RESTRICTED USE PESTICIDE

DUE TO ACUTE INHALATION TOXICITY OF SULFURYL FLUORIDE

For sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. An applicator certified by the state must be present on site at all times during introduction of fumigant, reentry prior to aeration, and initiation of the aeration procedure.

SULFURYL FLUORIDE	GROUP	8C	INSECTICIDE

FIFRA 24(c) Special Local Need Label (SLN)

For Distribution and Use Only in the State of Hawaii
For Use of an Alternate Aeration Procedure for Residential Structures.

ACCEPTED

HI-250005

Under Hawaii Pesticides Law as Supplement to Product No. 1015-78

Vikane®

EPA Reg. No. 1015-78 **SLN HI 250005**

DANGER  **POISON**

This label expires and must not be distributed or used in accordance with this SLN registration after November 2, 2030.

Directions for Use

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This state-specific Section 24(c) labeling must be in the possession of the user at the time of application.
- The EPA registered label for Vikane, EPA Reg. No. 1015-78, must be in the possession of the user at the time of application. Follow all applicable directions, restrictions, and precautions on the label.

This Section 24(c) Special Local Needs label permits the use of an alternate aeration procedure for residential structures[1] fumigated with Vikane® gas fumigant in Hawaii. This aeration procedure supersedes Aeration Procedures 1 and 2 for residential structures. Follow all use directions, requirements and precautions on the label attached to the product container and included in the Structural Fumigation Manual for Vikane. If equipment failure or other mishap requires entry to a fumigated structure or space before the completion of aeration, employees must use an SCBA or continuous monitoring of fumigant levels. This is designed to complement existing fumigation requirements.

Aeration is conducted using equipment comprised of aeration fans (connected to aeration ducting), aeration ducting, and inlet devices. For fumigations where the structure is tarped, aeration equipment must be installed prior to the fumigation so aeration can be initiated from outside the fumigated space. Aeration ducting, duct covers, inlets and inlet covers are part of the seal during the fumigation exposure period and must be constructed of material with the same retention and durability requirements as required for tarps

covering the structure as specified in the product labeling.

[1] A residential structure is where people typically live (temporarily or permanently) and sleep, such as single-family residences, mobile homes, apartments, townhouses, condominiums, hotels, motels, assisted care facilities, nursing homes, hospitals, barracks, and dormitories.

During fumigation preparation and prior to completion of sealing the structure, the following must be completed:

1. Open at least one operable window a minimum of 3 inches for each room that has a window including the garage.

    a. Operable windows are those that can be opened by normal means without moving furniture, removing nails, or cutting a paint seal.

    b. Rooms without operable windows, regardless of size, must use a circulation fan to aid in aeration of that space. A circulation fan in each room is not required, but adequate circulation fans must be used and arranged so that air circulation occurs throughout the entire structure. For example, a circulation fan in the hall could be used to aid aeration of bedrooms and bathrooms.

    c. The ground level windows of a multi-story structure may be left closed if the ground floor and upper levels have a common interior airspace, and fans are placed so that air movement occurs between the ground and upper levels of the structure.

    d. If the majority of the rooms do not have operable windows, use an alternative fresh air source (e.g., doorway, air handling systems, etc.). If doorways are used, the doors must be secured against unauthorized entry (e.g., a vented security barrier attached over doorways).
2. If the structure has an attached garage, the door between the garage and the structure must be open.
3. If a storage shed is attached to the outside of the structure or located under a staircase, no circulation fan is required to aid aeration in that space.
    a. If the shed contains an operable window, it must be opened a minimum of 3 inches.
    b. If there is no window, the door must be opened a minimum of 3 inches to provide fresh air exchange. The door must be secured to prevent unauthorized entry.
4. Each operable attic access must be open. A circulation fan must be directed into each attic. If the structure has multiple attic access points for a single attic space, a fan is not required for each access.
5. Fans attached to ducts used for aeration must be at least 18 inches in diameter and placed so that fresh air is drawn through the structure. Extension cords, remote relays or other devices should be used to allow for these fans to be activated to initiate aeration without entry into the fumigated space.

Aeration Ducting (setup during tarping of structure)

1. Aeration ducting must be constructed so that it maintains a minimum 18-inch diameter without being inflated by the airflow of the attached fan. The ducting must be designed so that it can be sealed in a manner that allows it to be opened remotely from ground level when aeration is initiated.
2. Connect the ducting to an aeration fan securely and in such a way that the ducting does not easily collapse, and airflow through the ducting remains unrestricted when it is installed or extended through the tarp.
3. Extend the aeration ducting from the attached fan inside the fumigated space through the tarp to at least 10 feet off the ground or the first roofline. Attach the duct securely and position so the release point is of the duct is outside the tarp and the fumigant is discharged vertically. Ensure the duct and fan are secure to prevent collapse of the duct during aeration.
    1. Ducting should be positioned so that discharge occurs in an open area away from sensitive locations such as nearby occupied structures.
    2. Whenever possible, ducting should be spaced along the side of the structure opposite inlet

devices to facilitate aeration.

4. Aeration ducting must be covered (sealed) during the fumigation exposure period.
    a. It is recommended to securely cover the duct before extending the duct.
    b. Removal of the duct cover must be done from the ground level outside of the fumigated space.
    c. If the duct cover cannot be removed remotely from the ground level due to malfunction, an SCBA must be used when removing the duct cover.
    d. The duct cover shall not restrict or block the aeration duct opening after the duct cover is removed.
5. The number of ducted aeration fans required for use on a structure is determined by structure volume. This information can be found in Table 1.

Inlet Devices (setup during tarping of the structure)

1. Inlet devices are used to draw in fresh air to create negative pressure and promote cross-ventilation of the structure. The size of the inlets influence the creation of negative pressure which helps pull fresh air through the structure. In addition, spacing of the inlets across the side of the structure where inlets are located helps to facilitate aeration of the structure. Each inlet device must have an opening area of at least 240 in^2 but be no larger than 381 in^2.
2. Opened inlets must be covered with material that allows for ventilation such as netting, mesh, or wire. Inlets must be able to be sealed so that fumigant does not escape the structure but in such a way that the inlet can be opened from outside of the fumigated space during aeration.
3. Inlet devices should be placed on the side of the structure opposite the aeration ducting whenever possible.
    a. Place inlets so that the full opening of each inlet is maintained undistorted. Do not allow the inlet opening to be partially rolled into a tarp seam.
    b. Place inlets so that air movement is unobstructed and will draw in fresh air to create negative air pressure and promote cross-ventilation of the structure.
        i. Do not allow excess tarp to partially or fully cover inlets.
        ii. Do not place inlets directly against the side of the fumigated structure.
        iii. Do not place inlets so that landscaping plants are directly in front of or behind the inlets.
        iv. Do not place inlets in an area where another structure may impede air flow into the inlet.
4. If a non-standard arrangement of the required inlet devices and aeration fans is used, air flow must be managed (for example, through circulation fans) to provide for aeration of the entire fumigated space.
5. The bottom of an inlet must be at least 48 inches (4 ft) above the ground level.
6. Inlet devices must be fully sealed prior to the introduction of sulfuryl fluoride.
7. The minimum number of inlets required depends upon the volume of the fumigated structure and is specified in Table 1.

Initiation of Aeration, Aeration, and Reentry

The minimum time required to aerate the structure is determined by the initial concentration of sulfuryl fluoride introduced and is specified in Table 2. No workers are allowed on the roof without use of an SCBA when aeration fans are operating.

The following steps must be completed in sequence. Individual tasks within a specific step may be completed in any order. A Certified Applicator must be present for all steps below and assure completion of Steps 1 – 6.

Step 1: To initiate aeration, remove the seal or duct cover from each installed aeration duct and activate the aeration fans. If the duct cover cannot be remotely removed due to malfunction, an SCBA must be used when manually removing the cover.

Step 2: After all aeration fans are activated, unseal all inlet covers to allow for air movement into the structure. No workers may be on the roof without an SCBA when aeration fans are operating.

Step 3: Any time after the required hours of aeration are completed, as specified in Table 2, turn off the aeration fan(s).

Step 4: Remove all tarpaulins and/or seals from the structure.

Do not enter the structure without an SCBA or continuous monitoring until completion of Step 6.

Step 5: If the structure has a central air system, turn on only the fan (or blower) for each operational unit. As an alternative, a circulation fan may be placed in front of a furnace inlet to blow air into the central heating and cooling ducts.

Remove all chloropicrin evaporation containers from the fumigated space.

Step 6: Measure the concentration of Sulfuryl Fluoride in the breathing zones of each room (areas within the structure where individuals typically stand, sit, or lie down) using a clearance device. Refer to EPA's website at Sulfuryl Fluoride | US EPA (https://www.epa.gov/ingredients-used-pesticide-products/sulfuryl-fluoride) for more information and a list of effective clearance devices. If the concentration of Sulfuryl Fluoride is greater than 1 ppm or warning properties of chloropicrin are detected, continue ventilation with doors and windows open until aeration is completed. Confirm the concentration of Sulfuryl Fluoride in the breathing zones of each room are at or below 1 ppm using a clearance device as previously described before the structure is reoccupied.

Table 1. Number of ducted aeration fans and inlet devices required by structure volume.

Fumigated Structure Size (ft^3)	**Number of Ducted Aeration Fans**	**Number of Inlet Devices**	**Total Inlet Size Range (in^2): minimum of 240in^2, maximum of 381in^2 for each inlet device**
60,000 or less	1	2-3	480 - 762
60,001 – 120,000	2	3-4	720 - 1143
120,091 – 180,000	3	4-5	960 - 1524
180,001 – 240,000	4	5-6	1200 - 1905
For each 60,000 over 240,000	1 additional ducted fan AND	1-2 additional inlet devices*	Add a minimum of 240 in^2 up to a maximum of 381 in^2 Per additional inlet device.

Persons entering a fumigated structure in response to equipment malfunction or emergency at any time before certification for reoccupancy is completed must use an SCBA required by the product labeling.

Calculating the Number and Size of Inlet Devices to Fall within the Total Inlet Size Range

The number of inlet devices listed in the third column and their total combined surface area must fall within the total inlet size range listed in the last column.

Example: Fumigated structure volume is 60,000 ft^3 or less

Inlet size is 240 in^2:

2 inlet devices – 2 x 240in^2 = 480 in^2 which is the minimum total inlet size range found in Table 1 and is acceptable.

3 inlet devices – 720 in^2 which is within the total inlet size range found in Table 1 and is acceptable.

4 inlet devices – 960 in^2 which exceeds the total inlet size range for a 60,000 ft^3 structure and is not acceptable.

Increasing the Ratio of Inlet Devices to Ducted Aeration Fans for Structures over 240,000 ft^3

*It is important to maintain some negative pressure within the structure throughout the aeration procedure. This is evidenced as the tightening of tarps once aeration fans are turned on and inlet devices are opened. The greater the structure volume, the greater the pressure on the tarps.

To prevent excessive tightening of the tarps against the structure, it may be necessary to increase the ratio of

inlet devices to ducted aeration fans by adding additional inlet devices during the preparation phase of a structure over 240,000 cubic feet.

As the size of the building increases, the ratio of inlet devices to ducted aeration fans can be increased to a maximum of 2 inlet devices per ducted aeration fan.

During initiation of aeration, after the ducted aeration fans are turned on and the required number of inlet devices are opened, if tarpaulins appear to be tightening too much against the structure, additional inlet devices can be opened to relieve stress on the tarpaulins.

Table 2. Determining the minimum aeration time.

Determining Minium Aeration Time based on the Initial Concentration of Sulfuryl fluoride Introduced (oz/1000 ft^3)	Minimum Aeration Time (hours)[1]
16 or less	12
17 to 32	14
33 to 48	16
49 to 64	18
65 to 96	20
91 to 112	22
>112	24

[1]When the high ambient temperature for the aeration period is below 40°F at the fumigation site, a minimum of 24 hours of aeration is required.

Blow Opens

Blow Open events are equipment failures which occur when the tarp prematurely becomes unsecured and opens along a seam or tear.

In the case of a blow open, determine the concentration of Sulfuryl Fluoride in the exterior workspace before resealing or removing tarpaulins using a clearance device. Refer to EPA's website at Sulfuryl Fluoride | US EPA (https://www.epa.gov/ingredients-used-pesticide-products/sulfuryl-fluoride) for more information and a list of effective clearance devices. If the concentration of Sulfuryl Fluoride is above 1 ppm in the exterior workspace, wear an SCBA when resealing or removing tarpaulins.

Use the following information to determine what aeration process should be followed:

- If the job is finished, it can be resealed and aerated using the CAP aeration procedure described in the section "Initiation of Aeration, Aeration, and Reentry".
- If the job is finished and cannot be resealed, tarpaulins can be removed. Aeration must be completed using the Aeration Procedure 1 or Aeration Procedure 2 based on the initial concentration of fumigant introduced as described below in section "Aeration of Residential Structures".
- If the job is not finished, it can be resealed, more fumigant added if necessary, and the CAP aeration procedure can be used.
- If the job is not finished and cannot be resealed and the fumigation is to be rescheduled for a later date, tarpaulins can be removed. Aeration must be completed using the appropriate Aeration Procedure based on the initial concentration of the fumigant introduced as described below in section "Aeration of Residential Structures".

Aeration of Residential Structures

Preparation

Prepare for Aeration Procedures 1 and 2 by doing the following:

- Open all operable attic doors and accesses and direct a fan into the attic.
- Position introduction and circulation fans to provide for air circulation throughout the fumigated

space. For example, a circulation fan in the hall could be used to aid air circulating in bedrooms and bathrooms.

- For residential structures, use a minimum of one fan of at least 18 inches in diameter for every 22,500 cubic feet of space to be fumigated.

Aeration Procedure 1
Structures fumigated at concentrations of 16 oz/MCF or less, use the 12-hour aeration time.

For all structures fumigated at concentrations of 16 oz/MCF or less complete the following three steps in sequence for the 12-hour aeration time.

Step (1): Aerate structure with all operable windows and doors open, aided by at least one fan (of at least 18 inches in diameter) for every 22,500 cubic feet of fumigated space, for a minimum of 2 hours following the directions in the Preparation section. If the structure has an attached garage, the door between the garage and structure should be open. If the structure has a central air system, turn on only the fan (or blower) for each operational unit. As an alternative, a circulation fan may be placed in front of a furnace inlet to blow air into central heating and cooling ducts. Removal of all chloropicrin evaporation containers from the fumigated space during Step (1) will aid in the dissipation of the warning agent from the structure.

Step (2): Secure structure and do not allow reentry for a minimum of 12 hours from the start of aeration (first opening of the seal) for residential structures. During this time structures must remain posted with warning signs.

Step (3): After the minimum 12-hour waiting period, measure the concentration of Vikane® gas fumigant in breathing zones of each room using a clearance device. Refer to EPA's website at Sulfuryl Fluoride | US EPA (https://www.epa.gov/ingredients-used-pesticide-products/sulfuryl-fluoride) for more information and a list of effective clearance devices. If the concentration of Sulfuryl Fluoride is greater than 1 ppm, ventilate structure with operable doors and windows open and confirm concentrations are 1 ppm or less before the structure is certified for re-occupancy.

Aeration Procedure 2
Structures fumigated at concentrations greater than 16 oz/MCF, use the appropriate aeration time.

For all structures fumigated at concentrations greater than 16 oz/MCF complete the following three steps in sequence for the appropriate aeration time.

Step (1): Aerate structure with all operable windows and doors open, aided by at least one fan (of at least 18 inches in diameter) for every 22,500 cubic feet of fumigated space, for a minimum of 2 hours following the directions in the Preparation Section. If the structure has an attached garage, the door between the garage and structure should be open. If the structure has a central air system, turn on only the fan (or blower) for each operational unit. As an alternative, a circulation fan may be placed in front of a furnace inlet to blow air into central heating and cooling ducts. Removal of all chloropicrin evaporation containers from the fumigated space during Step (1) will aid in the dissipation of the warning agent from the structure.

Step (2): Secure the structure and do not allow reentry for the minimum number of hours as listed in **Table2**, "Determining Minimum Hours of Aeration Time Based on Initial Concentration of Sulfuryl Fluoride Introduced", from the start of aeration (first opening of the seal) for residential structures. During this time the structure must remain posted with warning signs.

Step (3): After the minimum aeration time, measure the concentration of Vikane® gas fumigant in breathing zones of each room using a clearance device. Refer to EPA's website at Sulfuryl Fluoride | US EPA (https://www.epa.gov/ingredients-used-pesticide-products/sulfuryl-fluoride) for more information and a list of effective clearance devices. If the concentration of Sulfuryl Fluoride is greater than 1 ppm, ventilate structure with operable doors and windows open and confirm concentrations are 1 ppm or less before the structure is certified for re-occupancy.

Douglas Products and Packaging Company
1550 East Old 210 Hwy
Liberty, MO 64068-9459