

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : ZOXY 2F II
Product code : 1000740

1.2. Other means of identification

Other means of identification : EPA Reg No. 89442-21

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Fungicide
Restrictions on use : Use in accordance with label directions for use.

1.4. Supplier's details

Albaugh, LLC (ARMORTECH)
1525 Northeast 36th Street 1525 NE 36th Street
Ankeny, 50021
United States
T 800-247-8013
contactus@albaughllc.com - <https://www.albaugh.com/us/specialty-products/turf-ornamental>

1.5. Emergency phone number

Emergency number : For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident:
• Call CHEMTREC Day or Night within USA and Canada: 1-800-424-9300, Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

For Medical Emergencies Only:
• Call Albaugh LLC Day or Night within USA and Canada: 1-888-347-6732
24 hours a day, 7 days a week

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification
Not classified

2.2. Label elements

GHS US labeling
No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

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2.5. Unknown acute toxicity

Not applicable

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Other Ingredients (non-hazardous, proprietary) (Component)	-	66 – 70	Not classified
azoxystrobin (Active substance (Biocide), Main constituent)	CAS-No.: 131860-33-8	22.2 - 23.6	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:dust,mist), H331 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
1,2-propanediol (Component)	CAS-No.: 57-55-6	7.6 – 8.4	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

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5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions	: Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Protect from sunlight.
Packaging materials	: Always store product in container of same material as original container.

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SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid. Opaque. White.
Color	: White
Odor	: Odourless
Odor threshold	: No data available
pH	: 6.77 (1% Aq. Dispersion)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 97.5 °C
Flash point	: > 100 °C None observed at boiling point.
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1.072 g/ml (Value is not to be used as a product specification)
Solubility	: Forms suspension in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 56.28 mm ² /s (20C)

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Explosion limits	: No data available
Explosive properties	: Not Explosive.
Oxidizing properties	: Not oxidising.
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ZOXY 2F II	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Unknown acute toxicity (GHS US)	Not applicable
azoxystrobin (131860-33-8)	
LC50 Inhalation - Rat	0.7 – 0.96 mg/l/4h (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	0.83 mg/l/4h
ATE US (dust, mist)	0.83 mg/l/4h

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1,2-propanediol (57-55-6)	
LD50 oral rat	22000 mg/kg (Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg body weight (24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 44.9 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 7 day(s))
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 6.77 (1% Aq. Dispersion)

azoxystrobin (131860-33-8)	
pH	No data available in the literature

1,2-propanediol (57-55-6)	
pH	6.5 – 7.5 (50 %)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 6.77 (1% Aq. Dispersion)

azoxystrobin (131860-33-8)	
pH	No data available in the literature

1,2-propanediol (57-55-6)	
pH	6.5 – 7.5 (50 %)
Respiratory or skin sensitization	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

ZOXY 2F II	
Viscosity, kinematic	56.28 mm ² /s (20C)

azoxystrobin (131860-33-8)	
Viscosity, kinematic	Not applicable (solid)

1,2-propanediol (57-55-6)	
Viscosity, kinematic	55.77 mm ² /s (20 °C, No data available in the literature)
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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azoxystrobin (131860-33-8)	
LC50 - Fish [1]	0.47 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	0.055 mg/l (EPA OPP 72-3, 96 h, Americamysis bahia, Static system, Experimental value, GLP)
ErC50 algae	0.146 mg/l (US EPA, 72 h, Navicula pelliculosa, Static system, Experimental value, GLP)
1,2-propanediol (57-55-6)	
LC50 - Fish [1]	40613 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Measured concentration)
ErC50 algae	24200 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

ZOXY 2F II	
Persistence and degradability	Not rapidly degradable
azoxystrobin (131860-33-8)	
Persistence and degradability	Not readily biodegradable in the soil, Not readily biodegradable in water.
1,2-propanediol (57-55-6)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.96 – 1.08 g O ₂ /g substance
Chemical oxygen demand (COD)	1.63 g O ₂ /g substance
ThOD	1.69 g O ₂ /g substance
Other Ingredients (non-hazardous, proprietary)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

azoxystrobin (131860-33-8)	
Partition coefficient n-octanol/water (Log Pow)	2.5 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
1,2-propanediol (57-55-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.1 (Experimental value, EU Method A.8: Partition Coefficient, 20.5 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

azoxystrobin (131860-33-8)	
Surface tension	71.8 mN/m (20 °C, EU Method A.5: Surface tension)
Ecology - soil	Low potential for mobility in soil.
1,2-propanediol (57-55-6)	
Surface tension	71.6 mN/m (22 °C, 1.01 g/l, EU Method A.5: Surface tension)

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1,2-propanediol (57-55-6)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.46 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14 Transport information

DOT	TDG	IMDG	IATA
Shipment by ground under DOT/TDG is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.			
14.1. UN number			
Not regulated	Not regulated	UN3082	UN3082
14.2. Proper Shipping Name			
Not regulated	Not regulated	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Azoxystrobin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Azoxystrobin)
14.3. Transport hazard class(es)			
Not regulated	Not regulated	9	9
	Not regulated		
14.4. Packing group			
Not regulated	Not regulated	III	III
14.5. Environmental hazards			
Not regulated	Not regulated	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

Special transport precautions : Avoid release to the environment.

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DOT

Not regulated

TDG

Not regulated

IMDG

No data available

IATA

No data available

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
azoxystrobin	131860-33-8	Not present	-	
1,2-propanediol	57-55-6	Present	Active	
Other Ingredients (non-hazardous, proprietary)		Not present	-	

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

FIFRA Labelling

EPA Registration Number	89442-21
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.	
FIFRA Signal Word	Caution
FIFRA Precautionary Statement	KEEP OUT OF REACH OF CHILDREN. Hazards To Humans and Domestic Animals.
FIFRA Human Health Hazards	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.
FIFRA First Aid	IF ON SKIN OR CLOTHING: •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.

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FIFRA Labelling	
FIFRA Environmental Hazards	<p>ENVIRONMENTAL HAZARDS</p> <p>This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. DO NOT apply directly to water except as specified on this label. For terrestrial uses, DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. DO NOT contaminate water when disposing of equipment washwater or rinsate.</p> <p>Ground Water Advisory</p> <p>Azoxystrobin and a degradate of azoxystrobin are known to leach through soil to ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.</p> <p>Surface Water Advisory</p> <p>This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of azoxystrobin and a degradate of azoxystrobin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.</p>
FIFRA Other	<p>STORAGE AND DISPOSAL</p> <p>DO NOT contaminate water, food or feed by storage and disposal.</p> <p>PESTICIDE STORAGE</p> <p>Store in original containers only. Keep container closed when not in use. DO NOT store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.</p> <p>PESTICIDE DISPOSAL</p> <p>Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.</p> <p>CONTAINER HANDLING [less than or equal to 5 gallons]</p> <p>Non-refillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.</p>

15.2. International regulations

CANADA

azoxystrobin (131860-33-8)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

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1,2-propanediol (57-55-6)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

azoxystrobin (131860-33-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

1,2-propanediol (57-55-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date : 1/29/2026

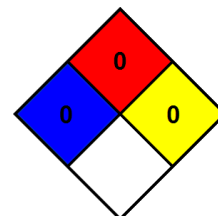
Full text of hazard classes and H-statements

H331	Toxic if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS USA-ALBAUGH

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.