

Effective for Contracts dated from 1st April 2012

Fumigation Rules

No.132

RULES FOR FUMIGATION

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GAFTA

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FUMIGATION RULES NO. 132

For contracts which incorporate the terms and conditions of these Rules for fumigation of shipboard treatments, the following shall apply: -

1.0 INTRODUCTION

1:1 The Parties agree that when fumigation is required, they shall appoint a GAFTA Registered Fumigant Operator.

1:2 The Fumigant Operator's Code of Practice of the GAFTA Trade Assurance Scheme (GTAS) shall apply.

2.0 GENERAL

2:1 Fumigation must be carried out by a fumigation company approved by GAFTA and/or the relevant National Plant Protection Organisation and/or the relevant National Health Authority, according to the custom of the port or location designated in the contract. Fumigation companies must have a certificate of compliance with a recognised quality management system that is specifically relevant to the fumigation of agricultural commodities, for example ISO 9001 or have been successfully audited and certified under GAFTA Trade Assurance Scheme (GTAS).

2:2 Where National Authorities (or other parties as applicable) in the country of use operate an approval system, then the fumigation materials and equipment in use should have approved status.

- 2:3 All fumigation materials and equipment used for fumigation must be in good serviceable order.
- 2:4 In accordance with standard trade practice the fumigant normally used is phosphine gas which is released from a proprietary metal phosphide product.
- 2:5 GAFTA Registered Fumigators should operate in accordance with IMO/IMDG Code Recommendations on the Safe Use of Pesticides in Ships, the fumigant manufacturer's instructions and other industrial standards and legislation norms relevant in the place of service.
- 2:6 Where there is a specified concentration level required by a National Authority that level is to apply as an acceptable concentration/dosage.
- 2:7 Fumigation companies or their representatives must be allowed full access to the vessel at the loading and/or discharge port as applicable allowing them the opportunity to carry out all operations related to fumigation process.
- 2:8 It is the responsibility of the principal to ensure that the suitability of the carrying vessel and the appropriate permissions regarding the operation of fumigation onboard a vessel are agreed and acceptable to the Master/Owners by incorporating suitable terms in the freight contract (Charter Party).
- 2:9 Fumigation is normally performed within the port limits, or such other recognised places for vessels and goods to be fumigated, all as set out and agreed in the contract.
- 2:10 The responsibility of a fumigation company (when engaged to undertake a fumigation) is limited to the proper application of the fumigant, the following of the proper procedures including health and safety considerations and the exchange of appropriate information between the responsible parties. Where

the correct procedures are followed (in accordance with the contract of engagement) this is understood to be an accurate procedure against infestation.

3.0 TERMS AND DEFINITIONS

3:1 **Fumigation** - is the process of application, exposure and dissipation of a toxic chemical in its gaseous state with the purpose of control of target pests in the product and its enclosure.

3:2 **In-transit Fumigation** - is the process of fumigation during a voyage. Note: as the vessel will normally sail shortly after completion of fumigant application it is impossible to assess the full efficacy of the fumigation before sailing.

3:3 **Fumigant Application** - is the process of introduction of a toxic gas or a chemical releasing toxic gas into the product to be treated and its enclosure for control of target pests.

3:4 **Exposure** - is the period of time required for toxic gas release, dissipation throughout the product and effective action on the target pests in the fumigated product and its enclosure.

3:5 **Degassing (venting)** - is the process at the end of the exposure period, after the fumigation enclosure is unsealed, when fumigant gas desorbs and diffuses out of the product that was fumigated and the fumigation enclosure.

3:6 **Removal/disposal of spent fumigant.**

Removal - is the process of removal of retrievable parcels (sleeves, sachets, plates, blankets) of residues from the reacted metal phosphides at the end of the exposure / fumigation process. Residues must be handled in accordance with the applicable regulations and manufacturer's safety guidelines.

Disposal - is the process of collection of the waste residues from onboard

vessels and other means of transport for neutralisation and destruction by an approved and qualified operator.

3:7 **Clearance (also known as “gas free”)** - is the procedure after the degassing period when the fumigator tests the air in the workspace to make sure that the concentration of fumigant gas has fallen to or below safe levels.

3:8 **Re-circulation System** – the ancillary equipment for improvement of gas penetration in the fumigated cargo.

3:9 **Fumigation Certificate (or Fumigant Application Certificate)** - is the document issued after fumigant application stating the characteristics and procedure applied.

3:10 **Clearance Certificate (or Gas Free Certificate)** - is the document issued after degassing (venting) of the cargo at or just prior to destination, indicating safe levels of the fumigant tested and declaring the area safe for workers to enter a fumigated space and/or handle a fumigated product.

3:11 **Fumigator** – means the appointed fumigation company

4.0 ACCEPTED METHODS OF PHOSPHINE APPLICATION

The methods of phosphine application methodology that can be considered for “in transit” fumigation of bulk or bagged cargoes in ships holds and the key elements of each are listed below:

The criteria that are relevant in respect of the fumigation are (Inter alia):

- Type of fumigant product and formulation used
- Exposure time
- Conditions: temperature/moisture

- Type and volume of cargo/product

4:1 **Surface tablet/pellet application**

Is the application of tablets or pellets of a metal phosphide on the cargo surface.

High concentrations of gas build up in the head space, potentially resulting in significant leakage through the hatch covers unless they are very well sealed. Penetration down into the cargo is limited. Powdery residues cannot be removed.

4:2 **Surface blanket application**

Is the application of metal phosphide in blankets, sachets or sleeves, placed on the surface of the cargo (or into the top half metre). All points the same as (4:1) except that with this method powdery residues can be removed prior to discharge.

4:3 **Fumigation by probing**

Is the application of tablets or pellets by probing into the cargo of at least 0.3 m depth up to a few meters. There is less loss of gas through hatch covers than in (4:1). Better penetration of gas is experienced compared to applications on the cargo surface. The procedure is only fully effective if the holds are relatively shallow and voyage time relatively long. Powdery residues cannot be removed.

4:4 **Probing sleeve application.**

Is the application of tablets or pellets by probing into the cargo a few meters in retrievable sleeves. All points as for (4:3) except that with this method powdery residues can be removed prior to discharge.

4:5 **Surface application with re-circulation.**

Is the fitting of an enclosed powered re-circulation system to the hold and application of metal phosphide tablets or pellets to the surface. This to ensure the gas is homogeneously and rapidly distributed throughout the cargo. Powdery residues cannot be removed.

The recirculation system consists of a permeable tubular loop placed in the lower part of a hold prior to commencement of loading operations. The tubular loop is connected via an impermeable tube/hose to the headspace of the hold. The mixture of gas and air is circulated by a spark proof ventilator.

4:6 **Probing sleeve/blanket application with re-circulation.**

Is the fitting of an enclosed powered re-circulation system to the hold and application of metal phosphide in blankets, sachets or sleeves on the surface or probed into the top one or two meters. As for (4:5) except that with this method, powdery residues can be removed. Also gaseous residues can be removed more easily than with other methods, as once the powdery residues have been removed the re-circulation system can be used to assist this to happen rapidly.

5.0 SCOPE OF SERVICE AND DOCUMENTATION.

5:1 Scope of Service

If shipboard fumigation is necessary it can be considered under two headings:

5:1:1 ***In-port fumigation***, where fumigant application, exposure, degassing and clearance are all completed at one port which could either be the load port or discharge port, and therefore efficiency of the fumigation can be established at that port. If fumigation is at load port Fumigation Certificate (as 5:2:1 below) will be issued before sailing, or if fumigation is carried out at discharge port Fumigation Certificate (as 5:2:1 below) will be issued before discharge.

5:1:2 ***In-transit fumigation*** can be provided by a fumigator either partially or in full and the scope of such service is determined by the customer's order for corresponding certificate(s) as follows:

5:2 Documentation

5:2:1 **Fumigation Certificate (or Fumigant Application Certificate)** - issued in accordance with the requirements of the contract and/or phytosanitary measures and/or International standards confirming the correct fumigant application before sailing and/or confirming that the correct treatment has been completed prior to discharge.

5:2:2 **Clearance Certificate (or "Gas Free" Certificate)** – means that the fumigator's services at discharge port are only intended to provide correct cargo degassing (venting) on arrival.

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