring the use of recognized measures outlined in this standard for imported wood packaging material. Requiring phytosanitary measures beyond an approved measure described in this standard also requires technical justification.

2. Regulated wood packaging material

These guidelines apply to packaging material made from raw wood of coniferous and deciduous trees, which can serve as a transmission route for harmful organisms that can pose a risk primarily to living trees. This affects wood packaging material such as pallets, dunnage, crates, squares, drums, crates, crates, pallet collars and joists, which may be present in almost any imported consignment, including consignments that would not normally be subjected to phytosanitary testing.

Wood packaging made entirely of engineered wood, such as plywood, particleboard, fiberboard or veneer, manufactured using glue, heat and pressure or a combination thereof may be considered sufficiently processed to eliminate the risk associated with the raw wood. They are unlikely to become infested with raw wood harmful organisms during their use and therefore do not need to be regulated for these harmful organisms.

Wood packaging material such as wood cores left after veneer production², sawdust, excelsior and shavings and raw wood³ cut into thin pieces does not represent a transmission route for the introduction of quarantine pests and does not need to be regulated unless there is a technical justification.

² A remaining wood core is a by-product of veneer manufacture using high temperatures and consists of the core of a log that remains after the debarking process six.

³ Thin wood is wood 6mm thick or less according to the Customs Harmonized Commodity Description and Coding System (Harmonized System or HS)

3. **Measures for wood packaging material**

3.1 **Acceptable measures** Any

treatment, operation or combination thereof that is effective against most harmful organisms should be considered effective in reducing the risk of harmful organisms associated with the wood packaging material used in transport. The selection of a measure for wood packaging material is based on consideration of:

- the range of different harmful organisms that may be affected with
- the effectiveness of the measure, the
- technical and/or economic feasibility.

Recognized measures should be accepted by all NPPOs as a basis for authorizing the entry of wood packaging material without further requirements, unless it has been demonstrated by findings and/or PRA that certain quarantine pests are more severe in relation to certain types of wood packaging material from certain sources require action.

Recognized measures are listed in Appendix I.

Wood packaging material subject to these recognized measures should bear a specific marking in accordance with Annex II.

The application of a mark simplifies the handling associated with verification of treatment compliance for wood packaging material. A universally recognized, non-language specific mark simplifies verification during inspection at the point of exit, point of entry or elsewhere.

Instructions for documentation of approved measures are available from the IPPC Secretariat.

3.2 **Acceptance measures** Other treatments

or processes applied to wood packaging material will be accepted if they can be shown to provide an appropriate level of phytosanitary protection (Annex III). Current Annex I measures remain under observation and new research may lead to other temperature/time combinations, for example. New measures can also reduce the risk when changing the properties of the wood packaging material. NPPOs should take into account that measures can be added or changed and should have sufficiently flexible wood packaging import requirements to accommodate changes when they are recognised.

3.3 **Other Measures** NPPOs

may, by agreement with their trading partners, recognize measures other than those listed in Annex I, particularly in cases where the measures listed in Annex I cannot be applied or implemented in the exporting country. Such measures must be technically

be fair and respect the principles of transparency, non-discrimination and equality.

Importing country NPPOs should consider other procedures for wood packaging material related to exports from all countries (or special origins) if evidence is provided that the pest risk is adequately managed or not present (e.g. areas with similar phytosanitary conditions or pest-free areas).

Certain shipments of wood packaging material (e.g. tropical hardwoods in connection with exports to countries with a temperate climate) can be assessed by the importing NPPO as not posing a phytosanitary risk and can therefore be exempted from measures.

Depending on the technical justification, countries may require that imported wood packaging material subject to an approved measure is made of debarked wood and bears an Annex II mark.

- 3.4 Review of measures** The approved measures as per Annex I and the list of measures under review as per Annex III will be reviewed based on new information communicated by the NPPOs to the Secretariat. This standard will be amended accordingly by the ICPM.

OPERATIONAL REQUIREMENTS In

order to meet the objective of preventing the spread of harmful organisms, both exporting and importing countries must demonstrate that the requirements of this standard have been met.

4. dunnage

Ideally, dunnage should also be marked as having undergone an approved measure in accordance with Appendix II of this standard. If not, this requires special consideration and it should at least be bark-free wood free from harmful organisms and signs of living harmful organisms. Otherwise importation would be refused or immediately disposed of in an approved manner (see Section 6).

5. Procedure before export

- 5.1 Verification of Conformity of Pre-Export Procedures** The NPPO of the exporting country is responsible for ensuring that the export systems comply with the requirements of this standard. This includes oversight of the certification and marking systems that ensure compliance, as well as the establishment of the inspection procedures (see also ISPM Pub. No. 7: *Export Certification Scheme*), registration or accreditation and oversight of establishments applying the measures, etc.

5.2 transit regulations

When transit shipments contain exposed wood packaging material that does not meet the requirements for approved measures, the NPPOs of the transit countries in addition to the measures of the importing country

set requirements to ensure that the wood packaging material does not pose an unacceptable risk.

6. Procedures upon import

The regulation of wood packaging material requires NPPOs to have policies and practices regarding wood packaging material for aspects outside their area of responsibility.

Because wood packaging material is included in almost all shipments, including those not normally subject to phytosanitary inspections, it is important to work with agencies, organizations, etc. not normally involved in compliance with phytosanitary export or import requirements. For example, cooperation with customs should be reviewed to ensure effectiveness in detecting potential non-conformity of wood packaging material. Cooperation with producers of wood packaging material should be developed.

6.1 Actions in the event of non-compliance at the point

of entry Where wood packaging material does not bear the required marking, a procedure may be followed unless other bilateral agreements are in place. This procedure is expressed in the way of treatment, disposal or rejection. The NPPO of the exporting country can be notified (see ISPM Pub. No. 13: *Guidelines for Notification of Non-Compliance and Emergency Action*). If the wood packaging material bears the required marking and evidence of living harmful organisms is provided, a procedure can be initiated. These procedures can take the form of treatment, disposal, or rejection. The NPPO of the exporting country must be notified in cases where live pests have been detected, in other cases it can be notified (see ISPM Pub. No. 13: *Guidelines for notification of non-conformity and emergency action*).

6.2 Disposal

Disposal of wood packaging material is a risk management option that can be used by the NPPO of the importing country upon arrival of wood packaging material when treatment is not possible or desired. The following methods are recommended for disposal of wood packaging material when required. Wood packaging material requiring emergency action shall be appropriately quarantined prior to treatment or disposal to prevent the escape of any harmful organism between the time the harmful organism posing the threat is identified and the time of Be prevent action or disposal.

combustion

Complete burning

Burial

Deep burial in locations approved by the appropriate authorities (Note: This is not a suitable disposal option for termite-infested wood). The depth of burial depends on climatic conditions and the harmful organism, but it is recommended to be at least 1 meter.

gen. The material must be covered immediately after burial and remain buried.

Processing

chips and further processing in a manner recognized by the NPPO of the importing country to destroy relevant harmful organisms (e.g

Manufacture of fiberboard.

Other methods

Treatments considered effective by the NPPO for the harmful organisms of concern.

The methods should be applied as promptly as possible.

AN HANG I

RECOGNIZED MEASURES FOR WOOD PACKAGING MATERIAL

Heat treatment (HT)

Wood packaging material must be heated according to a specific time-temperature schedule and reach a minimum core temperature of 56°C for at least 30 minutes⁴.

Oven drying (KD), chemical pressure impregnation (CPI) or other treatments may be considered HT treatment to the extent that they meet the HT requirements. For example, CPI can meet the HT requirement using steam, hot water, or dry heat.

Heat treatment is indicated by the marking HT. (see Appendix II)

Methyl bromide (MB) fumigation for wood packaging material The

wood packaging material must be fumigated with methyl bromide. The treatment is identified by the marking MB. When treating wood packaging material, the minimum standard for fumigation with methyl bromide is as follows:

temperature dosing	Minimum concentration (g/m ³) at:			
	0.5 h	4 h	36 h	16 h
210 C or more 48		24	17	14
160 C or more 56		28	20	17
110 C or more 64		32	22	19

The minimum temperature should not be lower than 100 C and the minimum duration of treatment must be 16 hours.⁵

List of the main harmful organisms affected by HT and MB

Species from the following groups of harmful organisms associated with wood packaging material are virtually eliminated by HT and MB treatment as indicated above:

harmful organism group
insects
Anobiidae
Bostrichidae
Buprestidae
Cerambycidae
Curculionidae
Isoptera
Lyctidae (Exceptions for HT)

⁴ A minimum core temperature of 56°C for at least 30 minutes is chosen in view of the wide range of harmful organisms for which this combination has been shown to be lethal and is an economically viable treatment. Although some pests are known to have a higher temperature tolerance, quarantine pests in this category are treated by the NPPOs on a case-by-case basis.

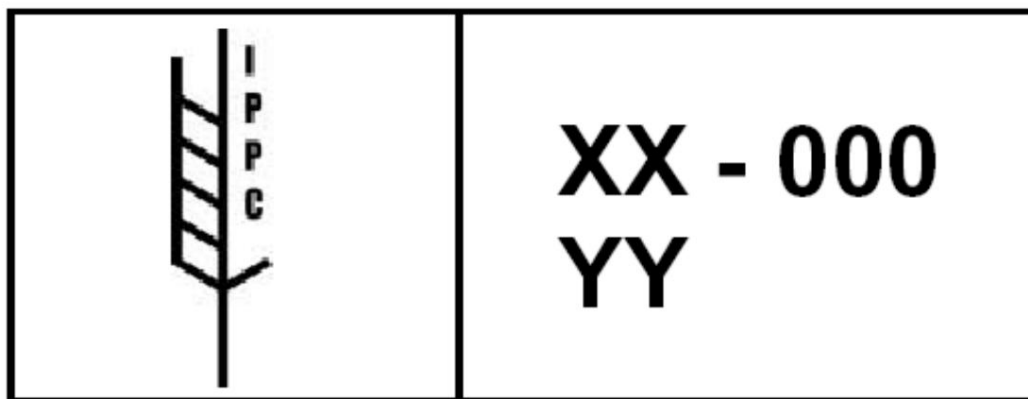
⁵ Some countries require a higher minimum temperature of the goods.

Oedemeridae
Scolytidae
Siricidae
nematodes
<i>Bursaphelenchus xylophilus</i>

ANNEX II

MARK FOR APPROVED ACTION

The marking shown below confirms that wood packaging material bearing the marking has been subject to an approved measure.



The marking should contain at least the following:

- the symbol
- the two-digit ISO country code followed by a unique number assigned by the NPPO to the producer of the wood packaging material who is responsible for using suitable wood and marking it correctly,
- IPPC abbreviation according to Annex I for the recognized measure applied (e.g HT, MB).

NPPOs, growers or suppliers may add control numbers or other information identifying specific batches at their discretion. Where debarking is required, the letters DB must be added to the abbreviation of the approved measure. Other information may also be included, provided that they are not confuse, mislead or deceive.

Markings must:

- conform to the model shown above - be legible - be permanent and non-transferrable - be affixed visibly, preferably on at least two opposite sides of the object to be certified.

The use of the colors red or orange must be avoided because these colors are used to identify dangerous goods.

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

Shippers must be encouraged to use appropriately marked timber for dunnage.

ANNEX III**ACTIONS FOR RECOGNITION UNDER THIS STANDARD**

Treatments⁶ that may be considered and approved when information is available include, but are not limited to:

Begasung

Phosphin
sulfur fluoride
Karbonylsulphid

CPI

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

irradiation

Gamma rays
X-rays
microwaves
Infrared
electron beam treatment

controlled atmosphere

⁶ Certain treatments such as phosphine fumigation and some CPI treatments are generally considered to be very effective, but there is currently a lack of empirical evidence of their effectiveness with which this procedure can be considered an accepted measure. This current lack of values is particularly related to the removal of harmful organisms from raw wood that are present at the time the measure is applied.

For more information on international standards, guidelines and recommendations regarding phytosanitary measures and the full list of current publications, please contact:

SECRETARIAT OF THE INTERNATIONAL PLANT PROTECTION CONVENTION

Postal address: IPPC Secretariat

Plant Protection Service

Food and Agriculture Organization of the United Nations (FAO)
Viale delle Terme di Caracalla

00100 Rome, Italy

Fax: +39-06-570.56347

E-mail: ippc@fao.org

Website: <http://www.ippc.int>

INTERNATIONAL STANDARDS ON PLANT HEALTH MEASURES (ISPMS)

New Revised Text of the International Plant Protection Convention, 1997. FAO, Rome.

ISPM Pub. No. 1: *Principles of Plant Quarantine in International Trade*, 1995. FAO, Rome.

ISPM Pub. No. 2: *Guidelines for Risk Analysis of Harmful Organisms*, 1996.
FAO, Rom.

ISPM Pub. No. 3: *Implementing Rules for the Importation and Clearance of Exotic Biological Control Agents*, 1996. FAO, Rome.

ISPM Pub. No. 4: *Requirements for establishing pest-free areas*, 1996. FAO, Rome.

ISPM Pub. No. 5: *Glossary of Phytosanitary Terms*, 1999. FAO, Rome.

Glossary Appendix No. 1: *Guidelines for the Interpretation and Application of the Concept for Official Control of Regulated Pests*, 2001. FAO, Rome.

ISPM Pub. No. 6: *Guidelines on Surveillance*, 1997. FAO, Rome.

ISPM Pub. No. 7: *Export Certification Scheme*, 1997. FAO, Rome.

ISPM Pub. No. 8: *Determination of pest status in an area*, 1998.

FAO, Rom.

ISPM Pub. No. 9: *Guidelines for pest eradication programs*, 1998. FAO, Rome.

ISPM Pub. No. 10: *Requirements for the establishment of pest-free places of production and pest-free parts of operations*, 1999. FAO, Rome.

ISPM Pub. No. 11: *Risk Analysis for Quarantine Pests*, 2001. FAO, Rome.

ISPM Pub. No. 12: *Guidelines for Phytosanitary Certificates*, 2001. FAO, Rome.

ISPM Pub. No. 13: *Guidelines for notification of non-conformity and emergency action*, 2001.
FAO, Rome.

ISPM Pub. No. 14: *Application of integrated measures in a systems approach to the risk management of harmful organisms*, 2002. FAO, Rome.

ISPM Pub. No. 15: *Guidelines for the regulation of wood packaging material in international trade*, 2002. FAO, Rome.

ISPM Pub. No. 16: *Regulated non-quarantine pests: concept and application*, 2002. FAO, Rome.

ISPM Pub. No. 17: *Pest Report*, 2002. FAO, Rome.

Annex 2

ISPM No. 15 heat treatment criteria according to
the requirements of the French Phytosanitary Service*

***Quelle:**

Ministry of Agriculture, Food, Fisheries and Rural Affairs / General Food Directorate / Plant quality and protection subdirectorate / Plant Health Bureau, (2004): Programme for the phytosanitary conformity of wood packaging for export use: 18 p.

ALEON, D. (2004): Phytosanitary treatment of wood by core heating. EPPO Bulletin, 34: 133-138.

Annex 2

French Phytosanitary Service heat treatment table**Sawn timber**

The data listed below is valid for all types of wood, all wood moisture content depending on the initial temperature of the wood.

Wood outlet temperature: 20 °C

Chamber temperature (°C)	Wood dimension, smallest dimension		
	22mm	45mm	80mm
60	1 hour 40 minutes	3 hours 30 minutes	
70	1 hour 10 minutes	2 hours 30 minutes	3 hours 10 minutes
80	1 hour	2 hours	2 Hours 50 Min without

Wood outlet temperature: 10 °C

Chamber temperature (°C)	Wood dimension, smallest dimension		
	22mm	45mm	80mm
60	1 hour 50 minutes	3 hours 50 minutes	
70	1 hour 20 minutes	2 hours 50 minutes	3 hours 40 minutes
80	1 hour 10 minutes	2 hours 20 minutes	3 hours 20 minutes

Wood outlet temperature: 0 °C

Chamber-temperature (°C)	Wood dimension, smallest dimension		
	22mm	45mm	80mm
60	2 hours	4 hours 15 minutes	
70	1 hour 30 minutes	3 hours 15 minutes	4 hours 10 minutes
80	1 hour 20 minutes	2 hours 45 minutes	3 hours 50 minutes

Annex 2

pallets

Wood outlet temperature: 20 °C

Chamber temperature (°C)	wood moisture	wood type	Length of time
60	> 25%	Nadelholz	9 hours 30 minutes
		hardwood	7 hours 40 minutes
	≤ 25%	Softwood & Hardwood	5 hours
70	> 25%	Softwood & Hardwood	3 hours 30 minutes
	≤ 25%	Softwood & Hardwood	3 hours
80	> 25%	Softwood & hardwood	2 hours 40 minutes
	≤ 25%	Softwood & Hardwood	2 hours

Wood outlet temperature: 10 °C

Chamber temperature (°C)	wood moisture	wood type	Length of time
60	> 25%	Nadelholz	10 Stunden 10 Minuten
		hardwood	8 hours 15 minutes
	≤ 25%	Softwood & Hardwood	5 hours 30 minutes
70	> 25%	Softwood & Hardwood	4 hours
	≤ 25%	Softwood & Hardwood	3 hours 20 minutes
80	> 25%	Softwood & Hardwood	3 hours
	≤ 25%	Softwood & Hardwood	2 hours 15 minutes

Wood outlet temperature: 0 °C

Chamber temperature (°C)	wood moisture	wood type	Length of time
60	> 25%	Nadelholz	10 Stunden 40 Minuten
		hardwood	8 hours 50 minutes
	≤ 25%	Softwood & Hardwood	5 hours 45 minutes
70	> 25%	Softwood & Hardwood	4 hours 20 minutes
	≤ 25%	Softwood & Hardwood	3 hours 40 minutes
80	> 25%	Softwood & Hardwood	3 hours 20 minutes
	≤ 25%	Softwood & Hardwood	2 hours 30 minutes

Remarks: • The

- duration of treatment only applies once the target temperature has been reached.
- The temperature should be measured at the coldest point of the chamber

**Plant control Treatment plant according
to ISPM No. 15 Heat
treatment**

Registration number (if already issued) OF
--

company / address Contact person in the company: Name: Tel.: Fax: Email:

Date of the tax audit:.....

- First time exam
- Subsequent
 audit Date of the last tax audit:
 Date of the last reference measurement:.....

Result of the test (details are listed in the following attachment)

The company meets the requirements according to ISPM No. 15 for the implementation of the heat treatment and is entitled to the registration number DE:..... respectively.

- And No

The defects that have occurred must be remedied by Until then, the approval is suspended.

The next follow-up examination is due no later than

.....
Place, date,

.....
Signature (PSD)

.....
Notice for the operation

Plant control Heat treatment plant

1. Operational Process

Is the operational process organized in such a way that the requirements of ISPM No. 15 can be met?

And

No, because: _____

Is treated, unmarked wood or wood packaging stored separately from untreated wood or wood packaging?

And

No

Is the marking according to ISPM No. 15 properly applied?

And

No

How are the treatment protocols transmitted to the agency that delivery notes etc.?

Can the treatment protocols be clearly assigned to the treatment batches?

And

No

1.1 Delivery

Is treated wood / wooden packaging bought in? Is it possible to assign purchased goods to goods that you have treated or manufactured yourself?

And

No

Is there a list of suppliers and documentation of purchases? (including archiving of delivery notes etc.)

And

No

Is the supplier's registration number according to ISPM No. 15 noted on the delivery documents?

And

No

1.2 Treatment / Production

Is there documentation on the type and amount of treatment according to ISPM No. 15 in the company and are the documents properly kept for at least 3 years?

And

No

How is the heat treatment carried out?

In the course of technical drying

As a purely phytosanitary measure

2 Inspection of the treatment chambers

The technical inspection of the treatment chambers is carried out by the plant protection service itself.

The technical test of the treatment chambers was carried out by a test facility recognized by the plant protection service.

Name and address of test facility:

.....
.....
.....
.....
.....

Type of heat treatment / drying chamber

Heater/fan in chamber ceiling

heater/fan on chamber wall

Anhang 3a

How is it verified that the core of the wood reaches 56 °C for at least 30 minutes?

About core temperature measurement

About chamber temperature using a reference table Where did the table come from?.....

Are the sensors arranged in such a way that the principle of measuring the coldest point in the chamber or wood is fulfilled?

And

No

What is the measuring accuracy of the sensors? Deviation of target value from actual value

.....
.....
.....

Is the chamber filled in such a way that the air can flow around the items to be treated unhindered?

• Slatted wood? And

No

• Chamber cross-section filled or voids covered And

No

How are the chamber/temperature parameters documented?

Automatically via the computer control of the system

Manually by means of temperature measurement Frequency of the measurement?.....

Are the parameters of ISPM No. 15 achieved?

And

No

Anhang 3a

3 extradition

Is there a list of the customers supplied?

And

No

Are the treatment logs, delivery notes and invoices archived in such a way that they can be traced in the event of a complaint?

And

No

Is the registration number according to ISPM No. 15 applied to the delivery notes / invoices?

And

No

4 list of defects

Lack	measure

**Operational control Treatment facility
according to ISPM
No. 15 MBr fumigation**

Registration number (if already issued) OF
--

company / address Contact person in the company: Name: Tel.: Fax: Email:

Date of the tax audit:.....

- First time exam
- Subsequent
 audit Date of the last tax audit:
 Date of the last reference measurement:.....

Result of the test (details are listed in the following attachment)

The company meets the requirements of ISPM No. 15 for carrying out fumigation with methyl bromide (MBr) and is entitled to the registration number DE:..... respectively.

And No

The defects that have occurred must be remedied by Until then, the approval is suspended.

The next follow-up examination is due no later than

Place, date,	Signature (PSD)	Notice for the operation
--------------	-----------------	--------------------------

Operational control of treatment plant MBr fumigation

1. Operational Process

Is the operational process organized in such a way that the requirements of ISPM No. 15 can be met?

And No, because: _____

Is treated, unmarked wood or wood packaging stored separately from untreated wood or wood packaging?

And No

Is the marking according to ISPM No. 15 properly applied?

And No

How are the treatment protocols transmitted to the agency that delivery notes etc.?

Can the treatment protocols be clearly assigned to the treatment batches?

And No

1.1 Delivery

Is treated wood / wooden packaging bought in? Is it possible to assign purchased goods to goods that you have treated or manufactured yourself?

And No

Is there a list of suppliers and documentation of purchases? (including archiving of delivery notes etc.)

And No

Is the supplier's registration number according to ISPM No. 15 noted on the delivery documents?

And No

1.2 Treatment / Production

Is there documentation on the type and amount of treatment according to ISPM No. 15 in the company and are the documents properly kept for at least 3 years?

And No

How is MBr aeration performed?

In a container

In a special fumigation hall

2 Inspection of the treatment chambers/containers

The technical inspection of the treatment chambers is carried out by the plant protection service itself.

The technical test of the treatment chambers was carried out by a test facility recognized by the plant protection service.

Name and address of test facility:

.....
.....
.....
.....
.....

Is the temperature in the treatment room continuously monitored and documented for the duration of the treatment?

And No

Is the methyl bromide concentration in the treatment room monitored for the duration of the treatment in such a way that the minimum concentrations of the gas can be measured and documented after 0.5 h, 2 h, 4 h and 16 h?

And

No

Are suitable scales available to determine the required amount of active ingredient depending on the temperature?

And

No

Is the container adequately ventilated after the treatment?

And

No

Are the parameters of ISPM No. 15 achieved?

And

No

3 extradition

Is there a list of the customers supplied?

And

No

Are the treatment logs, delivery notes and invoices archived in such a way that they can be traced in the event of a complaint?

And

No

Is the registration number according to ISPM No. 15 applied to the delivery notes / invoices?

And

No

Annex 3b

4 list of defects

Lack	measure

**Operational inspection of the treatment
facility in accordance
with ISPM No. 15 Packaging manufacturers**

Registration number (if already issued) OF
--

company / address Contact person in the company: Name: Tel.: Fax: Email:

Date of the tax audit:.....

- First time exam
- Subsequent
audit Date of the last tax audit:

Result of the test (details are listed in the following attachment)

The company meets the requirements according to ISPM No. 15 for the production of wooden packaging made of wood that has been treated according to ISPM No. 15 and is entitled to the registration number DE:..... respectively.

And No

The defects that have occurred must be remedied
by Until then, the approval is suspended.

The next follow-up examination is due no later than

Place, date,	Signature (PSD)	Notice for the operation
--------------	-----------------	--------------------------

Operational control of packaging manufacturers

1 Operational Procedure

Is the operational process, including warehousing, organized in such a way that the requirements of ISPM No. 15 can be met?

And No, because: _____

Is treated, unmarked wood or wood packaging stored separately from untreated wood or wood packaging?

And No

Is the marking according to ISPM No. 15 properly applied?

And No

In addition to the production of packaging materials, does the production facility also treat wood itself in accordance with ISPM No. 15?

And No

1.1 Delivery

Is treated wooden packaging bought in? Is it possible to assign purchased goods to self-made goods?

And No

Is there a list of suppliers and documentation of the additional purchases (wood and, if necessary, wooden packaging)? (including archiving of delivery notes etc.)

And No

Is the supplier's registration number according to ISPM No. 15 noted on the delivery documents?

And

No

1.2 Delivery

Is there a list of the customers supplied?

And

No

Can the treatment protocols of the wood used for the production batch be assigned to the invoices/ delivery notes?

And

No

Is the registration number according to ISPM No. 15 applied to the delivery notes / invoices?

And

No

2 manufacturing

Is there documentation on the type and quantity of packaging produced according to ISPM No. 15

And

No

Which types of packaging according to ISPM No. 15 are mainly produced?

kind of package	amount / year	remark
Euro pallets		
disposable pallets		
boxes		
dunnage		

3 list of defects

Lack	measure

Non-binding sample

Operational Statement

THE XX NNNNN

Address of the declaring establishment

We hereby confirm that we from the plant protection service.....

are registered for the following treatment(s) of wood for the manufacture of wooden packaging according to ISPM No. 15 under the registration number given above:

- heat treatment*
- Fumigation with methyl bromide*

Furthermore, we hereby confirm the proper execution of the wood treatment in accordance with the requirements of ISPM No. 15.

 place, date, signature

* Delete where not applicable

Non-binding sample

Confirmation of the authorization of a company to supply ISPM No. 15 treated unmarked wood

Address of the plant protection service

.....
.....
.....
.....
.....
.....
.....

This is to certify that the company.....

.....
.....
.....

for the phytosanitary treatment of wood for the manufacture of wooden packaging according to ISPM No. 15 under the registration number

OF.....

is registered for the following procedures:

- heat treatment*
- Fumigation with methyl bromide*

The company was checked and the proper execution of the wood treatment according to ISPM No. 15 according to §§ 13p, q, r of the PBVO was determined. This confirmation is valid until

Place, date, signature, official seal

* Delete where not applicable

Note (not part of this sample): If the official notification of registration or the report/follow-up certificate of the annual tax audit is to be used instead of this sample for deliveries to the Netherlands, it must be ensured that there is a validity limit (max. 1 year) in accordance with hold is.