

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ELATUS FUNGICIDE

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 0.0     | 06/17/2024     | S00051893203 | Date of first issue: 06/17/2024 |

### SECTION 1. IDENTIFICATION

Product name : ELATUS FUNGICIDE  
Design code : A18126B

Product Registration number : 100-1480

#### Manufacturer or supplier's details

Company name of supplier : Syngenta Crop Protection, LLC  
Address : Post Office Box 18300  
Greensboro NC 27419  
United States of America (USA)

Telephone : 1 800 334 9481  
Telefax : 1 336 632 2192

E-mail address : sds.requests@syngenta.com  
Emergency telephone : 1 800 888 8372

#### Recommended use of the chemical and restrictions on use

Recommended use : Fungicide


### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

Acute toxicity (Oral) : Category 4  
Eye irritation : Category 2A  
Skin sensitization : Category 1  
Specific target organ toxicity : Category 2 (Bile duct)  
- repeated exposure

#### GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H373 May cause damage to organs (Bile duct) through prolonged or repeated exposure.

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### Precautionary Statements

#### Prevention:

P260 Do not breathe dust.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves/ eye protection/ face protection.

#### Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P314 Get medical advice/ attention if you feel unwell.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

May form combustible dust concentrations in air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

| Chemical name   | CAS-No.      | Concentration (% w/w) |
|---|--------------|-----------------------|
| limestone   | 1317-65-3    | $\geq 30$ - $< 50$    |
| Azoxystrobin  | 131860-33-8  | 30                    |
| residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts | 68425-94-5   | $\geq 10$ - $< 20$    |
| benzovindiflupyr  | 1072957-71-1 | 15                    |
| dioxosilane   | 14808-60-7   | $\geq 0.1$ - $< 1$    |
| methanol  | 67-56-1      | $\geq 0.1$ - $< 1$    |

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

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

If inhaled : Take the victim into fresh air.  
If breathing is irregular or stopped, administer artificial

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|   |   |  |
|---|---|--|
|   |   | respiration.<br>Keep patient warm and at rest.<br>Call a physician or poison control center immediately.   |
| In case of skin contact                                     | : | Take off all contaminated clothing immediately.<br>Wash off immediately with plenty of water.<br>If skin irritation persists, call a physician.<br>Wash contaminated clothing before re-use.                           |
| In case of eye contact                                      | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Remove contact lenses.<br>Immediate medical attention is required.   |
| If swallowed  | : | If swallowed, seek medical advice immediately and show this container or label.<br>Do NOT induce vomiting.   |
| Most important symptoms and effects, both acute and delayed | : | Nonspecific<br>No symptoms known or expected.<br>Harmful if swallowed.<br>May cause an allergic skin reaction.<br>Causes serious eye irritation.<br>May cause damage to organs through prolonged or repeated exposure. |
| Notes to physician  | : | There is no specific antidote available.<br>Treat symptomatically.   |

## SECTION 5. FIRE-FIGHTING MEASURES

|  |   |   |
|--|---|---|
| Suitable extinguishing media                   | : | Extinguishing media - small fires<br>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.<br>Extinguishing media - large fires<br>Alcohol-resistant foam<br>or<br>Water spray                           |
| Unsuitable extinguishing media                 | : | Do not use a solid water stream as it may scatter and spread fire.  |
| Specific hazards during fire fighting          | : | As the product contains combustible organic ingredients, fire will produce dense black smoke containing hazardous products of combustion (see section 10).<br>Exposure to decomposition products may be a hazard to health. |
| Further information                            | : | Do not allow run-off from fire fighting to enter drains or water courses.<br>Cool closed containers exposed to fire with water spray.   |
| Special protective equipment for fire-fighters | : | Wear full protective clothing and self-contained breathing apparatus.   |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

|                      |   |   |
|----------------------|---|---|
| Personal precautions | : | Refer to protective measures listed in sections 7 and 8.<br>Avoid dust formation. |
|----------------------|---|---|

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### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).  
Do not create a powder cloud by using a brush or compressed air.  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### 6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion.  
Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material.  
Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.  
This material can become readily charged in most operations.  
Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
For personal protection see section 8.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep out of the reach of children.  
Keep away from food, drink and animal feedingstuffs.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Components | CAS-No.   | Value type<br>(Form of exposure) | Control parameters / Permissible concentration | Basis    |
|------------|-----------|----------------------------------|--|----------|
| limestone  | 1317-65-3 | TWA (total dust)                 | 15 mg/m3                                       | OSHA Z-1 |
|            |           | TWA (respirable fraction)        | 5 mg/m3  | OSHA Z-1 |
|            |           | TWA (Total dust)                 | 15 mg/m3                                       | OSHA P0  |
|            |           | TWA (respirable dust)            | 5 mg/m3  | OSHA P0  |

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|                  |              |                                     |                                  |           |
|------------------|--------------|-------------------------------------|----------------------------------|-----------|
|                  |              | fraction)                           |                                  |           |
|                  |              | TWA (Respirable)                    | 5 mg/m3 (Calcium carbonate)      | NIOSH REL |
|                  |              | TWA (total)                         | 10 mg/m3 (Calcium carbonate)     | NIOSH REL |
| Azoxystrobin     | 131860-33-8  | TWA                                 | 0.7 mg/m3                        | Syngenta  |
| benzovindiflupyr | 1072957-71-1 | TWA                                 | 1 mg/m3                          | Syngenta  |
| dioxosilane      | 14808-60-7   | TWA (respirable)                    | 10 mg/m3 / %SiO <sub>2</sub> +2  | OSHA Z-3  |
|                  |              | TWA (respirable)                    | 250 mppcf / %SiO <sub>2</sub> +5 | OSHA Z-3  |
|                  |              | TWA (respirable dust fraction)      | 0.1 mg/m3                        | OSHA P0   |
|                  |              | TWA (Respirable particulate matter) | 0.025 mg/m3 (Silica)             | ACGIH     |
|                  |              | TWA (Respirable dust)               | 0.05 mg/m3 (Silica)              | NIOSH REL |
|                  |              | TWA (Respirable dust)               | 0.05 mg/m3                       | OSHA Z-1  |
| methanol         | 67-56-1      | TWA                                 | 200 ppm                          | ACGIH     |
|                  |              | STEL                                | 250 ppm                          | ACGIH     |
|                  |              | TWA                                 | 200 ppm<br>260 mg/m3             | NIOSH REL |
|                  |              | ST                                  | 250 ppm<br>325 mg/m3             | NIOSH REL |
|                  |              | TWA                                 | 200 ppm<br>260 mg/m3             | OSHA Z-1  |
|                  |              | STEL                                | 250 ppm<br>325 mg/m3             | OSHA P0   |
|                  |              | TWA                                 | 200 ppm<br>260 mg/m3             | OSHA P0   |

### Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time  | Permissible concentration | Basis     |
|------------|---------|--------------------|---------------------|--|---------------------------|-----------|
| methanol   | 67-56-1 | Methanol           | Urine               | End of shift (As soon as possible after exposure ceases) | 15 mg/l                   | ACGIH BEI |

**Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL

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APPLICATIONS AND/OR ON-FARM APPLICATIONS  
CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The breakthrough time depends amongst other things from the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Tightly fitting safety goggles  
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate:

Dust impervious protective suit

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.  
When selecting personal protective equipment, seek appropriate professional advice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Color : beige to dark brown

Odor : weak, uncharacteristic

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|  |   |   |
|--|---|---|
| Odor Threshold                                   | : | No data available   |
| pH   | : | > 8.50 - 10.50 (68 - 77 °F / 20 - 25 °C)<br>Concentration: 1 %w/v |
| Melting point/freezing point                     | : | No data available   |
| Initial boiling point and boiling range          | : | No data available   |
| Flash point                                      | : | No data available   |
| Evaporation rate                                 | : | No data available   |
| Flammability (solid, gas)                        | : | May form combustible dust concentrations in air.                  |
| Burning number                                   | : | 2 (68 °F / 20 °C)<br><br>2 (212 °F / 100 °C)                      |
| Upper explosion limit / Upper flammability limit | : | No data available   |
| Lower explosion limit / Lower flammability limit | : | No data available   |
| Vapor pressure                                   | : | No data available   |
| Relative vapor density                           | : | No data available   |
| Density  | : | 1 g/cm <sup>3</sup>   |
| Bulk density                                     | : | 0.56 g/cm <sup>3</sup>  |
| Solubility(ies)                                  | : |   |
| Water solubility                                 | : | No data available   |
| Solubility in other solvents                     | : | No data available   |
| Partition coefficient: n-octanol/water           | : | No data available   |
| Autoignition temperature                         | : | No data available   |
| Decomposition temperature                        | : | No data available   |
| Minimum ignition temperature                     | : | 500 °C  |
| Viscosity  | : |   |
| Viscosity, kinematic                             | : | No data available   |
| Explosive properties                             | : | Not explosive   |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing.          |

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Surface tension : 38.0 mN/m, 14.000 %, 68 °F / 20 °C

Minimum ignition energy : 100 - 300 mJ

Particle characteristics

Particle size : No data available

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Ingestion

Inhalation

Skin contact

Eye contact

#### Acute toxicity

Harmful if swallowed.

#### Product:

Acute oral toxicity : LD50 (Rat, female): 1,049 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.01 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

#### Components:

##### **Azoxystrobin:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 0.698 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

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Assessment: The substance or mixture has no acute dermal toxicity

### **benzovindiflupyr:**

|                           |   |   |
|---------------------------|---|---|
| Acute oral toxicity       | : | LD50 (Rat, female): 55 mg/kg  |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 0.56 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist                    |
| Acute dermal toxicity     | : | LD50 (Rat, male and female): > 2,000 mg/kg<br>Assessment: The substance or mixture has no acute dermal toxicity |

### **methanol:**

|                           |   |  |
|---------------------------|---|--|
| Acute oral toxicity       | : | Assessment: The component/mixture is toxic after single ingestion.         |
| Acute inhalation toxicity | : | Assessment: The component/mixture is toxic after short term inhalation.    |
| Acute dermal toxicity     | : | Assessment: The component/mixture is toxic after single contact with skin. |

### **Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

#### **Product:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

#### **Components:**

##### **Azoxystrobin:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

##### **benzovindiflupyr:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

##### **methanol:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

### **Serious eye damage/eye irritation**

Causes serious eye irritation.

#### **Product:**

|         |   |        |
|---------|---|--------|
| Species | : | Rabbit |
|---------|---|--------|

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Result : Irritation to eyes, reversing within 21 days

### Components:

#### **Azoxystrobin:**

Species : Rabbit  
Result : No eye irritation

**residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:**

Result : Irritation to eyes, reversing within 21 days  
Method : in vitro eye irritation test

#### **benzovindiflupyr:**

Species : Rabbit  
Result : No eye irritation

#### **methanol:**

Species : Rabbit  
Result : No eye irritation

### **Respiratory or skin sensitization**

#### **Skin sensitization**

May cause an allergic skin reaction.

#### **Respiratory sensitization**

Not classified due to lack of data.

### Product:

Species : Guinea pig  
Result : The product is a skin sensitizer, sub-category 1B.

### Components:

#### **Azoxystrobin:**

Species : Guinea pig  
Result : Does not cause skin sensitization.

#### **benzovindiflupyr:**

Test Type : mouse lymphoma cells  
Species : Mouse  
Result : Does not cause skin sensitization.

#### **methanol:**

Species : Guinea pig  
Result : Does not cause skin sensitization.

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### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Product:

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

#### Components:

##### **Azoxystrobin:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

##### **benzovindiflupyr:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

##### **methanol:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### Carcinogenicity

Not classified due to lack of data.

#### Components:

##### **Azoxystrobin:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

##### **benzovindiflupyr:**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen, This substance has been reported to cause tumors in certain animal species., These is no evidence that these findings are relevant to humans.

##### **dioxosilane:**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

IARC has concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources and in experimental animals from quartz and cristobalite (Group 1). It was noted however, that carcinogenicity was not detected in all industrial circumstances and may be dependent on inherent characteristics of the crystalline silica or external factors affecting its biological activity.

##### **methanol:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

#### **IARC**

Group 1: Carcinogenic to humans  
dioxosilane

14808-60-7

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(Silica dust, crystalline)

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** Known to be human carcinogen  
dioxosilane  
(Silica, Crystalline (Respirable Size)) 14808-60-7

### Reproductive toxicity

Not classified due to lack of data.

#### Components:

##### **Azoxystrobin:**

Reproductive toxicity - Assessment : No toxicity to reproduction, No effects on or via lactation

##### **benzovindiflupyr:**

Reproductive toxicity - Assessment : No toxicity to reproduction

##### **methanol:**

Reproductive toxicity - Assessment : No toxicity to reproduction

### STOT-single exposure

Not classified due to lack of data.

#### Components:

##### **benzovindiflupyr:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### **methanol:**

Target Organs : Eyes, Central nervous system  
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

### STOT-repeated exposure

May cause damage to organs (Bile duct) through prolonged or repeated exposure.

#### Components:

##### **Azoxystrobin:**

Target Organs : Bile duct  
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

##### **benzovindiflupyr:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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### dioxosilane:

Routes of exposure : Inhalation  
Target Organs : Lungs  
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

### methanol:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Aspiration toxicity

Not classified due to lack of data.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.032 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.22 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.97 mg/l  
plants Exposure time: 96 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.3 mg/l  
End point: Growth rate  
Exposure time: 96 h

#### Components:

##### **Azoxystrobin:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.47 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.28 mg/l  
aquatic invertebrates Exposure time: 48 h

EC50 (Americamysis): 0.055 mg/l  
Exposure time: 96 h

Toxicity to algae/aquatic : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1.109 mg/l  
plants Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.0303 mg/l

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- End point: Growth rate  
Exposure time: 72 h
- ErC50 (Skeletonema costatum (marine diatom)): 0.250 mg/l  
Exposure time: 72 h
- NOEC (Skeletonema costatum (marine diatom)): 0.010 mg/l  
End point: Growth rate  
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.16 mg/l  
Exposure time: 28 d
- EC10 (Pimephales promelas (fathead minnow)): 0.2197 mg/l  
Exposure time: 33 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.044 mg/l  
Exposure time: 21 d
- NOEC (Americamysis): 0.00954 mg/l  
Exposure time: 28 d
- Toxicity to microorganisms : IC50 (Pseudomonas putida): > 3.2 mg/l  
Exposure time: 6 h
- benzovindiflupyr:**
- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0091 mg/l  
Exposure time: 96 h
- LC50 (Cyprinus carpio (Carp)): 0.0035 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Americamysis): 0.056 mg/l  
Exposure time: 96 h
- Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 0.89 mg/l  
Exposure time: 96 h
- NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.42 mg/l  
End point: Growth rate  
Exposure time: 96 h
- ErC50 (Skeletonema costatum (marine diatom)): 0.55 mg/l  
Exposure time: 72 h
- NOEC (Skeletonema costatum (marine diatom)): 0.4 mg/l  
End point: Growth rate  
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.00095 mg/l  
Exposure time: 32 d

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Test Type: Early-life Stage

|  |   |
|--|---|
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Americamysis): 0.0074 mg/l<br>Exposure time: 28 d<br><br>EC10 (Daphnia magna (Water flea)): 0.012 mg/l<br>Exposure time: 21 d |
| Toxicity to microorganisms   | : EC50 (activated sludge): > 1,000 mg/l<br>Exposure time: 3 h   |

### Persistence and degradability

#### Components:

##### **Azoxystrobin:**

|                    |   |
|--------------------|---|
| Biodegradability   | : Result: Not readily biodegradable.                            |
| Stability in water | : Degradation half life: 224 d<br>Remarks: Persistent in water. |

##### **residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:**

|                  |                                      |
|------------------|--------------------------------------|
| Biodegradability | : Result: Not readily biodegradable. |
|------------------|--------------------------------------|

##### **benzovindiflupyr:**

|                  |                                      |
|------------------|--------------------------------------|
| Biodegradability | : Result: Not readily biodegradable. |
|------------------|--------------------------------------|

### Bioaccumulative potential

#### Components:

##### **Azoxystrobin:**

|                 |                                    |
|-----------------|------------------------------------|
| Bioaccumulation | : Remarks: Does not bioaccumulate. |
|-----------------|------------------------------------|

##### **benzovindiflupyr:**

|                 |                                    |
|-----------------|------------------------------------|
| Bioaccumulation | : Remarks: Does not bioaccumulate. |
|-----------------|------------------------------------|

|  |                                |
|--|--------------------------------|
| Partition coefficient: n-octanol/water | : log Pow: 4.3 (77 °F / 25 °C) |
|--|--------------------------------|

### Mobility in soil

#### Components:

##### **Azoxystrobin:**

|   |  |
|---|--|
| Distribution among environmental compartments | : Remarks: Low mobility in soil.   |
| Stability in soil                             | : Dissipation time: 81.3 d<br>Percentage dissipation: 50 % (DT50)<br>Remarks: Product is not persistent. |

##### **benzovindiflupyr:**

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Distribution among environmental compartments : Remarks: Slightly mobile in soils

### Other adverse effects

#### Components:

##### **Azoxystrobin:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

##### **benzovindiflupyr:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

##### **methanol:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

|                        |   |
|------------------------|---|
| Waste from residues    | : Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Do not dispose of waste into sewer.<br>Where possible recycling is preferred to disposal or incineration.<br>If recycling is not practicable, dispose of in compliance with local regulations.<br>This product will not be classified as a RCRA characteristic hazardous waste when discarded. |
| Contaminated packaging | : Empty remaining contents.<br>Triple rinse containers.<br>Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Do not re-use empty containers.  |

## SECTION 14. TRANSPORT INFORMATION

### **International Regulations**

#### **UNRTDG**

|                      |  |
|----------------------|--|
| UN number            | : UN 3077  |
| Proper shipping name | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(AZOXYSTROBIN, BENZOVINDIFLUPYR) |
| Class                | : 9  |
| Packing group        | : III  |
| Labels               | : 9  |

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Environmentally hazardous : yes  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### IATA-DGR

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (AZOXYSTROBIN, BENZOVINDIFLUPYR)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Environmentally hazardous : yes  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### IMDG-Code

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (AZOXYSTROBIN, BENZOVINDIFLUPYR)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

#### 49 CFR

Not regulated as a dangerous good  
Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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### SECTION 15. REGULATORY INFORMATION

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:

#### Caution

Harmful if swallowed.

Harmful if absorbed through skin.

Causes moderate eye irritation.

Avoid contact with skin, eyes or clothing.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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 re-use.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Combustible dust  
Acute toxicity (any route of exposure)  
Respiratory or skin sensitization  
Specific target organ toxicity (single or repeated exposure)  
Serious eye damage or eye irritation

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### California Prop. 65

WARNING: This product can expose you to chemicals including dioxosilane, which is/are known to the State of California to cause cancer, and methanol, toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Regulated Carcinogens

dioxosilane

14808-60-7

### SECTION 16. OTHER INFORMATION

#### Further information

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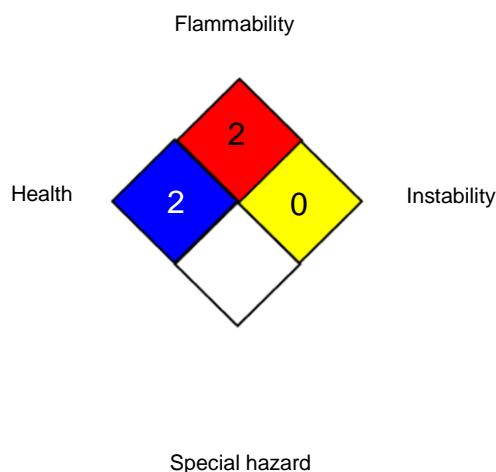
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### NFPA 704:



### HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | * | 2 |
| FLAMMABILITY    |   | 2 |
| PHYSICAL HAZARD |   | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

|                 |   |
|-----------------|---|
| ACGIH           | : USA. ACGIH Threshold Limit Values (TLV)   |
| ACGIH BEI       | : ACGIH - Biological Exposure Indices (BEI)   |
| NIOSH REL       | : USA. NIOSH Recommended Exposure Limits  |
| OSHA P0         | : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)                        |
| OSHA Z-1        | : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| OSHA Z-3        | : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts                        |
| Syngenta        | : Syngenta Occupational Exposure Limits   |
| ACGIH / TWA     | : 8-hour, time-weighted average   |
| ACGIH / STEL    | : Short-term exposure limit   |
| NIOSH REL / TWA | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST  | : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday    |
| OSHA P0 / TWA   | : 8-hour time weighted average  |
| OSHA P0 / STEL  | : Short-term exposure limit   |
| OSHA Z-1 / TWA  | : 8-hour time weighted average  |
| OSHA Z-3 / TWA  | : 8-hour time weighted average  |
| Syngenta / TWA  | : Time weighted average   |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in

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Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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