

SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: Flumioxazin 51WDG Select™
DESCRIPTION: A water dispersible granular herbicide
EPA Reg. No.: 92647-30-89442

COMPANY IDENTIFICATION: **Albaugh, LLC**
 1525 NE 36th Street
 Ankeny, IA 50021

2. HAZARD IDENTIFICATION

WARNING

Suspected of damaging fertility or the unborn child (H361)
 Very toxic to aquatic life with long lasting effects (H410)



HAZARD CLASSIFICATION

Health Hazards	Category
Reproductive toxicity	2
Other Hazards	Category
Hazardous to the aquatic environment, long-term	1
Hazardous to the aquatic environment, acute	1

HAZARDS NOT REQUIRING CLASSIFICATION

Do not mix or allow this product to come in contact with an oxidizing agent such as potassium permanganate. Hazardous chemical reaction may occur.

PRECAUTIONARY STATEMENTS

Obtain special instructions before use. (P201)
 Do not handle until all safety precautions have been read and understood. (P202)
 Wear protective clothing including: long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material, shoes and socks. (P280)
 Avoid release to the environment in a manner not in accordance with the product label. (P273)
 IF exposed or concerned: Get medical advice/attention. (P308+P313)
 Collect spillage. (P391)
 Store locked up. (P405)
 Dispose of contents / container in accordance with local regulations. Refer to the product label for specific disposal instructions. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Flumioxazin	2-[7-flouro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione	103361-09-7	51.0%

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical information.

5. FIREFIGHTING MEASURES

Flash Point (PMCC): N/A
Flammable Limits (LFL-UFL): Not Determined
Fire and Explosion Hazards: None known.
Extinguishing Medium: Foam, fog, CO₂, or dry chemical.
Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.
Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.
Hazardous Decomposition Products: Normal combustion forms carbon dioxide, water vapor and may produce: nitrogen and fluorine compounds. Incomplete combustion can product carbon monoxide.
NFPA Ratings: Health – 1 / Flammability – 1 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately observing the precautions in Section 8 of this SDS. Isolate the hazard area and keep unnecessary and unprotected personnel from entering.
Spill cleanup: Prevent material from further release into soil, surface water and ground water. Vacuum or sweep up material and place in an appropriate container for disposal. Wash area with soap and water. Pick up wash liquid with suitable absorbent material such as clay, sand, or earth and place in container for disposal.

7. HANDLING AND STORAGE

Handling: KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing.

Storage: Keep pesticide in original container. Store in a cool, dry, secure place. Do not put formulation or dilute spray solution into food or drink containers. Do not contaminate food or feedstuffs. Do not store or transport near feed or food. Not for use or storage in or around the home.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Applicators and other handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material (such as polyethylene or polyvinyl chloride), and shoes plus socks.

General: Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Light yellow granule

Odor: Odorless

Flash Point: N/A

pH: 6-7

Density: 0.6 g/mL (tap)

Solubility: Soluble in water

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Extreme temperatures and direct sunlight.

CHEMICAL STABILITY: Stable under all normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: None when stored and handled as prescribed. Thermal decomposition may release oxides of carbon and nitrogen.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizing agents (such as chlorates, nitrates, peroxides, etc.)

POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

The following is for a similar formulation:

ORAL TOXICITY (rat LD₅₀): > 5,000 mg/kg

DERMAL TOXICITY (rat LD₅₀): > 2,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): > 0.969 mg/L (4-hour)

EYE IRRITATION: Minor irritation

SKIN IRRITATION: Minor irritation

SKIN SENSITIZATION: Not a contact sensitizer.

CARCINOGENICITY:

IARC: Not listed

US NTP: Not listed

ACGIH: Not listed

MUTAGENIC TOXICITY: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

REPRODUCTIVE TOXICITY: Reproductive toxicity was observed in F1 males, P1 females and F1 females at 300 ppm Flumioxazin Technical, the highest dose tested and a dose that also produced signs of systemic toxicity. Toxicity was also observed in the F1 and F2 offspring at doses of 200 ppm and greater.

12. ECOLOGICAL INFORMATION

This product is toxic to non-target plants and aquatic invertebrates. This pesticide is toxic to plants and must be used strictly in accordance with the drift and run-off precautions on the label in order to minimize off-site exposures.

The following is for the active ingredient, flumioxazin:

AQUATIC TOXICITY

Rainbow trout (96-hr LC₅₀): 2.3 ppm

Rainbow trout (NOAEC): 0.0077 ppm

Daphnia (96-hr LC₅₀): 5.5 ppm

Daphnia (NOAEC): 0.028 ppm

Green algae (EC₅₀): 0.00102 ppm

TERRESTRIAL TOXICITY

Bobwhite quail (feeding): > 2250 mg/kg

Mallard duck (NOAEC): 250 mg/kg

OTHER TOXICITY

Honey bee (contact, 48-hr): > 105µg/bee

13. DISPOSAL CONSIDERATIONS

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

CONTAINER DISPOSAL: Non-refillable container. Do not reuse this container. Refer to the product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

US DOT (shipments by land)

Not regulated by DOT.

IMDG / IATA (shipments by vessel or air)

Containers < 11 lbs. (5 kg)

Not regulated.

Containers > 11 lbs. (5 kg)

UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (flumioxazin), 9, PG III, Marine Pollutant

15. REGULATORY INFORMATION

FIFRA –

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. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing.

See inside label booklet for additional precautionary statements.

ENVIRONMENTAL HAZARDS

This product is toxic to non-target plants and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and must be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off and is recommended.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing and reducing agents. A hazardous chemical reaction may occur.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

Not listed

SARA Title III – Section 313 Reportable Ingredients

Not listed

CERCLA –

Not listed

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemical known to the state of California to cause cancer or productive harm.

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (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, while the labeling provides that information specifically for product use in the ordinary course.

To the extent consistent with applicable law, neither Albaugh, LLC nor Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ALBAUGH, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ALBAUGH, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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