

**Attachment 5: Fumigant Application
Methods and Mandatory Minimum Exposure Time**

The following mandatory procedures represented in Table 3 apply only when fumigation is required to do the following: (1) remove the special grade designation “infested” from the official inspection certificate when insect infestation is found during loading, or eliminate the “U.S. Sample Grade” designation, as applicable; or (2) when fumigation is required to satisfy phytosanitary inspection certification of the cargo; or (3) when official personnel are requested by contract to observe fumigation of a lot and certify that the fumigation was done according to official procedures.

TABLE 3

Application Method with Minimum Fumigant Dosage Rate and Exposure Time in Days by Cargo Hold Depth*				
Application Method and Minimum Dosage Rate Per 1,000 Cubic Feet of Storage Space	CARGO HOLD DEPTH IN METERS			
	< 6	6 – 12	>12 – 20	>20
FUMIGANT EXPOSURE TIME IN DAYS				
Surface Application 45 grams of metal phosphide per 1,000 cu. ft.	9	15	Not Acceptable	Not Acceptable
Subsurface / Trench-in Application 45 grams of metal phosphide per 1,000 cu. ft.	8	15	18	Not Acceptable
Recirculation Application Method A 33 grams of metal phosphide per 1,000 cu. ft.	4	7	9	9
Recirculation Application Method B 45 grams of aluminum phosphide pellets per 1,000 cu. ft. or 30 grams of magnesium phosphide per 1,000 cu. ft.	3.5	3.5	3.5	3.5

* Cargo Hold Depth is the length from the bottom of the hold to the top of the combing.

Note: It is recommended that fumigated holds remain closed during entire voyage even if the mandatory minimum exposure time is met or exceeded.

Fumigating Slack Holds and Slack Tanks of Vessels.

- a. When the grain or commodity is less than or equal to 12 meters in depth, the surface application may be used with the mandatory minimum dosage rate of 45 grams of metal phosphide per 1,000 cu. ft.
- b. When the grain or commodity is greater than 12 meters in depth, the application method (e.g., subsurface, recirculation) as specified in the chart above must be used.