



SHIP SAFETY BULLETIN

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Subject: FUMIGATION ON BOARD VESSELS
Applying Health Canada’s standard on the maximum concentration of phosphine allowed in vessel crews’ accommodations

Purpose

Phosphine gas is effective in killing pests on vessels. This bulletin informs Transport Canada Marine Safety and Security partners about Health Canada’s standard on the maximum acceptable concentration of phosphine in and around spaces crew members normally occupy.

Scope

This bulletin addresses all parties to which section 2 of the *Cargo, Fumigation and Tackle Regulations* (SOR/2007-128) applies.

Background

This Health Canada standard is in Re-evaluation Note REV2010-03, and was issued on August 24, 2010, by the Pest Management Regulatory Agency (PMRA). We have attached it to this bulletin.

http://publications.gc.ca/collections/collection_2010/sc-hc/H113-5-2010-3-eng.pdf

You will find the regulations that apply to fumigation operations on board vessels in the *Cargo, Fumigation and Tackle Regulations* (CFTR), SOR/2007-128.

Part 2 of the CFTR deals with safe fumigation practices on board Canadian and foreign vessels in Canadian waters travelling to or from Canadian ports. It:

Keywords:

1. Phosphine
2. TLV
3. Fumigation in transit
4. CFTR
5. Health Canada

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- takes into account the IMO’s recommendations on pesticide use on board vessels (SOLAS Convention CH VI-R 3 / MSC .1/Circ.1264 Annex of May 27, 2008); and
- aims to protect persons who may be on board during or after a fumigation, in particular crew members, fumigators, marine safety and security inspectors, and cargo handlers.

Fumigants for use on board vessels are restricted, and their use is governed by the *Pest Control Products Act*, administered by Health Canada.

- 1- **Phosphine:** One of the fumigants authorized by CFTR subsection 203.(1). It has insecticide properties and is produced when aluminum phosphide and magnesium phosphide react to moisture.
- 2- **“Threshold limit value” (TLV),** in respect of a fumigant, means the highest allowable concentration of the fumigant a person may be exposed to in a given space. (*VLE*) (CFTR s. 200).

CFTR Schedule 2 subsections 203(2), 211(2), 212(5), 226(4), 231(6) and 237(3) give the TLV of fumigants.

- **Current situation:** TLV (ppm) of phosphine: 0.3
- **Health Canada Standard:** reduces the TLV from 0.3 to 0.1 ppm

Recommendations

To ensure that vessels adopt Health Canada standards:

- the fumigator-in-charge must send test results taken as per CFTR, section 221, to the Transport Canada Centre nearest the fumigation site or to the Cargo Inspector on duty;
- masters shall report any danger resulting from fumigation, as per CFTR, section 208;
- with authority from the CSA 2001, Marine Safety and Security inspectors should ensure that fumigation operations comply with this Health Canada standard; and
- in the broader context of regulatory reform, Transport Canada will amend CFTR, Schedule 2, to reflect the Health Canada standard on the threshold limit value of phosphine in vessel accommodations during fumigation.