

Town of Bourne
Community Preservation Committee
Application

FY2025

APPLICATION FOR COMMUNITY PRESERVATION FUNDING

Submit to: Community Preservation Committee
Town of Bourne
24 Perry Avenue
Buzzards Bay, MA 02532

Name of Applicant Benjamin Joyce

Name of Co-Applicant, if applicable Cataumet Schoolhouse Preservation Group (CSPG)

Contact Name Benjamin Joyce

Mailing Address box 244 City cataumet State ma Zip 02534

Daytime Phone 774 269 3165 Email Bensjoyce333@gmail.com

Name of Proposal Cataumet Schoolhouse Fumigation

Address of Proposal 1200 County Rd Cataumet po box 649

Assessors Map _____ Parcel _____

CPA Category (circle all that apply): **Open Space** **Historic Preservation** **Recreation** **Community Housing**

CPA Funding Requested \$23,999 Total Cost of Proposed Project \$29,000

PROJECT DESCRIPTION: Attach answers to the following questions. Applications will be returned as incomplete if all requested information is not provided. Include supporting materials as necessary.

- **Goals:** What are the goals of the proposed project?
- **Community Need:** Why is this project needed? Does it address needs identified in the current Local Comprehensive Plan?
- **Community Support:** What is the nature and level of support for this project? Include letters of support and any petitions.
- **Timeline:** What is the schedule for project implementation, including a timeline for all critical milestones?
- **Credentials:** How will the experience of the applicant contribute to the success of this project?
- **Success Factors:** How will the success of this project be measures? Be as specific as possible.
- **Budget:** What is the total budget for the project and how will CPA funds be spent? All items of Expenditure must be clearly identified. Distinguish between hard and soft costs and contingencies. (NOTE: CPA funds may NOT be used for maintenance.)
- **Other Funding:** What additional funding sources are available, committed, or under consideration? Include commitment letters, if available, and describe any other attempts to secure funding for this project. Maintenance: If ongoing maintenance is required for your project, how will it be funded?
- **Maintenance:** If ongoing maintenance is required for your project, how will it be funded?

General Selection Rating Criteria

The project must meet all the legal criteria of the Community Preservation Act. The project must be well documented and provide sufficient information to be feasible. The following criteria will be considered as the project is evaluated. However, meeting all of the criteria does not guarantee CPC support for the project. *(Score each question as follows: Y for Yes, N for No, N/A for Does Not Apply. Scores will be totaled and averaged by the number of rating members)*

- no 1) Does the project have other sources of funding? If so, indicate percentage.
- yes 2) Does the project require urgent attention?
- no 3) Does the project serve a currently underserved population?
- yes 4) Does the project preserve a threatened resource?
- yes 5) Is the project consistent with existing Bourne Planning Documents such as the Local Comprehensive Plan or Open Space Plan?
- yes 6) Does the project fit within the current or already proposed zoning regulations?
- yes 7) Does the project have a means of support for maintenance and upkeep?
- yes 8) Does the project involve currently owned municipal assets?
- no 9) Does the project have two other sources of funding?
- no 10) Does the project have more than two other sources of funding?
- yes 11) Does the project involve two core concerns of the CPA?
- yes 12) Does the project involve all three-core concerns of the CPA?
- yes 13) Does the project have community support?
- yes 14) Does the project have sufficient supporting documentation?
- yes 15) Does the project have support from another Board or Committee?
- yes 16) Does the project provide a positive impact to the community?
- yes 17) Does the project have the support of the majority of immediate abutter?

Historic Preservation Selection Criteria

Check each line as it applies:

- yes 1) Is the building on the National Register of Historic Places?
- yes 2) Is the property eligible for listing on the National Register of Historic Places?
- yes 3) Is the property on the State Historic Register?
- yes 4) Is the property eligible for listing on the State Historic Register?
- yes 5) Has the property been included in the local Survey of Historic Properties?
- no 6) Is the property in danger of being demolished?
- yes 7) Are there potential archeological artifacts at the site?
- yes 8) Has the property been noted in published histories of the town or county?
- yes 9) Is there a realistic chance of restoring the property?
- yes 10) Are there other potential uses for the property, which could benefit the town?
- no 11) Could the building be converted for affordable housing use while still retaining its historic quality?
- yes 12) Is the property part of a historic area or district in the town?
- yes 13) Is the owner also interested in preserving the historic integrity of the property?
- yes 14) Is there an opportunity for other matching funding to preserve the property? Explain?
- yes 15) Are there any particularly important historic aspects about the property?
- yes 16) Did the property ever play a documented role in the history of the town?



Eradication of Powder Post Beetle Infestation

Goals: The Cataumet Schoolhouse Preservation Group (CSPG) is charged under agreement with the Select Board (yr., 2000) for the restoration, preservation and use of the Schoolhouse. In the last 4 years, an alarming increase in Powder Post Beetle manifestation has been noticed in the form of “sawdust” accumulation indicating Powder Post Beetle infestation. Members of our Group and visitors to the Schoolhouse urge us to do something about it.,

Community need. On August 15, 2019 the Cataumet Schoolhouse was accepted for inclusion on the National Register of Historic Places. The Schoolhouse was built in 1894, and operated as a school until 1930. It has been cited very positively by Historic Authorities in the State such as Mass. Historic and Historic Massachusetts. We have a collection of letters citing its value as a historic resource.

Local Comprehensive Plan: The Schoolhouse serves the public in Bourne by serving as a link to past generations and helps define the Town of Bourne by detailing a “sense of place”

Community support: The Schoolhouse has had some thousands of visits over the last 20 years. Many of them have voiced concern over the sawdust generated by the destructive Powder Post Beetle.

Timeline: Western Pest Control stated that they would be ready by the summer of 2024

Success Factors: Powder Post Beetles leave a trail of sawdust. When sawdust trailings no longer accumulate then the Powder Post Beetles are gone. Our contact with Western Pest control, Jason Muir stated that the gas they use kills the eggs too. Only one application is necessary.

Budget: Western Pest Control proposal cites \$23,999 to fumigate the Schoolhouse (copy attached). We are requesting an additional \$5,000 to meet any unforeseen expenses.

Maintenance: Fumigation is a one-time deal. If the Powder Post Beetle problem is not dealt with then it's very possible that more severe structural damage to the Schoolhouse will ensue.

February 1, 2024
OUR 92nd YEAR

Cataumet School House
Ben Joyce- 774-269-3165
Bensjoyce333@gmail.com

Location:
Cataumet School House
1200 County Road
Cataumet MA 00534

Dear Ben

Thank You for allowing Western Fumigation the opportunity to inspect the schoolhouse at 1200 County Road, Cataumet MA 00534 for your current Powder Post Beetle issues. Western Fumigation is the largest and most experienced fumigation service on the East Coast. We have been in operation over 90 years and we are strictly in the fumigation business.

Safety is always our first concern, and we will have personnel from Western Fumigation on site during the entire process guarding the location and monitoring fumigant levels inside and outside the Schoolhouse. Your property will need to be vacant through the entire process. Western personnel will aerate the structure and will turn it back over once all safety levels are reached. The process will take up to 48 hours to complete fumigation with another 6-10 hours for aeration. Our team will be setting monitoring and introduction lines and fans through the home to make sure proper levels of the fumigant are maintained in all areas during the entire operation to ensure an effective fumigation. We will be Tenting the structure.

We will be using a fumigant called Vikane. It will penetrate all areas of the structures and will effectively eliminate Powder Post Beetles. You will be instructed prior to service about any items that need to be addressed. All living things, plants, animals, open food packages, medications must be moved out during the process. Food packages that are still hermetically sealed from the manufacturer can remain as well as the food in freezer.

Western Fumigation requires access to all areas of the structure(s), doors left unlocked, safes open or codes provided. In addition, any security systems be placed on test mode or disabled.

There will be zero negative impact on electronic equipment, clothing, furniture.

There will be zero residual effect in anything in the home once fumigation completed. No clean up required.

Since fumigation has no residual, we suggest working with a local Pest Services Company to have a routine pest program in place once fumigation completed.

Structural Fumigation Treatment using Vikane, no residual \$23,999.00

If you decide to move forward with fumigation, we will send you an agreement for signature and directions for safe fumigation along with pre inspection to confirm condition of the home.

Please do not hesitate to call or email me with any questions or for additional information.

Sincerely
Jason Muir
Business Development
Western Fumigation
856-580-7059 cell
610-595-2100 office

PREPARING FOR YOUR HOME FUMIGATION



Thank you for trusting Western Fumigation to perform a fumigation service on your home. No matter what pest we are dealing with, we know this can be stressful. We're here to walk you through it every step of the way. We are the only fumigation company that guards our fumigation jobs 24/7 during operations and your home is no different. After the fumigation is done, we will clear your home of any products we used and then – and only then – is the job officially done. The safety and security of our employees and our customers are priority #1 at Western Fumigation.

Below are a few things you can do to ensure a successful fumigation service.

BEFORE THE FUMIGATION

- ☐ Remove all items for human consumption such as foods, beverages (if not factory sealed), prescriptions, and over-the-counter medicines that are not in airtight containers or place them in NYLOFUME BAGS.
- ☐ Remove all people, plants, and pets including fish.
- ☐ Extinguish all pilot lights. Provide a list of all pilot lights and other open flames (such as furnace, water-heater, dryer, etc.) to our fumigation technician when he/she arrives.
- ☐ Unplug all heating elements and turn off all air conditioning units.
- ☐ Remove all mattresses and pillows with plastic coverings (or just remove the coverings) from the premises.
- ☐ As a safety precaution, our fumigation technician must have access to all parts of your home including store rooms, closets, etc., which you may normally keep closed. Be sure all these doors are unlocked.
- ☐ Remove any plant within 12 inches of the structure.
- ☐ Remove all valuables such as jewelry and money.
- ☐ Thoroughly soak all plants, shrubs, and soil within 12 inches of the structure that will be fumigated to a depth of 6 inches.
- ☐ Heat your home so it is at least 70°F when our fumigation technician and the crew arrive.
- ☐ Notify all friends and relatives who may have occasion to show up at your home about the fumigation so that they will not try to enter the structure while under the care of Western Fumigation.
- ☐ Remove or pull back any rocks or crushed stones along the foundation of your home so that the tarp will lie on a relatively smooth surface to properly seal in the gas.

VIKANE®

Fact Sheet For Vikane® Gas Fumigant (Sulfuryl Fluoride)

Vikane® Gas Fumigant

In the interest of Douglas Products' commitment to product stewardship, this fact sheet is intended to provide basic information about the product and how it is used. If you have specific questions about your fumigation, refer to documents provided by the fumigator or call the fumigator listed on the warning signs posted on your structure. If you have questions about Vikane gas fumigant (the fumigant used) or the procedures described, call the Douglas Products Customer Information Center at 844-8VIKANE (844-884-5263).

Why Buildings Are Fumigated

Insects that feed or tunnel into wood can seriously damage houses, apartments, and other dwellings or structures. Each year termites or other wood destroying insects damage more than 5 million homes. Other pests, such as bed bugs, may be dispersed throughout rooms and can be difficult to locate and control quickly and completely. Depending on the extent or location of the infestation, fumigation is the only total control method proven to eliminate certain infestations of wood destroying insects, bed bugs, and other structure-infesting pests.

How Buildings Are Fumigated

Because Vikane is a gas, prior to fumigation, the structure is completely sealed. This serves to contain Vikane in the building so it can penetrate wood and building contents to thoroughly eliminate the pests. Depending on the construction of the building, the doors and windows may be sealed with tape and a plastic sheet, or the structure may be covered with a tarp. The building will remain sealed for 2-72 hours depending on the specifics of the job. Warning signs are posted around the building notifying people to keep out.

After the fumigation period is completed, a professional fumigator will aerate the structure using fans for a prescribed aeration period. Once the dwelling has been thoroughly aerated, the fumigator is required to measure the level of any fumigant remaining in the living space to ensure it is below the EPA approved concentration for reentry by the occupants.

Extremely low levels of fumigant can remain for a short period of time in dead air spaces between walls and inside cabinets as well as porous materials such as furniture. The small amount of fumigant in these areas will continue to dissipate for a few hours after the fumigation but at levels well below the established safe reentry concentration. Your building will not be cleared for reoccupancy until it is safe to enter. The fumigator will post a notice on your building indicating the day and time for reentry. Structures can be occupied only when the concentration is 1 part per million or less (this represents a margin of safety – laboratory animals have been exposed to 100 parts per million for 2 weeks with no adverse effects). Because Vikane is a true gas and not a vapor, aeration is rapid. Recent studies demonstrated that in most structures levels are less than 1 part per million after the prescribed aeration period and have no detectable levels of Vikane within 24 hours after the start of aeration.

Sulfuryl fluoride is a colorless, odorless gas, so a warning agent is added to the building that causes watery eyes and a scratchy throat. If you experience these symptoms in a structure that has been recently fumigated, you should leave immediately and call the pest control company to have your building retested.

Sulfuryl Fluoride [Potential Health Risks From Overexposure]

Sulfuryl fluoride is a gas that can potentially enter your body only through inhalation. Because it is a gas, it does not stay on dry surfaces; therefore, there is no exposure from touching treated surfaces.

Vikane® Gas Fumigant

Nervous System And Respiratory Irritation

Overexposure to high levels of sulfuryl fluoride can result in nose and throat irritation and nausea. At high concentrations (such as those used during the fumigation) it can cause excess fluid in the lungs, sleepiness, pneumonia, and convulsions. These symptoms would be expected to appear within 8 hours after such an exposure. In the unlikely event you experience these symptoms in the building that has been recently fumigated, you should leave immediately. Consult your physician and call the pest control company to have your building retested.

Additional Studies

Sulfuryl fluoride has not been shown to cause birth defects in pregnant animals exposed under experimental conditions. In addition, current studies have demonstrated there are not mutagenic or genotoxic effects caused by exposure to sulfuryl fluoride.

Questions

If you have specific questions about your fumigation, refer to documents provided by the fumigator or call the fumigator listed on the warning signs posted on your structure. Call the Douglas Products Customer Information Center at 844-8VIKANE (844-884-5263) if you need additional information or have questions concerning this product.

Safety Precautions And Homeowner Preparation

- Discuss the treatment program in advance with your pest control company so you fully understand what will be done and what you need to do.
- Carefully follow the instructions you are given about what items you are to remove from your building.
- Stay out of the treated building until it is cleared by your pest control company for reentry.
- If you are interested or concerned, you should ask your pest control company to show the records of how your building was aerated before it was cleared for reentry.
- You may wish to increase ventilation by opening doors and windows.

TermiteTenting.com



©Trademark of Douglas Products.

Vikane is a federally Restricted Use Pesticide. Always read and follow label directions.

These materials have been created specifically for Vikane gas fumigant and no other structural fumigant. These materials may not be copied, in whole or in part, or reproduced without the permission of Douglas Products.

U01-069-146 (5/16) BR

1. IDENTIFICATION**Product identifier****Product Name** Vikane®**Other means of identification**

SDS # DOUG-005
Document ID # SDS.VIKANE.English.20200504.1
Registration Number(s) EPA Reg. No. 1015-78
UN/ID No UN2191

Recommended use of the chemical and restrictions on use**Recommended Use** End Use Fumigant.**Details of the supplier of the safety data sheet****Supplier Address**

Douglas Products and Packaging Company, LLC
1550 East Old 210 Highway
Liberty, MO 64068
Customer Information Number: 800-223-3684

Emergency telephone number**Emergency Telephone** 1-844-845-3129 or 1-352-326-7641**2. HAZARDS IDENTIFICATION**

Emergency Overview: This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance: Colorless gas**Physical state:** Gas**Odor:** Odorless**Classification**

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Gases)	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Gases under pressure	Liquefied gas

Signal Word**Danger****Hazard statements**

Toxic if swallowed
Fatal if inhaled
Causes damage to organs
May cause damage to organs through prolonged or repeated exposure
Contains gas under pressure; may explode if heated

**Precautionary Statements - Prevention**

Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory protection

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed
 Protect from sunlight

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sulfuryl fluoride	2699-79-8	99.8
Other ingredients	Proprietary	<0.1

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures**General Advice**

Provide this SDS to medical personnel for treatment. Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Eye Contact

Liquid: In case of frostbite, immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention promptly, preferably from an ophthalmologist.
 Gas: No treatment required.

Skin Contact

Liquid: 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 to 20 minutes. Call a poison control center or doctor for treatment advice. Thoroughly aerate clothing and shoes contacted by liquid fumigant before wearing again.
 Gas: No treatment required. No decontamination of clothing or shoes covering the skin is required.

Inhalation	Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel. If the person is not breathing and has no pulse, consider cardiopulmonary resuscitation (CPR); use pocket resuscitation mask, bag valve mask etc. To prevent pulmonary edema have the person inhale 5 shots of an aerosol corticosteroid metered dose inhaler (if available), such as beclomethasone or fluticasone, etc., every 10 minutes until the person is evaluated by a physician.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Self-Protection of the First Aider	First Aid responders should pay attention to self-protection and use the recommended protective clothing (gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Most important symptoms and effects, both acute and delayed

Symptoms	Fatal if inhaled. Toxic if swallowed. See Section 11: Toxicological Information of this SDS for more detailed symptoms.
-----------------	---

Indication of any immediate medical attention and special treatment needed

Notes to Physician	<p>Maintain adequate ventilation and oxygenation of the patient. Sulfuryl fluoride is a gas which has no warning properties such as odor or eye irritation. The prediction of possible human effects is based in part on observations made on laboratory animals. Treat for frostbite from exposure to the liquid fumigant if present (eyes, skin) with gentle rewarming by water irrigation for at least 15 minutes.</p> <p>Clinical observation is essential. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. There is no known antidote for overexposure to sulfuryl fluoride. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.</p> <p>It is predicted that persons exposed to sulfuryl fluoride will show little evidence of intoxication at first, unless the concentration is very high (greater than 400 ppm). Early symptoms of exposure to sulfuryl fluoride are respiratory irritation and central nervous system depression. Excitation may follow. Slowed movement, reduced awareness, and slow or garbled speech may be noted. It is essential to keep such an individual at bed rest for at least 24 hours. Clinical observations should be directed at the pulmonary, hepatic, and renal systems. 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. Convulsions may ensue with respiratory arrest being the terminal event. Assisted respiration may be necessary.</p> <p>May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Consider administering a complete aerosol corticosteroid metered dose inhaler (100-150 shots) or equivalent as initial preventive treatment for incipient pulmonary edema. Consider administering 250-1000 mg prednisolone IV on the first day of treatment. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).</p>
---------------------------	---

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Container may rupture from gas generation in a fire situation.

Hazardous combustion products: Decomposition products can include and are not limited to: Hydrogen fluoride. Sulfur oxides. Toxic gases are released during decomposition.

Protective equipment and precautions for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Contain fire water run-off if possible. Fire water runoff, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Isolate area. Stay upwind and out of low areas. Ventilate area of leak or spill. Use personal protection recommended in Section 8.
-----------------------------	--

Environmental precautions

Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
----------------------------------	---

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Isolate area until gas has dispersed. Small spills: Knock down and dilute vapors with water fog or spray. Apply vapor suppression foams until spill can be cleaned up. Use non-sparking tools in cleanup operations. Large spills: Contact Douglas Products for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice.
--------------------------------	--

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep/store only in original container. Do not store near food, foodstuffs, drugs or potable water supplies.
Incompatible Materials	Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuryl fluoride 2699-79-8	STEL: 10 ppm TWA: 5 ppm TWA: 2.5 mg/m ³ F	TWA: 5 ppm TWA: 20 mg/m ³ TWA: 2.5 mg/m ³ F (vacated) TWA: 5 ppm (vacated) TWA: 20 mg/m ³ (vacated) TWA: 2.5 mg/m ³ (vacated) STEL: 10 ppm (vacated) STEL: 40 mg/m ³	IDLH: 200 ppm IDLH: 250 mg/m ³ F TWA: 5 ppm TWA: 20 mg/m ³ STEL: 10 ppm STEL: 40 mg/m ³
Other ingredients	TWA: 10 ppm	TWA: 50 ppm (vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m ³ (vacated) STEL: 2 ppm (vacated) STEL: 8 mg/m ³ Ceiling: 100 ppm	IDLH: 50 ppm TWA: 1 ppm TWA: 4 mg/m ³ STEL: 2 ppm STEL: 8 mg/m ³

Other Information

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. **APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.**

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

For handling the gas, wear safety glasses (with side shields). When contact with the liquid (condensed gas) is possible, wear chemical goggles. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection

Wear clean, body-covering clothing. Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When respirator protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Gas	Odor	Odorless
Appearance	Colorless gas	Odor Threshold	Odorless
Color	Colorless		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	Not applicable		
Melting point / freezing point	-137°C / -215°F		
Boiling point / boiling range	-55.2°C / -67°F		

Flash point	Not applicable	
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Not Flammable	
Flammability Limit in Air		
Upper flammability or explosive limits	Not applicable	
Lower flammability or explosive limits	Not applicable	
Vapor Pressure	18,000 hPa	(at 20°C/68°F)
Vapor Density	3.5	(at 20°C/68°F) (Air=1)
Relative Density	1.35	(Water=1)
Water Solubility	1.04 g/L 20°C, Unbuffered	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not applicable	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

Other information

Softening Point NOTE: The physical data presented above are typical values and should not be construed as a specification

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials

Strong bases.

Hazardous decomposition products

Decomposition products can include and are not limited to: Hydrogen fluoride. Sulfur oxides. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact No hazard from gas. Liquid may cause frostbite.

Skin Contact Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD50 of Sulfuryl fluoride has not been determined.

Inhalation Fatal if inhaled. Vapor concentrations are attainable which may be fatal with single exposure. Excessive exposure may cause severe irritation to upper respiratory tract (nose

Ingestion

and throat) and lungs.
Toxic if swallowed. Swallowing is unlikely because of the physical state. Single dose oral LD50 of Sulfuryl fluoride has not been determined.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuryl fluoride 2699-79-8	-	-	= 991-1122 ppm (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Please see Section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Essentially nonirritating to skin. Liquid may cause frostbite upon skin contact.

Germ cell mutagenicity

Most in vitro genetic toxicity studies were negative, but some were positive due to artifacts associated with the test system. Animal genetic toxicity studies were negative.

Carcinogenicity

Did not cause cancer in laboratory animals.

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuryl fluoride 2699-79-8		Group 2A		X

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Teratogenicity

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

STOT - single exposure

Causes damage to organs. Route of Exposure: Inhalation
Target Organs: Kidney.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure. In animals, effects have been reported on the following organs: Central nervous system, Kidney, Lung, Respiratory tract, Thyroid observations in animals include: Convulsions, Tremors. May cause fluorosis of teeth and bones.

Numerical measures of toxicity

Oral LD50	100.20 mg/kg
Gas	100.20 mg/L
ATEmix (inhalation-dust/mist)	0.50 mg/L

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sulfuryl fluoride	EyC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth inhibition (cell density reduction), 3.05 mg/l EbC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Biomass, 0.58 mg/l ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition,	LC50, Danio rerio (zebra fish), static test, 96 Hour, 0.89 mg/l	EC50, Daphnia magna (Water flea), static test, 48 Hour, 0.62 mg/l

	1.13 mg/l		
--	-----------	--	--

Persistence/Degradability

Chemical degradation (hydrolysis) is expected in the environment.

Bioaccumulation

Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partition coefficient: n-octanol/water (log Pow): 0.41 Estimated.

Mobility

Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient (Koc): 6 Estimated

Other Adverse Effects**Toxicity to Above Ground Organisms**

LC50, Apis mellifera (bees), 2 Hour, mortality, 6.5mg/l

LC50, Colinus virginianus (Bobwhite quail), 4 Hour, 1,844 ppm

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods**Disposal of Wastes**

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical name	California Hazardous Waste Status
Sulfuryl fluoride 2699-79-8	Toxic

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN2191
Proper Shipping Name Sulfuryl Fluoride
Hazard class 2.3

IATA

Forbidden

IMDG

UN number UN2191
Proper Shipping Name Sulfuryl Fluoride
Transport hazard class(es) 2.3
Marine Pollutant Yes

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	DSL/NDL	EINECS/E LINC	ENCS	IECSC	KECL	PICCS	AICS
---------------	------	---------	---------------	------	-------	------	-------	------

Sulfuryl fluoride	X	X	X	X	X	X	X	
-------------------	---	---	---	---	---	---	---	--

Legend:*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List**INECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS - Japan Existing and New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**KECL - Korean Existing and Evaluated Chemical Substances**PICCS - Philippines Inventory of Chemicals and Chemical Substances**AICS - Australian Inventory of Chemical Substances***US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Sulfuryl fluoride - 2699-79-8	2699-79-8	99.8	1.0

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuryl fluoride 2699-79-8	X	X	X

EPA Pesticide Registration Number EPA Reg. No. 1015-78**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Extremely Hazardous Liquid And Vapor Under Pressure. Fatal If Inhaled. May Be Fatal If Swallowed. Liquid May Cause Freeze Burns of Exposed Skin. Do not get in eyes, on skin, or on clothing. Vikane specialty gas fumigant is odorless. Exposure to toxic levels may occur without warning or detection by the user.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Danger	Danger
Acute toxicity - Oral	May be fatal if swallowed	Toxic if swallowed
Acute toxicity - Inhalation	Fatal if inhaled	Fatal if inhaled
Specific target organ toxicity (single exposure)	N/A	Causes damage to organs
Specific target organ toxicity (repeated exposure)	N/A	May cause damage to organs through prolonged or repeated exposure

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

4

0

0

None

HMIS**Health Hazards****Flammability****Physical hazards****Personal Protection**

Not determined

Not determined

Not determined

Not determined

Issue Date:

23-Feb-2019

Revision Date:

04-May-2020

Revision Note:

Editorial updates

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet