



**Safety Data Sheet - GHS**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** SureGuard® Herbicide  
**PCPA REGISTRATION NUMBER:** 29236  
**VC NUMBER(S):** 1420  
**SYNONYM(S):** None  
**PRODUCT DESCRIPTION:** Herbicide

*SureGuard* is a registered trademark of Valent U.S.A. LLC

**MANUFACTURER/DISTRIBUTOR**  
 VALENT CANADA, INC.  
 201-230 Hanlon Creek Blvd.  
 Guelph, Ontario N1C 0A1  
 (519) 767-9262

**EMERGENCY TELEPHONE NUMBERS**  
 HEALTH EMERGENCY OR SPILL (24 hr):  
 (800) 682-5368  
 TRANSPORTATION (24 hr.): CHEMTREC  
 (800) 424-9300 or (202) 483-7616

**Product Information**  
 AGRICULTURAL PRODUCTS: (800) 682-5368

**2. HAZARDS IDENTIFICATION**

**Classification** - (per U.S. OSHA 29 CFR 1910.1200 (Hazcom 2012))

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Reproductive toxicity	Category 2
Specific target organ toxicity - (repeated exposure) - (Bone Marrow)	Category 2
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 1

**Signal Word**

**WARNING**

**Symbols**



**Hazard statements**

- Harmful if inhaled.
- Suspected of damaging fertility or the unborn child.
- May cause damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life.
- Very toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Obtain, read and follow all safety instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Use personal protective equipment as required.  
 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/clothing/eye protection/face protection.  
 Do not breathe mist or spray.

**Response**

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
 If exposed or concerned: Get medical attention/ advice.  
 Get medical advice/ attention if you feel unwell.

**Storage**

Store locked up.

**Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC)**

None

**Other Information**

For information on Transportation requirements, see Section 14.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Flumioxazin	103361-09-7	51
Ingredients withheld as a Trade Secret	Various CAS No.'s	49

Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(800) 682-5368** at any time.

### 4. FIRST AID MEASURES

**EYE CONTACT:**

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. Call a poison control center or doctor for treatment advice.

**SKIN CONTACT:**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**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 the poison control center or doctor. Do not give anything to an unconscious person.

**INHALATION:**

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**NOTES TO PHYSICIAN:**

Treatment is supportive and symptomatic.

Emergency Telephone: (800) 682-5368  
 REVISION NUMBER: 9

SDS NO.: CAN-0172  
 REVISION DATE: 21/01/2022

## 5. FIRE FIGHTING MEASURES

**Flash point °C**

**Flash point °F**

**EXTINGUISHING MEDIA:** Water fog, carbon dioxide, foam, dry chemical

**FIRE FIGHTING INSTRUCTIONS:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Prevent extinguishing media run off from entering drains, sewers, and bodies of water.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition or combustion may produce harmful/irritant gas or fumes such as nitrogen oxides, carbon oxides, hydrogen fluoride or organic compounds.

## 6. ACCIDENTAL RELEASE MEASURES

**CONTAINMENT:** Reduce airborne dust. Avoid runoff into storm sewers or other bodies of water.

**CLEANUP:** Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

## 7. HANDLING AND STORAGE

**HANDLING:**

The usual precautions for handling chemicals should be observed. For personal protection see Section 8. Avoid contact with eyes, skin or clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective clothing and equipment when handling this product. Goggles or protective eyewear, gloves, long-sleeved shirt, long pants, socks and shoes are appropriate.

**STORAGE:**

Keep pesticide in original container. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place, away from heat, flame and strong acids. Not for use or storage in or around the home. Keep container closed when not in use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.**

**EYES & FACE:** Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

**RESPIRATORY PROTECTION:** Use this material only in well ventilated areas. If ventilation is not adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

**SKIN & HAND PROTECTION:** Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including long pants, long-sleeved shirt and shoes plus socks, and chemical-resistant gloves. Remove contaminated clothing. Wash before reuse.

**EXPOSURE LIMITS**

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits
Titanium Dioxide	TWA value 10 mg/m <sup>3</sup>	PEL 5 mg/m <sup>3</sup> Respirable fraction PEL 15 mg/m <sup>3</sup> Total dust
Kaolin clay	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Granules	<b>Vapor pressure</b>	Not determined
<b>Physical State</b>	Solid	<b>Vapor density</b>	Not determined
<b>Color</b>	Light brown	<b>Specific Gravity</b>	Not determined
<b>Odor</b>	Slight	<b>Water solubility</b>	Dispersible in water
<b>pH</b>	5.9 @ 25°C (1% aqueous solution)	<b>Solubility in other solvents</b>	Not determined
<b>Melting point / freezing point</b>	Not determined	<b>Partition coefficient</b>	Not determined
<b>Boiling point / boiling range</b>	Not determined	<b>Autoignition temperature</b>	Not determined
<b>Flash point</b>	Not determined	<b>Decomposition temperature</b>	Not determined
<b>Evaporation rate</b>	Not determined	<b>Viscosity</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not determined	<b>Explosive properties</b>	Not determined
<b>Flammability Limits in Air:</b>		<b>Oxidizing properties</b>	Not determined
<b>Upper flammability limits</b>	Not determined	<b>Liquid Density</b>	Not determined
<b>Lower flammability limits</b>	Not determined	<b>Bulk density</b>	33.2 lb/ft <sup>3</sup>

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Extremes of temperature and direct sunlight.

### Incompatible materials

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

### Hazardous Decomposition Products

Thermal decomposition or combustion may produce harmful/irritant gas or fume such as nitrogen oxides, carbon oxides, hydrogen fluoride or organic compounds.

## 11. TOXICOLOGICAL INFORMATION

### **ACUTE TOXICITY:**

Oral Toxicity LD <sub>50</sub> (rats)	> 5,000 mg/kg	EPA Tox Category	IV
Dermal Toxicity LD <sub>50</sub> (rabbits)	> 2,000 mg/kg	EPA Tox Category	III
Inhalation Toxicity LC <sub>50</sub> (rats)	> 2.18 mg/L (4 h)	EPA Tox Category	IV
Eye Irritation	Brief and/or mild irritation	EPA Tox Category	IV
Skin Irritation	Brief and/or mild irritation	EPA Tox Category	IV
Skin Sensitization	Not a Skin sensitizer	EPA Tox Category	None

### **TOXICITY OF FLUMIOXAZIN TECHNICAL:**

**SUBCHRONIC:** The lowest no-observable-effect-level (NOEL) in subchronic studies was 30 ppm in the three-month toxicity study in rats.

**CHRONIC/CARCINOGENICITY:** Flumioxazin Technical is “not likely to be carcinogenic to humans” based on the lack of carcinogenicity in rat and mouse studies. In a chronic feeding study with dogs, the NOEL was 10 mg/kg/day (capsule). In chronic dietary studies, NOELs were 300 ppm and 50 ppm in mice and rats, respectively.

**DEVELOPMENTAL TOXICITY:** Flumioxazin Technical produces developmental toxicity in rats in the absence of maternal toxicity. The developmental NOEL in the oral and dermal developmental toxicity studies were 10 and 100 mg/kg/day, respectively. No developmental toxicity was noted in rabbits at doses up to 3000 mg/kg/day, a dose well above the maternal NOEL of 1000 mg/kg/day.

Mechanistic studies indicate that the effects seen in the rat are highly unlikely to occur in the human and that flumioxazin would not be a developmental toxicant in the human.

**REPRODUCTION and OFFSPRING:** In a 2-generation study in rats with Flumioxazin Technical, there were no effects on reproduction up to 300 ppm, the highest dose tested. The NOEL for systemic toxicity in adults was 200 ppm. The NOEL for offspring was 100 ppm.

**MUTAGENICITY:** Flumioxazin Technical was not mutagenic in the *in vitro* gene mutation and a chromosome aberration assay in the absence of metabolic activation. In three *in vivo* assays, chromosome aberration, unscheduled DNA synthesis, and micronucleus assay, Flumioxazin Technical was not mutagenic. The only positive response was observed in the *in vitro* chromosome aberration assay in the presence of metabolic activation. Overall, Flumioxazin Technical does not present a genetic hazard.

## 12. ECOLOGICAL INFORMATION

**AVIAN TOXICITY:** Flumioxazin Technical is practically non-toxic to avian species.

Oral LD<sub>50</sub> Bobwhite Quail: >2,250 ppm  
 Dietary LC<sub>50</sub> Bobwhite Quail: >5,620 ppm  
 Dietary LC<sub>50</sub> Mallard Duck: >5,620 ppm  
 Mallard reproduction NOEL: 250 ppm

In mallard ducks, a slight, but not statistically significant reduction in hatchlings and 14-day old survivors was observed. Based on a possible, slight effect on egg production at 500 ppm, the NOEL for this study was 250 ppm.

**AQUATIC ORGANISM TOXICITY:** Flumioxazin Technical is slightly to moderately toxic to freshwater fish; moderately toxic to freshwater invertebrates; moderately toxic to estuarine/marine fish and moderately to highly toxic to estuarine/marine invertebrates, based on the following tests:

96-hour LC<sub>50</sub> Rainbow Trout: 2.3 mg/L  
 96-hour LC<sub>50</sub> Bluegill Sunfish: >21 mg/L  
 48-hour LC<sub>50</sub> Daphnia magna: >5.5 mg/L  
 96-hour LC<sub>50</sub> Sheepshead Minnow: >4.7 mg/L  
 96-hour (Shell Deposition) EC<sub>50</sub> Eastern Oyster: 2.4 mg/L  
 96-hour LC<sub>50</sub> Mysid Shrimp: 0.23 mg/L  
 Fish early life-stage (Rainbow Trout) NOEC: >7.7 µg/L, <16 µg/L  
 Chronic toxicity (Mysid Shrimp) NOEC: >15 µg/L, <27 µg/L  
 Chronic toxicity (Daphnia magna) NOEC: 28 µg/L

**OTHER NON-TARGET ORGANISM TOXICITY:** Flumioxazin Technical is practically non-toxic to bees. The acute contact LC<sub>50</sub> in bees was >105 µg/bee.

### OTHER ENVIRONMENTAL INFORMATION:

This product is toxic to non-target plants and aquatic invertebrates.

### 13. DISPOSAL CONSIDERATIONS

**END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.**

**PRODUCT DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**DISPOSAL METHODS:** Check government regulations and local authorities for approved disposal of this material. Dispose of in accordance with applicable laws and regulations.

### 14. TRANSPORTATION INFORMATION

**DOT (ground) shipping name:** Not regulated for domestic ground transport by US DOT or Canada TDG.  
**Emergency Response Guidebook No.:** Not applicable

**ICAO/IATA proper shipping name:** UN 3077 Environmentally Hazardous Substance, Solid, N.O.S. (Flumioxazin), 9, III, Marine Pollutant

**IMDG proper shipping name:** UN 3077, Environmentally Hazardous Substance, Solid, N.O.S. (flumioxazin), Marine pollutant

### 15. REGULATORY INFORMATION

#### CANADIAN REGULATIONS:

**WHMIS Hazard Class:** Non-controlled  
 This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (CPR)* and the SDS contains all information required by the CPR.

#### Kaolin clay

Canada DSL Inventory List - Present  
 EINECS Inventory List - Present

**PESTICIDE REGULATIONS:** All pesticides are governed under PCPA (Pest Control Products Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

**PROVINCIAL REGULATIONS:** This product did not trigger any provincial regulations.

For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

### 16. OTHER INFORMATION

**REASON FOR ISSUE:** General Update  
**SDS NO.:** CAN-0172  
**PCPA REGISTRATION NUMBER:** 29236  
**REVISION NUMBER:** 9  
**REVISION DATE:** 21 Jan 2022  
**SUPERCEDES DATE:** 23 Jan 2018  
**RESPONSIBLE PERSON(S):** Valent U.S.A. LLC, Corporate EH&S, (925) 256-2803

**Emergency Telephone:** (800) 682-5368  
**REVISION NUMBER:** 9

**SDS NO.:** CAN-0172  
**REVISION DATE:** 21/01/2022

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The Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE PMRA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use.

The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the PMRA under the authority of the *Pest Control Products Act* through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use a PMRA-registered pesticide product in any manner inconsistent with its labeling.

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