

Title	IMDG Code 2016 / SUPPLEMENT / Recommendations on the Safe Use of Pesticides in Ships applicable to the Fumigation of Cargo Transport Units / 6
Effective Date	1-1-2012
Invalid from	1-1-2014
Note	Incorporating Amendment 35-10

6 Hazards to personnel

6.1

If for any reason, the ship's crew or other personnel have to open a container declared as being under fumigation they must be very careful.

6.2

There are no obvious signs when Methyl bromide has been used as a fumigant (e.g., by sight or smell). The container should be left open as long as possible and then checked with the equipment available and should be declared gas free before entry is allowed. In the case of an emergency, entry may be allowed, with full confined space precautions, if there is any gas found to be present.

6.3

If the container is fumigated with Phosphine there are normally visual signs inside the container of the fumigant in the form of sachets, tablets, pressed plates or powder. The state of the packaging depends on the time these have been exposed and the atmosphere that they have been exposed in. It is also possible that the fumigants have moved between cargo items and may not be immediately visible.

6.4

As moisture is required for the reaction to take place, when a container is opened at sea the level of moisture in the air may restart the reaction.

6.5

After the Magnesium or Aluminium Phosphide reacts with moisture to generate Phosphine, a residue of magnesium or aluminium hydroxide remains. This is a light powdery grey substance like ash. Hopefully this has been retained in some kind of packaging so that it can be removed safely. If, however, there is a residue over the cargo, the crew must avoid breathing in this residue or getting it into their eyes or mouth. If not they are still at risk of being poisoned by the residue, which may still be able to generate some Phosphine.

6.6

It should be noted that there are certain commodities (e.g., edible nuts) where a small amount of fumigant is put in cotton wool and placed inside each bag. These items are then dangerous because their handling brings the fumigant close to the face.

6.7

Personnel should be made aware that not every fumigated container is declared and, hence, not marked as such. There are indicators for fumigated containers like tapes on vents or the door joints, a possible 'fishy garlic' smell of Phosphine and packets or piles of powdery residue inside the container.