

**Inclusion of the phytosanitary treatment  
*sulphuryl fluoride fumigation of wood  
packaging material*  
in Annexes 1 and 2 of ISPM 15  
(2006-010A)**

**IPPC Member Consultation  
1 July to 30 November  
2015**

# ISPM 15: Regulation of Wood Packaging Material in Int'l Trade

## Structure of ISPM 15:

### -REQUIREMENTS:

1. Basis for Regulation
2. Regulated Wood Packaging Material
3. Phytosanitary Measures for Wood Packaging Material
  - 3.1 Approved phytosanitary measures
  - 3.2 **Approval of new or revised treatments**
  - [...]
- 4.2 Application and use of the mark
- [...]

**ANNEX 1: Approved treatments associated with wood packaging material**

**ANNEX 2: The mark and its application**

# General Considerations

- The proposed revision is part of work to adopt feasible treatments for WPM, to replace use of methyl bromide (MB)
- CPM-3 (2008): adopted IPPC recommendation on *Replacement or reduction of the use of MB as a phytosanitary measure*

# BACKGROUND

Draft phytosanitary treatment (PT) submitted by contracting party - **Sulphuryl fluoride fumigation of wood packaging material:**

- Reviewed by TPPT (*Technical Panel on Phytosanitary Treatments*) with regard to compliance with the requirements of ISPM 28 (Phytosanitary treatments for regulated pests)
- Reviewed by TPFQ with regard to feasibility and implementation of PT for wood packaging material
- Recommended by SC for member consultation in 2015 (1 July – 30 Nov.)

# BACKGROUND

Draft phytosanitary treatment (PT) submitted by contracting party - **Sulphuryl fluoride fumigation of wood packaging material:**

- Also recommended by the TPPT and approved by the SC for member consultation in 2015 as PTs/Annexes to ISPM 28:
  - Sulphuryl fluoride fumigation of insects in debarked wood (2007-101A) [lower dose]
  - Sulphuryl fluoride fumigation of insects and nematodes in debarked wood (2007-101A) [higher dose]

*Note: References are available from these draft PTs*

# What is Sulphuryl Fluoride (SF)?

## Information from FAO-AGP (Plant Production & Protection Div.):

- SF is in the 'positive list in EU' (i.e. fulfills the EU food safety requirements)
- Registered also in China and the US
- Overall, authorities seem to judge the risks and benefits of this fumigant in comparison with methyl bromide as more favourable.



# Requirements for Phytosanitary Treatments under ISPM 15

## SC 2008 November :

Para. 105: SC agreed the following criteria should be used when considering treatment suitability for inclusion in ISPM 15:

- All treatments ... for inclusion in ISPM 15 should be evaluated for **equivalence to the current ISPM 15 methyl bromide treatment** in the following manner:
- It must be demonstrated in compliance with ISPM 28 and to be at least 99.99683% effective against *Anoplophora glabripennis* (Asian longhorn beetle) and *Bursaphelenchus xylophilus* (Pinewood nematode) or appropriate surrogates.

# Drafting Issues

- Requirements for the treatment:
  - wood must not exceed 20 cm in cross-section
  - wood must be debarked
  - moisture content of wood should not be more than 60 %
- These requirements reflect the experimental conditions used in the development of the treatment



# Drafting Issues

- Requirements for the treatment [continued]:
  - temperature of wood must be not less than 20 °C
- Two treatment schedules are provided for:
  - 48 hours at 20 °C or above
  - 24 hours at 30 °C or above
- The required CT (concentration-time product) must be reached

• **Table 3:** Minimum CT over 24 or 48 hours for wood packaging material fumigated with sulphuryl fluoride

| Temperature (°C)      | Minimum CT (g·h/m <sup>3</sup> ) | Minimum final concentration (g/m <sup>3</sup> ) |
|-----------------------|----------------------------------|---|
| 20 and above for 48 h | 3 000                            | 29  |
| 30 and above for 24 h | 1 400                            | 41  |

• **Table 4:** Example of a treatment schedule that achieves the minimum required CT for wood packaging material treated with sulphuryl fluoride

| Temperature (°C) | Minimum target CT dosage (g·h/m <sup>3</sup> ) | Dosage (g/m <sup>3</sup> ) | Minimum concentration (g/m <sup>3</sup> ) at: |     |     |      |      |                 |      |
|------------------|--|----------------------------|---|-----|-----|------|------|-----------------|------|
|                  |  |                            | 0.5 h   | 2 h | 4 h | 12 h | 24 h | 36 h            | 48 h |
| 20 and above     | 3 000  | 120                        | 124   | 112 | 104 | 82   | 58   | 41              | 29   |
| 30 and above     | 1 400  | 82                         | 87  | 78  | 73  | 58   | 41   | NA <sup>#</sup> | NA   |

# Thank you!



# What is Sulphuryl Fluoride (SF)?

## US National Pesticide Information Center

### Technical Fact Sheet

- SF is an insecticide and rodenticide first registered 1959.
- Found compliant with current health, safety, and product labeling requirements
- SF was eligible for re-registration in 1993 by the U.S. Environmental Protection Agency
- SF is a gas used to fumigate closed structures and their contents for drywood and Formosan termites, wood infesting beetles, bedbugs, carpet beetles, clothes moths, cockroaches, and rodents.
- SF is an odorless, colorless gas. It is non-flammable, non-corrosive, and does not react with materials to produce odors or residues.
- As a result of the knowledge required to use fumigants appropriately, the U.S. EPA has classified SF as a "Restricted Use Pesticide" (i.e., one that may be purchased and used only by certified applicators). Although SF is only slightly toxic via inhalation an acute hazard is associated with this chemical because it is an odorless, colorless gas.