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## Fumigation Risks

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### 1. Purpose

- 1.1. This Safety Alert is issued by the Bahamas Maritime Authority to highlight the risks associated with in-transit cargo fumigation. It is based on the initial findings of an ongoing investigation into a very serious marine casualty

### 2. Introduction

- 2.1. A Bahamas registered general cargo vessel was chartered to carry a cargo of corn on a short haul voyage in Europe. On completion of loading the cargo was fumigated with ALUMINIUM PHOSPHIDE at a dose of  $1\text{g/m}^3$ .
- 2.2. During the voyage, the vessel experienced heavy weather. On the second day of the voyage, the cargo hold's gas-tight integrity failed and HYDROGEN PHOSPHIDE gas (PH3) entered the accommodation. Several members of the crew were overcome. One crew member died and three others had to be evacuated.

### 3. Causal Factors

- 3.1. The investigation is ongoing but attention is drawn to the following:
- Carriage of fumigated cargo must be fully risk assessed with effective controls identified and utilised
  - Crew members must be fully briefed on the risks of carrying a fumigated cargo, symptoms of exposure to the fumigant and actions to take if those symptoms are experienced
  - The fumigant may not be detected by smell
  - Periodic monitoring may not detect fumigant in time to avert lethal levels of exposure

### 4. Validity

- 4.1. This Safety Alert is valid until further notice and may be updated as the investigation progresses.