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| <b>Title</b>          | IMDG Code 2016 / SUPPLEMENT / Recommendations on the Safe Use of Pesticides in Ships applicable to the Fumigation of Cargo Transport Units / 5 |
| <b>Effective Date</b> | 1-1-2012                                                                                                                                       |
| <b>Invalid from</b>   | 1-1-2014                                                                                                                                       |
| <b>Note</b>           | Incorporating Amendment 35-10                                                                                                                  |

## 5 Ship-side operations

## 5.1

Fumigation after loading on board a ship

## 5.1.1

No person should be allowed by the master to fumigate the contents of a freight container, or cargo transport unit once it has been loaded on board a ship.

## 5.2

Containers loaded without ventilation after fumigation (fumigation in transit)

## 5.2.1

If it is intended that freight containers or cargo transport units containing cargo under fumigation should be taken on board ship without preliminary ventilation, their shipment must be considered as a Class 9 Hazard under the IMDG Code and as such the procedures should conform to the provisions as specified in the entries for FUMIGATED UNIT (UN 3359) of the Code. The following special precautions, incorporating the IMDG provisions, are necessary:

.1 A freight container or cargo transport unit containing cargo under fumigation should not be allowed on board until sufficient time has elapsed to allow the attainment of a reasonably uniform gas concentration throughout the cargo. Because of variations due to types and amounts of fumigants and commodities and temperature levels, it is recommended that the period to elapse between fumigant application and loading should be determined locally for each country. Twenty-four hours is normally adequate for this purpose. Before loading the container should be checked for leaks and any leakage sealed.

.2 The master should be informed prior to loading of freight containers and cargo transport units under fumigation. These should be identified with suitable warning signs, incorporating the identity of the fumigant and the date and time of fumigation. Any freight container under fumigation must have the doors substantially secured before loading onto a ship. Plastic or lightweight metal seals are not sufficient for this purpose. The securing arrangement must be such as to allow only authorized entry to the freight container. If container doors are to be locked, the means of locking should be of such a construction that, in case of emergency, the doors could be opened without delay. Adequate instructions for disposal of any residual fumigant material should be provided.

.3 Shipping documents for freight containers or cargo transport units concerned should show the date of fumigation and the type and amount of fumigant used.

.4 Stowage on deck should be at least 6 m away from vent intakes, crew quarters and regularly occupied spaces.

.5 Stowage under deck should only be undertaken when unavoidable and then only in a cargo space equipped with mechanical ventilation sufficient to prevent the build-up of fumigant concentrations above the toxicity levels (threshold limits) set by national agencies. The threshold limit for occupational exposure to the fumigant can be found on the Safety Data Sheet. The ventilation rate of the mechanical ventilation system should be at least two air changes per hour, based on the empty cargo space.

.6 Equipment suitable for detecting the fumigant gas or gases used should be carried on the ship, with instructions for its use.

.7 Where the stowage requirements above cannot be met, cargo spaces carrying fumigated freight containers or cargo transport units should be treated as if under fumigation and the provisions below should apply.

## 5.2.2

Before a fumigated container is loaded to a vessel below deck special precautions are necessary. This includes the following:

.1 At least an officer and one other are to receive appropriate training and will be designated as the trained representatives of the master. The master, through his representative, is responsible for ensuring safe conditions in the occupied spaces of the vessel.

.2 The trained representatives should brief the crew before the container is loaded.

## 5.2.3

The fumigant gas is heavier than air so care should be taken in the holds particularly when working on the tank tops.

## 5.2.4

The trained representatives of the master should be provided and be familiar with:

.1 The information in the relevant Safety Data Sheet (SDS), if available.

.2 The instructions on the packaging itself, such as the recommendations of the fumigant manufacturer concerning methods of detection of the fumigant in air, its behaviour and hazards properties, symptoms of poisoning, relevant first aid and special medical treatment and emergency procedures.

## 5.2.5

The ship should carry:

.1 adequate gas-detection equipment for the fumigant concerned, together with instructions for its use;

.2 instructions on disposal of residual fumigant material;

.3 at least four sets of adequate respiratory protective equipment; and

.4 a copy of the latest version of the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), including appropriate medicines and medical equipment.

## 5.2.6

Prior to the arrival of the ship, generally not less than 24 hours in advance, the master should inform the appropriate authorities of the country of destination and ports of call that fumigation in transit is

being carried out. The information should include the type of fumigant used; the date of fumigation and cargo spaces carrying fumigated freight containers or cargo transport units.

#### 5.2.7

The instructions on the fumigant label or package itself, such as the recommendations of the fumigant manufacturer concerning methods of detection of the fumigant in air, its behaviour and hazardous properties, symptoms of poisoning, relevant first aid and special medical treatment.

#### 5.2.8

Disposal of any residual fumigant material should be in accordance with suppliers instructions.