

Title	IMDG Code 2016 / SUPPLEMENT / Recommendations on the Safe Use of Pesticides in Ships applicable to the Fumigation of Cargo Transport Units / 4
Effective Date	1-1-2012
Invalid from	1-1-2014
Note	Incorporating Amendment 35-10

4 Fumigants used

There are a number of chemicals that are used as fumigants such as Phosphine and Methyl Bromide.

4.1

Phosphine UN 2199

4.1.1

This process requires a long period of time to work completely. This can be applied with little technical training as it is supplied in sachets, tablets or pressed plates containing Magnesium Phosphide or Aluminium Phosphide. These generate Phosphine gas when exposed to the moisture in the air. The gas has a slight 'fishy garlic' smell and breaks down into a powdery grey residue.

4.1.2

The rate of generation of Phosphine depends on the temperature, the airborne moisture and the degree the generating material is exposed to the air.

4.1.3

Symptoms of poisoning by inhalation of Phosphine include nausea, vomiting, headache, feeling weak, fainting, pain in chest, cough, chest tightness and difficulty breathing. Pulmonary oedema (the presence of excess fluid in the lungs usually due to heart failure) can follow, usually within 24 hours, but sometimes this is delayed for some days.

4.2

Methyl bromide UN 1062

4.2.1

Fumigation with Methyl bromide is a relatively rapid process that can normally be completed in less than 48 hours. So these containers are not usually presented for shipment with gas above the toxicity levels (threshold limits) set by national agencies.

4.2.2

Symptoms of poisoning by inhalation of Methyl Bromide include headaches, dizziness, and eye irritation; coughing, nausea, abdominal discomfort, and numbness of feet. Higher exposure will bring about unconsciousness to central nervous system, convulsions, and loss of vision, balance and hearing.

4.2.3

Methyl Bromide is supplied as a gas. So during application, expertise is required to carry out the operation.