



Canadian Food Inspection Agency / Agence canadienne d'inspection des aliments

Practical guidance on the implementation of ISPM 15



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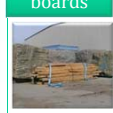


Scope

- Overview of the standard
- Authorisation of compliant exports
- Import control
- Applying the treatments

Overview of the standard

- Harmonized requirements ensure predictable, safe trade
- Basis of the standard:
 - Official treatment & marking
 - NPPO import system
- Certification should be the basis for entry and ongoing use
- NPPOs may undertake Pest Risk Analysis (PRA) to support additional measures if required
- 3 treatments internationally recognised
- Non-compliance should be reported in keeping with ISPM 13

Regulated commodities

Dunnage	Pallets	Load boards	Spools	Crates
				

Exempt commodities

Plastic and oriented strand board	Thin wood	Wood shavings	Plywood	Wine barrels
		 <small>cpodna.com</small>		 <small>cecliswine.com</small>

Elements of an official production system

- Legislative tools to support authorisation and control
- Systems to verify elements of certification (debarking, treatment and marking)
- Producer systems to ensure compliance with standard:
 - Treatment system
 - Segregation
 - Marking procedures
 - Traceability of the product as it moves through the system or to other authorised producers
 - Records attesting to treatment, production, handling and marking of compliant products
 - Security of the marking system
 - Etc.

Elements of an official production system

- ◆ Publication of information on authorised facilities
- ◆ Outreach and education
 - ◆ Identification and cooperation from the sector
 - ◆ Cooperation from users and cooperators (e.g. freight-forwarders, etc.)
- ◆ Audit and oversight
 - ◆ NPPO or authorised agency
 - ◆ Training
 - ◆ Frequency
- ◆ Follow-up on non-compliance

Marking



- ◆ Phytosanitary certificates should not be used
- ◆ Mark must comply with Annex 2
- ◆ Should not include additional information (e.g. dates, symbols, etc.)
- ◆ Must be easily read
- ◆ Dunnage may require multiple marks

Reuse, Repair and Remanufacture

- ◆ Reuse
 - ◆ Ongoing use without changing components
 - ◆ No requirement to re-treat or re-certify
- ◆ Repair
 - ◆ < 1/3 of components changed
 - ◆ Treated wood must be used
 - ◆ Mark must be affixed to the repaired components
 - ◆ No requirement to re-treat
 - ◆ Complexity in determining origin if non-compliant
- ◆ Remanufacture
 - ◆ > 1/3 of components changed
 - ◆ Entire unit should be retreated
 - ◆ All previous marks removed and unit re-certified



Supervision of the export system

- ◆ NPPOs cannot oversee or verify that every unit complies with requirements
- ◆ Oversight should be based on verifying that:
 - ◆ A producer's documented procedures meeting prescribed standards and
 - ◆ Records of production and the inspection of activities or commodities to confirm compliance
- ◆ Unannounced auditing, testing, etc.
- ◆ Repair and remanufacture managed in as manner similar to the production of new WPM

Examples of auditing the system

- ◆ Treatment
 - ◆ Do the volumes of treated wood used match WPM produced?
 - ◆ Do records of treatment confirm the volumes of wood required for production?
 - ◆ Is the wood being used pest free?
 - ◆ Does the treatment chamber meet prescribed operating conditions;...
- ◆ Marking of treated products –
 - ◆ Is the mark applied only to wood which has been treated?
 - ◆ Is the mark applied after assembly?
 - ◆ Is the mark consistent with Annex 2;...
- ◆ Security of the mark
 - ◆ Who has access?
 - ◆ Do those that have access understand their responsibilities;...
- ◆ Segregation
 - ◆ Are treated and untreated products easily identified?
 - ◆ Do employees understand the requirements;...



Import control





- ◆ Considerations:
 - ◆ Legislation to control imported goods
 - ◆ Outreach and awareness
 - ◆ Availability/effective utilization of inspection resources
 - ◆ Location of inspection site (e.g. at the port of entry; redirection to an inspection site; at destination; etc.)
 - ◆ Requirements for import declarations to identify compliant shipments
 - ◆ Equipment to conduct inspections



Import control

- Considerations:
 - Training/education of staff or cooperating agencies (Customs, port employees, etc.)
 - Protocols for the selection of imports for inspection
 - Actions to be taken on non-compliant imports
 - Separation of the commodity from the non-compliant WPM
 - Redirection or refusal of the commodity and the non-compliant WPM
 - Treatment, etc.
 - Notification of non-compliance
 - Importers should be made aware of non-compliant shipments
 - Notification in keeping with ISPM 13

Import inspection

Shipment is re-directed to inspection location	Gas testing	Shipment is offloaded for inspection	Some shipments inspected in place
			

Approved treatments

- Debarked wood should be used
 - Any residual piece < 3cm
 - If > 3cm no more than 50 cm²
- Treatments practically eliminate the risks of pests present in the wood at time of treatment
 - Heat treatment (HT)
 - Dielectric heating (DH)
 - Methyl Bromide (MB) fumigation
- Treatment should precede marking
- Debarking should precede methyl bromide fumigation

Debarking



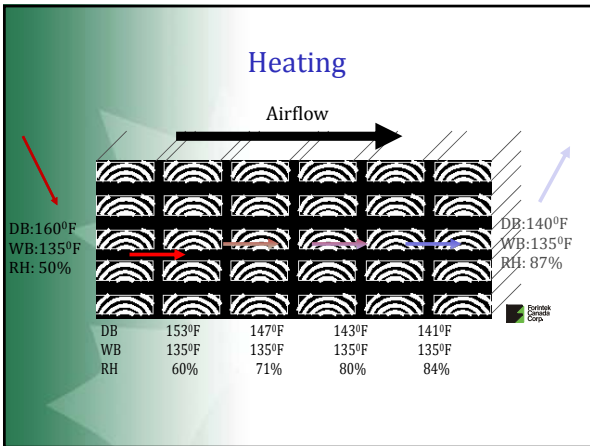
Heat treatment

- Heating of the wood to a specified temperature across its profile for specified period of time
 - 56°C for 30 minutes = HT
 - 60°C for 60 seconds = DH
- Heat treatment in a conventional kiln achieved by reaching specific ambient temperatures and humidity in the chamber
- Experts in wood drying technology could be used to establish treatment schedules, operating conditions
- Kiln drying which includes moisture reduction during heating of the wood may or may not achieve heat treatment

Factors influencing effective heat Treatment

- Uniformity and velocity of air flow through the wood stack
- Air circulation around the wood stack
- The presence and size of cold spots in the chamber
- Type and effectiveness of the heat source
- Type of wood being treated (species/density, size, etc.)
- Number and type of temperature and humidity measuring devices
- Efficiency of the chamber
- Size of the chamber
- Humidification and venting
- Recording devices
- etc.





- ### Heating
- When air flows through the wood stack :
 - Its temperature decreases as energy is used in heating and evaporation
 - Its relative humidity increases as it picks up moisture from the surface of lumber
 - Its heating capacity decreases
 - Increasing the relative humidity in the chamber may be used to reduce the cooling effect of moisture in the wood
 - Fan reversals and increased air flows may reduce cold spots in the kiln
 - The wood stack should allow for air flow over and under the stack
 - The size and density of the wood should consistent to ensure uniform heating
 - Baffles may be used to direct air flows and optimize heating

Heat chamber operation

Chamber

Chambers should be constructed to ensure uniform heating

Loading

Air flow

Fans should be used to maximize air flow through the wood stack

Fan reversal may be required to ensure uniform heating within the stack

Heat chamber operation

Wet bulb

Sensors should be regularly calibrated

Sufficient sensors should be used to account for variation or failure in any sensor

Dry bulb

Probes

Sensors should consider the location of cold spots in the kiln (e.g. exit side of the air flow, etc.)

Spacers

Spacers (stickers) should be used to maximize air flow through the wood

- ### Verification of heat treatment
- Option 1**
 - Fixed number of temperature sensors inserted into the wood to measure temperatures through each treatment
 - At least two sensors located in the cold spot (slowest heating pieces)
 - Option 2**
 - Test treatment with multiple temperature sensors to identify a specific treatment schedule (ambient temperatures and other operating conditions) for a specific wood (species, size, etc.)
 - Based upon the test treatments, ongoing use of the specific schedule to ensure that each treatment meets the requirements
 - Where treatment systems are the same, initial measurements on one kiln may be used for additional similar kilns provided other factors such as species being treated, wood size, etc. remain constant

Methyl Bromide (MB) fumigation

- Annex 1: Table 1: Minimum CT for MBr**

Temperature (°C)	CT (g-h/m3) over 24 h	Minimum final concentration (g/m3) after 24 h
21.0 or above	650	24
16.0 - 20.9	800	28
10.0 - 15.9	900	32

- Usually carried out on the basis of dose (concentration over a period of time (CT))
- CT is affected by sorption, leakage, temperature, humidity, etc.
- Table 2 of Annex 1 provides a guide to measuring treatment by way of concentration
- MB infiltrates most woods very well, but will not infiltrate large dimension timber (e.g. 20cm)
- Temperature must be > 10°C in order for the MB to remain gaseous
- Should temperatures fall below optimal, treatments should be extended or restarted

MB fumigation

- Applicators should observe good fumigation practices
 - Appropriate sealing/testing for leaks
 - Appropriate air circulation
 - Loading of chamber (not more than 80%)
 - Reduce/account for potential unwanted sorption (water, other articles within treatment area, etc.)
 - Removal of articles that may prevent fumigant penetration (impermeable wraps, etc.)
 - Temperature and dosage monitoring
 - Applicator and environment safety

MB fumigation

Container fumigation



Appropriate fans placed in the chamber
Sufficient lines are placed into the chamber to ensure effective dispersion of the gas

Tarp fumigation



Logs are used to secure the tarp
Several sheets are used to prevent leakage