



# ProFume\*

## Gas Fumigant

RESTRICTED

For control of stored product pests such as Indian meal moth, confused flour beetle, saw-toothed grain beetle, warehouse beetle and granary weevil.

Fumigation sites: Empty cereal grain mills, associated empty storage facilities and empty food processing plants. **DO NOT FUMIGATE COMMODITIES.**

When fumigating, all provincial and federal rules and regulations regarding use of detection devices, positive-pressure self-contained breathing apparatus, security requirements, and placement of warning signs and other requirements under the ProFume fumigation site specific management plan must be observed.

**THIS PRODUCT CAN ONLY BE USED IN CONJUNCTION WITH A DETAILED FUMIGATION MANAGEMENT PLAN.**

READ THE LABEL AND BOOKLET BEFORE USING  
KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL

GUARANTEE: sulfuryl fluoride .....99.8%

REGISTRATION NO. 28241 PEST CONTROL PRODUCTS ACT

**DANGER**  **POISON**

**CAUTION**  **EXPLOSIVE**

**LIQUID IS CORROSIVE TO EYES AND SKIN**

**Extremely Hazardous Liquid And Vapour Under Pressure  
Inhalation Of Vapours May Be Fatal  
Liquid May Cause Freeze Burns Of Exposed Skin**

NET CONTENTS: 57 kg

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**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offense under the *Pest Control Products Act* to use a control product under unsafe conditions.

**NATURE OF RESTRICTION;** Exposure to this product may be hazardous to your health. Care must be taken when handling to minimize exposure. Follow all label directions and precautions carefully. **FOR USE ONLY BY PEST CONTROL OPERATORS MEETING APPLICABLE PROVINCIAL/TERRITORIAL LICENSING/CERTIFICATION REQUIREMENTS, AND WHO ARE TRAINED BY DOW AGROSCIENCES IN THE USE OF THIS PRODUCT.**

## **RESTRICTED USES**

### **GENERAL INFORMATION**

Before using, carefully read and understand all label precautions and directions. ProFume Gas Fumigant is a highly hazardous material and should be used only by individuals knowledgeable of its chemical hazards and trained in the use of required respiratory equipment, detection devices, emergency procedures, and proper use.

### **GENERAL USE PRECAUTIONS**

When used for fumigation of enclosed spaces, two persons trained in the use of ProFume Gas Fumigant, at least one meeting applicable provincial/territorial licensing/certification requirements, must be present at all times during introduction of fumigant, reentry prior to aeration, and initiation of the aeration procedure. Two persons need not be present while monitoring from outside of the fumigated structure.

No one shall be in fumigated structures if the level of ProFume Gas Fumigant is above 1 ppm unless wearing a NIOSH or MSHA approved positive pressure self-contained breathing apparatus (SCBA, not SCUBA) or combination air supplied/SCBA respirator, such as manufactured by Ranger, Survivair, Scott, or MSA. **Note: When in the fumigated area during the aeration procedure, approved respiratory protection must be worn until concentration of ProFume Gas Fumigant is confirmed not to exceed 1 ppm with an approved detection device.**

Only an approved detection device of sufficient sensitivity, such as the INTERSCAN (Model GF 1900) or MIRAN gas analyzer (SapphIRe), can be used to confirm a concentration of ProFume Gas Fumigant of 1 ppm or less. The Interscan GF 1900 must be calibrated within one month prior to use as a detection device. All other approved detection devices must be calibrated according to manufacturer recommendations. The concentration of ProFume Gas Fumigant must be monitored in breathing zones. The structure or enclosure must remain posted for fumigation until cleared for reentry.

### **DIRECTIONS FOR USE**

READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.

#### **Preparation for Fumigation**

All persons, non-target animals, and growing plants must be removed from the space to be fumigated. When monitoring, place gas sampling lines at representative areas within the fumigated space. Use re-circulation fans as appropriate to rapidly disperse fumigant throughout the structure or enclosure.

**Note: All flames, including pilot lights, must be extinguished. All electrical heating elements must be turned off or unplugged.**

A structure may only be fumigated twice in one year. This product may only be used from April until October.

### **Connected Areas**

A connected area is defined as any area connected with the space to be fumigated by construction elements that may allow passage of fumigant between the spaces. Any connected area must be vacated during the fumigation process.

ProFume Gas Fumigant concentration levels must be measured in any connected space or structure during the fumigation. Use only an approved detection device of sufficient sensitivity, such as the INTERSCAN (Model GF 1900) or MIRAN gas analyzer (SaphiRe), to confirm a concentration of ProFume Gas Fumigant of 1 ppm or less. **Note:** Connected areas must be vacated and that area shall be considered as a fumigated space, and all applicable rules, regulations and label instructions apply, such as preparation, posting, securing, and aeration.

### **Posting of Fumigated Areas**

The applicator must post all entrances and all sides of the structure or enclosure to be fumigated with warning signs bearing the statements:

- The signal word DANGER and the SKULL and CROSSBONES symbol in red
- The statement, "Area under fumigation, DO NOT ENTER."
- This sign may only be removed after the structure is aerated to less than a concentration of 1 ppm of fumigant.
- The date and time fumigation began and fumigation is completed.
- Name of fumigant used.
- Name, address, and telephone number of the fumigation company and licensed/certified applicator.

Post warning signs at all entrances to a fumigated area and all sides of the structure to be fumigated. Warning signs should be placed in advance of the fumigation in order to keep unauthorized persons away. Do not remove a warning sign until the treated structure is aerated down to a fumigant concentration of 1 ppm.

Only a licensed/certified applicator may authorize removal of warning signs. The warning signs may be removed only when the concentration of ProFume Gas Fumigant within the treated area is below exposure standards for reentry.

### **Sealing Instructions**

#### **Taped and Other Spot Sealing**

For fumigation enclosures that can be adequately sealed with plastic, paper, or tape, seal adequately around doors, windows, vents, and other openings. To minimize escape of gas through the soil and to avoid injury to nearby plants, wet soil (if not sufficiently moist) around the structure to act as a barrier for the gas.

#### **Securing Structure Entrances**

Seal and placard all exterior doors or doorways with warning signs. To secure the structure against unauthorized entry during the fumigation exposure period, use a locking device or barricade on all exterior doors or doorways. Consult provincial regulations for any supplementary instructions and local restrictions on securing against entry.

## **INTRODUCING THE FUMIGANT**

**Do not apply when temperature is below 4.4°C. To prevent damage, do not apply liquid fumigant directly to any surface within the fumigation area.**

ProFume Gas Fumigant is packaged as a liquid under pressure and requires a heat source for conversion of the liquid to a gas during introduction. The heat source can be the air around the introduction site or mechanical heat exchanging systems. Consult the ProFume Gas Fumigant Fumigation Manual and ProFume Gas Fumigant Fumiguide for fumigant introduction options, instructions, and safety precautions. The introduction system must:

- prevent breakdown or contamination of ProFume Gas Fumigant
- confine ProFume Gas Fumigant until it is released into the fumigation area
- prevent liquid sulfuryl fluoride from contacting surfaces within the fumigation area
- prevent a fog-out in the fumigation area. A fog-out is condensation of moisture inside a fumigated structure that is caused by a large drop in air temperature.

ProFume Gas Fumigant must be introduced from the cylinder through a suitable leak-proof tube with a minimum burst pressure of 3450 kPa (500 psi). Release of the fumigant into a large open space is recommended.

### **Dosage and Exposure Time**

The target dosage is the product of fumigant Concentration x Exposure Time (CT). However, the impact of concentration and time on control of the target pest varies and, thus, is more accurately represented by  $C^nT$ . The ProFume Gas Fumigant Fumiguide calculator uses specific  $C^nT$  formulas based on the pest, life stage, temperature, and exposure period to determine target dosages for specific fumigation scenarios. The maximum target dosage in the Fumiguide is 1500 CT with a maximum target concentration of 128 g/m<sup>3</sup>.

The target dosage can thus be calculated by inputting into the ProFume Gas Fumigant Fumiguide the target pest, low or high dosage target, temperature, and exposure time. Then, to calculate the amount of fumigant to be introduced, input the estimated fumigant loss rate measured as half-loss time (HLT) and volume of the area to be fumigated. Based on the calculated target dosage, exposure time, HLT, and volume of the area to be fumigated, the ProFume Gas Fumigant Fumiguide will calculate the amount of ProFume Gas Fumigant to be initially introduced.

Monitoring concentrations of ProFume Gas Fumigant within the fumigated area is required for fumigation accuracy. When monitoring, take gas concentration readings from the exposure area with an approved monitoring device such as a Fumiscope (Model D). Input these monitoring results into the ProFume Gas Fumigant Fumiguide that will calculate the actual HLT. The ProFume Gas Fumigant Fumiguide will then calculate any additional amount of fumigant and/or increase in exposure time necessary to achieve the target dosage. Add any necessary fumigant or extend fumigant exposure time to achieve the targeted dosage.

### **Efficacy**

ProFume Gas Fumigant may be used to control infestations of insect pests of food, feed, commodities and the structures where these are stored or processed. Total insect control is possible under optimum environmental and fumigation conditions. However, for some less susceptible insects, egg stage tolerance combined with cool temperatures may limit the potential for total control of the infestation. Maximum control is achieved by using precision fumigation techniques (excellent gas distribution and confinement, long exposures, sealed structures, high temperatures, etc.).

## **Aeration and Reentry**

### **Aeration**

Aerate the enclosure or structure using passive or active ventilation methods. To ensure workers and bystanders are not exposed to concentrations that exceed exposure standards for reentry, control the ventilation process, monitor concentrations of ProFume Gas Fumigant around the fumigated enclosure or structure, or prohibit entry into the area.

### **Reentry**

No one shall be in fumigated structures if the level of ProFume Gas Fumigant is above 1 ppm unless wearing a NIOSH or MSHA approved positive pressure self-contained breathing apparatus (SCBA, not SCUBA) or combination air supplied/SCBA respirator, such as manufactured by Ranger, Survivair, Scott, or MSA. **Note:** When in the fumigated area during the aeration procedure, approved respiratory protection must be worn until concentration of ProFume Gas Fumigant is confirmed not to exceed 1 ppm with an approved monitoring device.

Only an approved detection device of sufficient sensitivity, such as the INTERSCAN (Model GF 1900) or MIRAN gas analyzer (SapphIRe), can be used to confirm a concentration of ProFume Gas Fumigant of 1 ppm or less. The Interscan Model GF 1900 must be calibrated within one month prior to use as a detection device. All other approved detection devices must be calibrated according to manufacturer recommendations. The concentration of ProFume Gas Fumigant must be monitored in breathing zones. The structure or enclosure must remain posted for fumigation until cleared for reentry.

### **Reentry Procedure**

Measure the concentration of ProFume Gas Fumigant in the structure or enclosure. When concentrations are below 1 ppm, the structure or enclosure is cleared for immediate reentry.

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL**

**Extremely Hazardous Liquid And Vapour Under Pressure. Inhalation Of Vapours May Be Fatal. Liquid May Cause Freeze Burns Of Exposed Skin**

**Do not get in eyes, on skin, or on clothing. ProFume Gas Fumigant is odourless. Exposure to toxic levels may occur without warning or detection by the user.**

### **Personal Protective Equipment for Fumigation**

#### **Protective Clothing**

A long-sleeved shirt and long-pants are required. Do not wear gloves or rubber boots. Do not reuse clothing or shoes that have become contaminated with liquid ProFume Gas Fumigant until thoroughly aerated and cleaned.

#### **Respiratory Protection**

If the concentration of ProFume in the fumigated area (as measured by an approved detection device with sufficient sensitivity such as INTERSCAN, Spectros ExplorIR or MIRAN gas analyzer (SapphIRe) does not exceed 1 ppm in the breathing zones, no respiratory protection is required. When this concentration is exceeded, all persons in the exposure area must wear NIOSH or MSHA approved positive pressure self-contained breathing apparatus (SCBA, not SCUBA) or combination air-supplied/SCBA respirator such as manufactured by Ranger, Draeger, Survivair, Scott or MSA. Before using any make or brand of SCBA, learn how to use it correctly. Determine that it has an adequate air supply for the job at hand, that it fits properly, provides an adequate seal around the face, and that it is in good working order.

All users are advised to contact CANUTEC at 613-996-6666 for medical information and the clean-up of spills. DO NOT attempt to clean up a major spill. DO NOT attempt to clean up any spill if you do not have the proper protective equipment.

For transportation emergencies, call 780-498-9821 (ERAP 2-1516).

#### **FIRST AID**

**Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.**

In all cases of overexposure, when symptoms such as nausea, difficulty in breathing, abdominal pain, slowing of movements and speech, or numbness in extremities are exhibited, get medical attention immediately. Consult a physician or contact a poison control centre immediately.

**If inhaled:** Move person to fresh air. If person is not breathing, contact emergency personnel immediately, then give artificial respiration, preferably mouth-to-mouth if possible. Consult a physician or contact a poison control centre for further treatment advice.

**If on skin or clothing:** Immediately apply water to contaminated area of clothing before removing. Once area has thawed, remove contaminated clothing, shoes, and other items covering skin. Rinse skin immediately with plenty of water for 15-20 minutes. Consult a physician or contact a poison control centre immediately.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Liquid ProFume Gas Fumigant in the eye may cause damage due to refrigeration or freezing. Consult a physician or contact a poison control centre immediately.

**Note to Physician:** ProFume Gas Fumigant is a gas that has no warning properties such as odour or eye irritation. Early symptoms of exposure to ProFume Gas Fumigant are respiratory irritation and central nervous system depression. Excitation may follow. Slowed movement, reduced awareness, and slow or garbled speech may be noted. Prolonged exposure can produce lung irritation, pulmonary edema, nausea, and abdominal pain. Repeated exposure to high concentrations can result in significant lung and kidney damage. Single exposures at high concentrations have resulted in death. Treat symptomatically.

#### **TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

#### **AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

#### **ENVIRONMENTAL HAZARDS**

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. TOXIC to birds and mammals. Carefully inspect the outside and inside of the structure prior to application of the fumigant to ensure the absence of birds and mammals. Avoid application if birds or mammals are present.

#### **STORAGE**

Store in dry, cool, well ventilated area under lock and key. Post as a pesticide storage area. Store cylinders upright; secured to a rack or wall to prevent tipping. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding. It is recommended to transport cylinders using hand truck or fork truck to which the cylinder can be firmly secured. Do not transport cylinders in closed vehicles where the same common airspace is occupied by personnel. When on public roads, transport securely only in an upright position.

Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

When cylinder is empty, close valve, screw safety cap onto valve outlet, and replace protection bonnet before returning to supplier. Only the registrant is authorized to refill cylinders. Do not use cylinder for any other purpose. Follow registrant's instructions for return of empty or partially empty cylinders. ProFume cylinders must never be transported by aircraft.

**Leak Procedures:** Evacuate to a distance where the concentration of sulfuryl fluoride is below 1 ppm. Use a NIOSH or MSHA approved positive pressure self-contained breathing apparatus (SCBA, not SCUBA) or combination air-supplied/SCBA respirator, such as manufactured by Ranger, Draeger, Survivair, Scott, or MSA, for entry into affected areas to correct problem. Move leaking or damaged cylinder outdoors or to an isolated location, observing strict safety precautions. Work upwind if possible. Do not permit entry into leakage area by unprotected persons until concentration of fumigant is determined to be 1 part per million (ppm) or less, as determined by a detection device with sufficient sensitivity such as an INTERSCAN [Model: GF 1900], MIRAN gas analyzer [SaphIRe], or Spectros ExplorIR.

#### **DISPOSAL**

**Disposal of Container:** For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose. See Storage for proper handling directions.

**Disposal of Product:** All unused product must be returned to the point of purchase (distributor/dealer).

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offense under the *Pest Control Products Act* to use a control product under unsafe conditions.

**NOTICE TO BUYER:** Seller's guarantee shall be limited to the terms set out on the label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

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Initial printing