

1 Identification

· Product identifier

· Trade name: **AFFIANCE® FUNGICIDE**

EPA Registration No.: 10163-332

· CAS Number:

Active Ingredient: Tetraconazole (7.48%) CAS No. 112281-77-3

Azoxystrobin (9.35%) CAS No. 131860-33-8

· Application of the substance / the mixture Agricultural fungicide

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Gowan Company

P.O. Box 5569

Yuma, Arizona 85366-5569

(928) 783-8844

· Information department: sds@gowanco.com

· Emergency telephone number:

Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300

Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (Prosar®): (888) 478-0798

2 Hazard(s) identification

· Classification of the substance or mixture



Acute Tox. 4 H302 Harmful if swallowed.

Aquatic Acute 2 H401 Toxic to aquatic life.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labeling:

Azoxystrobin

Tetraconazole

· Hazard statements

H302 Harmful if swallowed.

H401 Toxic to aquatic life.

· Precautionary statements

P264 Wash thoroughly after handling.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

· Hazard description:

Harmful if absorbed through skin. Harmful if swallowed. 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.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 1
 Reactivity = 0

HAZARD INDEX:

- 4 Severe Hazard
- 3 Serious Hazard
- 2 Moderate Hazard
- 1 Slight Hazard
- 0 Minimal Hazard

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable in US.
- **vPvB:** Not applicable in US.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 131860-33-8	azoxystrobin 	9.35%
CAS: 112281-77-3	Tetraconazole 	7.48%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact 1-888-478-0798 for emergency medical treatment information.
- **After inhalation:**
- Move person to fresh air.
 - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
 - Call poison control center or doctor for further treatment advice.
- **After 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.
- **After eye contact:**
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
 - Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
 - Call a poison control center or doctor for treatment advice.
- **After swallowing:**
- 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.

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- *Do not give anything by mouth to an unconscious person.*
- **Information for doctor:**
 - *Most important symptoms and effects, both acute and delayed Unknown*
 - *Indication of any immediate medical attention and special treatment needed None*

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Do not inhale explosion and combustion gases which, at high temperatures, may contain toxic substances such as CO_x, NO_x, SO_x, HCl, HF and HCN. Burning produces heavy smoke.
- **Advice for firefighters**
*May release irritating and toxic gases due to thermal decomposition
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.*
 - **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear personal protection equipment. Wear breathing apparatus if exposed to vapors/dusts/aerosols. Provide adequate ventilation. Use appropriate respiratory protection.
- **Environmental precautions:**
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Suitable material for taking up: absorbing material, organic, sand
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
*See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.*

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling**
Avoid contact with skin and eyes, inhalation of vapors and mists. Use localized ventilation system. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Contaminated clothing should be changed before entering eating areas. Do not eat or drink while working. See also section 8 for recommended protective equipment.
 - **Information about protection against explosions and fires:** *Keep ignition sources away - Do not smoke.*
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Store in original container in a dry, temperature-controlled, secure, place. Adequately ventilated premises.
 - **Information about storage in one common storage facility:** *Store away from foodstuffs.*
 - **Further information about storage conditions:** *Keep receptacle tightly sealed.*

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· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters** Provide local exhaust or process enclosure ventilation system.
 - **Components with limit values that require monitoring at the workplace:**
 The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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
- **Breathing equipment:**
 When needed, based on the conditions of use, wear a MSHA/NIOSH approved air purifying respirator with an organic-vapor removing cartridge with any N, R, P or HE pre-filter.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**

Chemical-resistant made of any waterproof material

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber > 14 mils, nitrile rubber > 14 mils, polyvinyl chloride (PVC) > 14 mils, and viton > 14 mils. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart.

- **Body protection:**

- Long sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any water proof material

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Liquid
- **Color:** Brownish
- **Odor:** Odorless
- **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 6.1

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** > 100 °C (>212 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.07 g/cm³ (8.92915 lbs/gal)

- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Dispersible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

· **Other information:** No further relevant information available.

10 Stability and reactivity

· **Reactivity:** No further relevant information available.

· **Chemical stability:** Stable under normal handling and storage conditions.

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions:** No dangerous reactions known.

· **Conditions to avoid:** No further relevant information available.

· **Incompatible materials:** None known

· **Hazardous decomposition products:**

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

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Sulfur dioxide (SO_x)
 Hydrogen chloride (HCl)
 Hydrogen fluoride (HF)
 Hydrogen cyanide (HCN)
 · **Additional information:** Hazardous Polymerization: Will not occur.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	LD50	>300 mg/kg (rat)
Dermal	LD50	>4000 mg/kg (rat)
Inhalative	LC50/4 h	>2.26 mg/l (rat)

· Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

· Sensitization: Not a skin sensitizer

· Additional toxicological information:

Tetraconazole:

Chronic Toxicity/Carcinogenic effect: Not likely to be carcinogenic to humans at levels that do not cause increased cell proliferation in the liver
 Reproductive Toxicity: No evidence of reproductive toxicity
 Teratogenic Effect: No teratogenic effect
 Mutagenic Effects: Not genotoxic

Azoxystrobin :

Chronic Toxicity/Carcinogenic effect: No carcinogenic effect.
 Reproductive Toxicity: Azoxystrobin showed no evidence of reproductive toxicity.
 Teratogenic Effect: No teratogenic effect
 Mutagenic Effects: No genotoxicity in vivo.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

· NTP (National Toxicology Program)

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

· Toxicity

Environmental Hazards:

This product is toxic to fish and aquatic invertebrates. 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 or runoff from treated areas may be hazardous to aquatic organisms adjacent to treatment areas. Exercise caution when making applications of DOMARK NEO, and do not apply when atmospheric conditions favor drift or runoff. Do not contaminate water when disposing of equipment wash waters or rinsate.

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- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
 - **Other information:**

Ecotoxicological Information: (Based on the mixture)

Fish (*danio rerio*) LC50 (96h): 6.7 mg/L

Daphnia (*Daphnia similis*) LC50 (48h): 0.57 mg/L

Algae (*Pseudokirchneriella subcapitata*) EC50 (72h): 5.32 mg/L
- **Ecotoxic effects:**
 - **Other information:**

Environmental Fate:

Tetraconazole:

Stable to hydrolysis and not expected to be degradable by photolysis in water.

Not readily biodegradable.

Bioaccumulative potential : BCF = 35.7 (whole fish).

Soil Koc between 531 and 1922.

Azoxystrobin:

Expected to be degradable. Stable in water (degradation half-life: 214 days).

Not persistent in soil (degradation half-life: 80 days).

No bioaccumulative potential.

Low to very high mobility in soil.
- **Additional ecological information:**
 - **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**

Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. 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 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.
- **Uncleaned packagings:**
 - **Recommendation:**

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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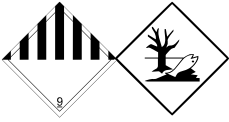
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14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT · ADR, IMDG, IATA 	<p style="text-align: center;"><i>Not Regulated</i></p> <p style="text-align: center;">UN3082</p>
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG · IATA 	<p style="text-align: center;"><i>3082 Environmentally hazardous substances, liquid, n.o.s. (azoxystrobin, Tetraconazole)</i></p> <p style="text-align: center;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (azoxystrobin, Tetraconazole), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (azoxystrobin, Tetraconazole)</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IATA 	<div style="text-align: center;">  </div> <p style="text-align: center;">· Class · Label</p> <p style="text-align: center;"><i>9 Miscellaneous dangerous substances and articles</i> 9</p>
<ul style="list-style-type: none"> · IMDG 	<div style="text-align: center;">  </div> <p style="text-align: center;">· Class · Label</p> <p style="text-align: center;"><i>9 Miscellaneous dangerous substances and articles</i> 9</p>
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	<p style="text-align: center;">III</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	<p style="text-align: center;"><i>Product contains environmentally hazardous substances: azoxystrobin</i></p> <p style="text-align: center;">Yes <i>Symbol (fish and tree)</i></p>
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: 	<p style="text-align: center;"><i>Warning: Miscellaneous dangerous substances and articles</i></p> <p style="text-align: center;">90 F-A,S-F</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p style="text-align: center;"><i>Not applicable</i></p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p style="text-align: center;">US DOT:</p> <p style="text-align: center;"><i>Non Bulk: Not regulated</i></p> <p style="text-align: center;">ALL OTHERS, Including bulk</p> <p style="text-align: center;"><i>UN3082, Environmentally hazardous substances, liquid, n.o.s. (azoxystrobin, Tetraconazole), 9, III</i></p>

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA /FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency (EPA) 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.

· **SARA Title III**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

None of the ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

Not applicable



GHS07

· **Signal word**

(US EPA) CAUTION

Warning

· **Hazard-determining components of labeling:**

Azoxystrobin

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Tetraconazole

- **Hazard statements**

H302 Harmful if swallowed.

H401 Toxic to aquatic life.

- **Precautionary statements**

Harmful if absorbed through skin. Harmful if swallowed. 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.

P264 Wash thoroughly after handling.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Supply Chain

- **Contact:** sds@gowanco.com

- **Date of preparation / last revision** 12/11/2018 / 5

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

- **Sources** Affiance® is a registered trademark of Isagro USA, Inc.

- *** Data compared to the previous version altered.**