



Maxunitech North America, Inc.

SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier

Product Name	Maxunitech Flumioxazin 4 SC
EPA Registration Number	95009-13

Other means of identification

Synonyms
Flumioxazin

2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2*H*-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1*H*-isoindole-1,3(2*H*)-dione

Recommended use of the chemical and restrictions on use

Recommended Use	Herbicide
Uses advised against	Use according to label

Supplier's details

Maxunitech North America, Inc.
Add: 11601 Shadow Creek Pkwy, Suite 111-573, Pearland, Texas 77584, USA

Emergency phone number

National Pesticide Information Center: 1-800-858-7378 (Monday through Friday, 8:00 AM to 12 PM Pacific Standard Time)
Poison Control Center: 1-800-222-1222 (In the event of a medical emergency)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral: Category 5
Acute toxicity - Dermal: Category 5
Acute toxicity - Inhalation: Category 4
Reproductive toxicity: Category 2
Hazardous to the Aquatic Environment – Short-Term (Acute): Category 1
Hazardous to the Aquatic Environment – Long-Term (Chronic): Category 1

GHS Label elements, including precautionary statements



WARNING

Hazard Statements

H303 - May be harmful if swallowed
H313 - May be harmful in contact with skin



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H332 - Harmful if inhaled

H361 - Suspected of damaging fertility or the unborn child

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements – Prevention

P203 - Obtain, read and follow all safety instructions before use.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 - Use only outdoors or with adequate ventilation.

P273 - Avoid release to the environment not in accordance with the product label.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Precautionary Statements – Response

P301+P307 - IF SWALLOWED: Get medical help.

P302+P317 - IF ON SKIN: Get medical help.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P318 - IF exposed or concerned, get medical advice.

P391 - Collect spillage.

Precautionary Statements - Storage

P405 - Store locked up.

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions.

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No.	%
Flumioxazin	103361-09-7	41.68
Other Ingredients	/	58.32
Total	/	100

4. FIRST AID MEASURES

Description of necessary first aid measures

General advice: Have the product container, label or Safety Data Sheet with you when calling a poison control center or doctor or going for treatment.

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..

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



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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: Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. If symptoms develop, get medical advice.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media

Suitable: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water fog.

Special hazards arising from

Unusual Fire and Explosion Hazards: May form combustible dust concentrations in air. If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): Normal combustion forms carbon dioxide, water vapor and may produce: nitrogen and fluorine compounds. Incomplete combustion can product carbon monoxide.

Advice for fire-fighters

Special protective equipment for fire-fighters: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full firefighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental precautions

Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods and materials for containment and cleaning up

Methods for Containment: Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up and Disposal: Clean up spill immediately. Vacuum or sweep up material and place in a chemical waste container. Or absorb spill with inert material. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash



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contaminated clothing before reuse. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

Conditions for safe storage, including any incompatibilities

Storage: Store product in original container only, away from other pesticides, fertilizer, food, or feed. Do not use or store around the home. Avoid storage below 32F. Product that has been frozen should be thawed and recirculated prior to its use. Store in a cool, dry place and avoid excess heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls

Engineering controls: Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Individual protection measures, such as personal protective equipment

General Protection: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower or water supply should be readily accessible to the work area.

Respiratory protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow liquid
Physical State	Liquid
Color	Light yellow
Odor	characteristic odor
Odor threshold	No information available
pH	5.92 at 20°C (1% solution) 5.46 at 19.8°C (undiluted)
Density	1.1516 g/m at 20°C
Melting point/freezing point	No information available
Boiling Point/Range	Not applicable
Flash point	No information available
Evaporation Rate	No information available



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Flammability (solid, gas)	No information available
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	445 cP at 20°C; 280.5 cP at 40°C
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available.

Chemical stability

Stable under normal handling and storage conditions.

Possibility of hazardous reactions

Will not occur.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

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

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

The following information is from the formulated product:

Dermal, inhalation

The acute toxicity information of the formulated product:

LD₅₀ Oral = 5,000 mg/kg (rat)

LD₅₀ Dermal > 2,000 mg/kg (rat)

LC₅₀ Inhalation > 2.076 mg/l 4 h (rat, no mortality during the test)

Serious eye damage/eye irritation: Non-irritant to eye (rabbit).

Skin corrosion/irritation: Non-irritant to dermal (rabbit).

Sensitization: Non-Sensitizer (Guinea Pigs).



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Delayed and immediate effects and also chronic effects from short and long term exposure.

The following information is based on active ingredient (Flumioxazin):

Subchronic toxicity:

No evidence of subchronic toxicity in animal studies.

NOEL: (90 d) for rats 30 ppm (2.2 mg/kg b.w. daily).

Chronic toxicity:

No evidence of chronic toxicity in animal studies.

NOEL: (2 y) for rats 50 ppm (1.8 mg/kg b.w. daily).

Mutagenicity:

Non-mutagenic in the Ames test, in vivo chromosomal aberration, and in vivo/vitro UDS.

Carcinogenicity:

IARC Group 1 or 2: Not listed.

NTP Carcinogen List: Not listed

OSHA - Select Carcinogens: Not listed

Neurological effects:

Known not to cause the neurological effects.

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.

Developmental toxicity:

Flumioxazin Technical produces developmental toxicity in rats in the absence of maternal toxicity at doses of 30 mg/kg/day by the oral route and 300 mg/kg/day by the dermal route. The developmental effects noted consisted primarily of decreased number of live fetuses and fetal weights, cardiovascular abnormalities, wavy ribs and decreased number of ossified sacrococcygeal vertebral bodies. The developmental NOEL in the rat oral and dermal developmental toxicity studies were 10 and 100 mg/kg/day, respectively. The response in rabbits was very different from that in rats. 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.

STOT - single exposure:

No information available.

STOT - repeated exposure:

No information available.

Aspiration hazard:

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The following information is based on active ingredient (Flumioxazin):



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Toxicity to fish

Rainbow trout
LC₅₀: 2.3 mg/l
Exposure time: 96 h

Bluegill sunfish
LC₅₀: >21 mg/l
Exposure time: 96 h

Sheepshead minnows
LC₅₀: >4.7 mg/l
Exposure time: 96 h

Toxicity to aquatic plants

Algae (*Selenastrum capricornutum*)
EC₅₀: 0.0011 mg/l
Exposure time: 72h

Acute toxicity to aquatic invertebrates

Daphnia magna
EC₅₀: 5.9 mg/l
Exposure time: 48 h

Fate

Degrades rapidly in soil and water. Leaching potential is low.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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: Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available; otherwise dispose of in a sanitary landfill or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

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

14. TRANSPORT INFORMATION

DOT (ground) SHIPPING NAME:

Not regulated for domestic ground transport by US DOT.

EMERGENCY RESPONSE

Not applicable

ICAO/IATA SHIPPING NAME:

UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Flumioxazin), 9, III, Marine Pollutant



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REMARKS:

Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations -- see IATA Special Provision A197

IMDG SHIPPING NAME:

UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Flumioxazin), 9, III, Marine Pollutant

REMARKS:

Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations – see IMDG 2.10.2.7

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:

CAUTION

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION.

Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

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 wash waters or rinsate.

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, including 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.

NON-TARGET ORGANISM ADVISORY: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions



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for use intended to minimize spray drift.

U.S. FEDERAL REGULATIONS: Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT, TSCA and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

SARA TITLE III

311/312 HAZARD CATEGORY:

Reproductive Toxicity, Acute Toxicity

313 TOXIC CHEMICALS:

None

CALIFORNIA PROP 65: WARNING:

Not listed.

TSCA:

Exempted - solely for FIFRA regulated use.

STATE REGULATIONS: Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

16. OTHER INFORMATION

SDS Creation Date: 30-Jan-2024

Version Number: #1

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.