

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ADAGE ST

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 2.0     | 03/21/2024     | S00044759934 | Date of first issue: 11/10/2017 |

### SECTION 1. IDENTIFICATION

Product name : ADAGE ST  
Design code : A14909H

Product Registration number : 100-1283

#### 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

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

Recommended use : Insecticide  
Fungicide

Restrictions on use : General Use Pesticide

### SECTION 2. HAZARDS IDENTIFICATION

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

Not a hazardous substance or mixture.

#### GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

#### Other hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

| Chemical name                               | CAS-No.     | Concentration (% w/w) |
|---|-------------|-----------------------|
| thiamethoxam                                | 153719-23-4 | 21.5                  |
| (9Z,12Z,15Z)-octadeca-9,12,15-trienoic acid | 8001-26-1   | $\geq 10$ - $< 20$    |
| propane-1,2-diol                            | 57-55-6     | $\geq 5$ - $< 10$     |
| propane-1,2,3-triol                         | 56-81-5     | $\geq 5$ - $< 10$     |
| metalaxyl-M                                 | 70630-17-0  | 3.2054                |
| fludioxonil                                 | 131341-86-1 | 1.0714                |
| ethanamine, N,N-diethyl-                    | 121-44-8    | 0 - $< 0.1$           |

Actual concentration is withheld as a trade secret

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### 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.<br>If breathing is irregular or stopped, administer artificial 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.   |
| 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. |
|----------------------|---|--|

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### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
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, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
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 : No special protective measures against fire required.  
Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
For personal protection see section 8.

Conditions for safe storage : No special storage conditions required.  
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 (Form of exposure)   | Control parameters / Permissible concentration | Basis     |
|---|-------------|---------------------------------|--|-----------|
| thiamethoxam                                | 153719-23-4 | TWA                             | 5 mg/m3  | Syngenta  |
| (9Z,12Z,15Z)-octadeca-9,12,15-trienoic acid | 8001-26-1   | TWA (mist - total)              | 10 mg/m3                                       | NIOSH REL |
|   |             | TWA (mist - respirable)         | 5 mg/m3  | NIOSH REL |
| propane-1,2-diol                            | 57-55-6     | TWA                             | 10 mg/m3                                       | US WEEL   |
| propane-1,2,3-triol                         | 56-81-5     | TWA (mist, respirable fraction) | 5 mg/m3  | OSHA Z-1  |
|   |             | TWA (mist, total dust)          | 15 mg/m3                                       | OSHA Z-1  |
|   |             | TWA (Mist - total dust)         | 10 mg/m3                                       | OSHA P0   |
|   |             | TWA (Mist - respirable)         | 5 mg/m3  | OSHA P0   |

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|                          |             |                                    |                     |          |
|--------------------------|-------------|------------------------------------|---------------------|----------|
|                          |             | fraction)                          |                     |          |
| metalaxyl-M              | 70630-17-0  | TWA                                | 5 mg/m3             | Syngenta |
| fludioxonil              | 131341-86-1 | TWA                                | 5 mg/m3             | Syngenta |
|                          |             | TWA (Inhalable particulate matter) | 1 mg/m3             | ACGIH    |
| ethanamine, N,N-diethyl- | 121-44-8    | TWA                                | 0.5 ppm             | ACGIH    |
|                          |             | STEL                               | 1 ppm               | ACGIH    |
|                          |             | TWA                                | 25 ppm<br>100 mg/m3 | OSHA Z-1 |
|                          |             | STEL                               | 15 ppm<br>60 mg/m3  | OSHA P0  |
|                          |             | TWA                                | 10 ppm<br>40 mg/m3  | OSHA P0  |

**Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL 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** : No special protective equipment required.

**Eye protection** : No special protective equipment required.

**Skin and body protection** : No special protective equipment required. Select skin and body protection based on the physical job requirements.

**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** : liquid

**Color** : red

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|  |   |   |
|--|---|---|
| Odor   | : | No data available                         |
| Odor Threshold                                   | : | No data available                         |
| pH   | : | 5.0 - 6.0<br>Concentration: 100 %w/v      |
| Melting point/freezing point                     | : | No data available                         |
| Initial boiling point and boiling range          | : | No data available                         |
| Flash point                                      | : | Method: Seta closed cup<br>does not flash |
| Evaporation rate                                 | : | No data available                         |
| Flammability (solid, gas)                        | : | No data available                         |
| 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  | : | 1.12 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                         |
| Viscosity  |   |   |
| Viscosity, kinematic                             | : | No data available                         |
| Explosive properties                             | : | No data available                         |
| Oxidizing properties                             | : | No data available                         |
| Particle characteristics                         |   |   |
| Particle size                                    | : | No data available                         |

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### 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

Not classified due to lack of data.

#### Product:

|                     |   |  |
|---------------------|---|--|
| Acute oral toxicity | : | Acute toxicity estimate: 4,484 mg/kg<br>Method: Calculation method |
|---------------------|---|--|

#### Components:

##### **thiamethoxam:**

|                           |   |   |
|---------------------------|---|---|
| Acute oral toxicity       | : | LD50 (Rat, male and female): 1,563 mg/kg  |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 3.72 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity     | : | LD50 (Rat, male and female): > 2,000 mg/kg<br>Assessment: The substance or mixture has no acute dermal toxicity   |

##### **propane-1,2-diol:**

|                           |   |   |
|---------------------------|---|---|
| Acute oral toxicity       | : | LD50 (Rat): > 20,000 mg/kg<br><br>Assessment: The substance or mixture has no acute oral toxicity |
| Acute inhalation toxicity | : | LC50 (Rabbit): 317,042 mg/l<br>Exposure time: 2 h<br>Test atmosphere: dust/mist                   |
| Acute dermal toxicity     | : | LD50 (Rabbit): > 2,000 mg/kg<br>Assessment: The substance or mixture has no acute dermal toxicity |

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toxicity

### propane-1,2,3-triol:

- Acute oral toxicity : LD50 (Rat, female): > 4,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat, male): > 2.75 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat, female): > 5,000 mg/kg

### metalaxyl-M:

- Acute oral toxicity : LD50 (Rat, female): 375 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 2.29 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Highest attainable concentration
- Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### fludioxonil:

- Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 2.6 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

### ethanamine, N,N-diethyl-:

- Acute oral toxicity : LD50 (Rat): 730 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 7.22 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor
- Acute dermal toxicity : LD50 (Rat): 580 mg/kg

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### Skin corrosion/irritation

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

#### Product:

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

#### Components:

##### **thiamethoxam:**

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

##### **propane-1,2-diol:**

|        |   |                    |
|--------|---|--------------------|
| Result | : | No skin irritation |
|--------|---|--------------------|

##### **propane-1,2,3-triol:**

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

##### **metalaxyl-M:**

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

##### **fludioxonil:**

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

##### **ethanamine, N,N-diethyl-:**

|         |   |   |
|---------|---|---|
| Species | : | Rabbit  |
| Result  | : | Corrosive after 3 minutes or less of exposure |

### Serious eye damage/eye irritation

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

#### Product:

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

#### Components:

##### **thiamethoxam:**

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

##### **propane-1,2-diol:**

|        |   |                   |
|--------|---|-------------------|
| Result | : | No eye irritation |
|--------|---|-------------------|



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### propane-1,2,3-triol:

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

### metalaxyl-M:

|         |   |                                 |
|---------|---|---------------------------------|
| Species | : | Rabbit                          |
| Result  | : | Risk of serious damage to eyes. |

### fludioxonil:

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

### ethanamine, N,N-diethyl-:

|        |   |                                 |
|--------|---|---------------------------------|
| Result | : | Risk of serious damage to eyes. |
|--------|---|---------------------------------|

## Respiratory or skin sensitization

### Skin sensitization

Not classified due to lack of data.

### Respiratory sensitization

Not classified due to lack of data.

### Components:

#### thiamethoxam:

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

#### propane-1,2-diol:

|        |   |                                    |
|--------|---|------------------------------------|
| Result | : | Does not cause skin sensitization. |
|--------|---|------------------------------------|

#### propane-1,2,3-triol:

|         |   |                        |
|---------|---|------------------------|
| Species | : | Guinea pig             |
| Result  | : | Not a skin sensitizer. |

#### metalaxyl-M:

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

#### fludioxonil:

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

## Germ cell mutagenicity

Not classified due to lack of data.

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### Components:

#### **thiamethoxam:**

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

#### **propane-1,2-diol:**

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

#### **propane-1,2,3-triol:**

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

#### **metalaxyl-M:**

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

#### **fludioxonil:**

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

#### **ethanamine, N,N-diethyl-:**

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

### **Carcinogenicity**

Not classified due to lack of data.

### Components:

#### **thiamethoxam:**

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

#### **propane-1,2-diol:**

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

#### **propane-1,2,3-triol:**

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

#### **metalaxyl-M:**

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

#### **fludioxonil:**

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

### **Reproductive toxicity**

Not classified due to lack of data.

### Components:

#### **thiamethoxam:**

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Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

### propane-1,2-diol:

Reproductive toxicity - Assessment : No toxicity to reproduction, No effects on or via lactation  
Animal testing did not show any effects on fetal development.

### propane-1,2,3-triol:

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

### metalaxyl-M:

Reproductive toxicity - Assessment : No toxicity to reproduction

### fludioxonil:

Reproductive toxicity - Assessment : No toxicity to reproduction

### ethanamine, N,N-diethyl-:

Reproductive toxicity - Assessment : No toxicity to reproduction

### STOT-single exposure

Not classified due to lack of data.

### Components:

#### thiamethoxam:

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

#### propane-1,2-diol:

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

#### ethanamine, N,N-diethyl-:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

### STOT-repeated exposure

Not classified due to lack of data.

### Components:

#### thiamethoxam:

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

#### propane-1,2-diol:

Assessment : The substance or mixture is not classified as specific target

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organ toxicant, repeated exposure.

### propane-1,2,3-triol:

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

### metalaxyl-M:

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

### fludioxonil:

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

### Aspiration toxicity

Not classified due to lack of data.

### Components:

#### propane-1,2-diol:

No aspiration toxicity classification

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### thiamethoxam:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h

EC50 (Cloeon sp.): 0.014 mg/l  
Exposure time: 48 h

EC50 (Chironomus riparius (harlequin fly)): 0.035 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 81.8 mg/l  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 81.8 mg/l  
End point: Growth rate  
Exposure time: 72 h

Toxicity to fish (Chronic tox- : NOEC (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

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icity)

Exposure time: 28 d  
Test Type: flow-through test

NOEC (Oncorhynchus mykiss (rainbow trout)): > 20 mg/l  
Exposure time: 88 d  
Test Type: Early-life Stage

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 100 mg/l  
Exposure time: 21 d

NOEC (Chironomus riparius (Midge larvae)): 0.01 mg/l  
Exposure time: 30 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h

### propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : (Ceriodaphnia dubia (water flea)): 18,340 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 19,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): 13,020 mg/l  
Exposure time: 7 d  
Test Type: semi-static test

### metalaxyl-M:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h

LC50 (Cyprinus carpio (Carp)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 271 mg/l  
Exposure time: 96 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 19.7 mg/l  
End point: Growth rate  
Exposure time: 96 h

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Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 50 mg/l  
Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 25 mg/l  
Exposure time: 21 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h

### fludioxonil:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l  
Exposure time: 96 h

LC50 (Pimephales promelas (fathead minnow)): 0.7 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.4 mg/l  
Exposure time: 48 h

EC50 (Americamysis): 0.27 mg/l  
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.259 mg/l  
Exposure time: 96 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.077 mg/l  
End point: Growth rate  
Exposure time: 96 h

ErC50 (Skeletonema costatum (marine diatom)): 0.43 mg/l  
Exposure time: 96 h

NOEC (Skeletonema costatum (marine diatom)): 0.14 mg/l  
End point: Growth rate  
Exposure time: 96 h

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.04 mg/l  
Exposure time: 28 d

EC10 (Pimephales promelas (fathead minnow)): 0.018 mg/l  
Exposure time: 116 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.035 mg/l  
Exposure time: 21 d

NOEC (Americamysis): 0.018 mg/l  
Exposure time: 28 d

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h

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### ethanamine, N,N-diethyl-:

|                                  |   |   |
|----------------------------------|---|---|
| Toxicity to fish                 | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 36 mg/l<br>Exposure time: 96 h                |
| Toxicity to algae/aquatic plants | : | ErC50 (Raphidocelis subcapitata (freshwater green alga)): 9.8 mg/l<br>Exposure time: 72 h |

### Persistence and degradability

#### Components:

##### thiamethoxam:

|                    |   |  |
|--------------------|---|--|
| Biodegradability   | : | Result: Not readily biodegradable.                                 |
| Stability in water | : | Degradation half life: 11 d<br>Remarks: Product is not persistent. |

##### propane-1,2-diol:

|                  |   |   |
|------------------|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 81 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F |
|------------------|---|---|

##### metalaxyl-M:

|                    |   |   |
|--------------------|---|---|
| Biodegradability   | : | Result: Not readily biodegradable.  |
| Stability in water | : | Degradation half life: 22.4 - 47.5 d<br>Remarks: Product is not persistent. |

##### fludioxonil:

|                    |   |   |
|--------------------|---|---|
| Biodegradability   | : | Result: Not readily biodegradable.                                  |
| Stability in water | : | Degradation half life: 450 - 700 d<br>Remarks: Persistent in water. |

### ethanamine, N,N-diethyl-:

|                  |   |                                |
|------------------|---|--------------------------------|
| Biodegradability | : | Result: Readily biodegradable. |
|------------------|---|--------------------------------|

### Bioaccumulative potential

#### Components:

##### thiamethoxam:

|  |   |   |
|--|---|---|
| Bioaccumulation                        | : | Remarks: Low bioaccumulation potential. |
| Partition coefficient: n-octanol/water | : | log Pow: -0.13 (77 °F / 25 °C)          |

##### metalaxyl-M:

|                 |   |   |
|-----------------|---|---|
| Bioaccumulation | : | Remarks: Low bioaccumulation potential. |
|-----------------|---|---|

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Partition coefficient: n-octanol/water : log Pow: 1.71 (77 °F / 25 °C)

### **fludioxonil:**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 4.12 (77 °F / 25 °C)

### **Mobility in soil**

#### **Components:**

#### **thiamethoxam:**

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 51 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

#### **metalaxyl-M:**

Distribution among environmental compartments : Remarks: Metalaxyl has a range from low to very high mobility in soil depending on soil type.

Stability in soil : Dissipation time: < 50 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

#### **fludioxonil:**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 14 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

### **Other adverse effects**

#### **Components:**

#### **thiamethoxam:**

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

#### **metalaxyl-M:**

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

#### **fludioxonil:**

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



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### ethanamine, N,N-diethyl-:

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.  
Do not dispose of waste into sewer.  
Where possible recycling is preferred to disposal or incineration.  
If recycling is not practicable, dispose of in compliance with local regulations.  
This product will not be classified as a RCRA characteristic hazardous waste when discarded.

Contaminated packaging : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(THIAMETHOXAM, FLUDIOXONIL)  
Class : 9  
Packing group : III  
Labels : 9  
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 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(THIAMETHOXAM, FLUDIOXONIL)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

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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 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(THIAMETHOXAM, FLUDIOXONIL)  
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.

## 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.

Causes moderate eye irritation.

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.

### 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** : No SARA Hazards

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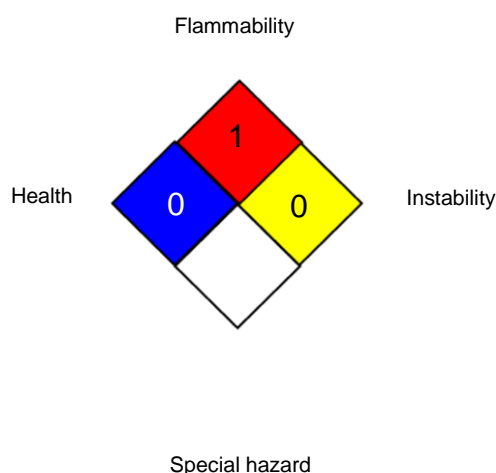
### SARA 313

: 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.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | / | 1 |
| FLAMMABILITY    |   | 1 |
| 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)   |
| 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          |
| Syngenta        | : Syngenta Occupational Exposure Limits   |
| US WEEL         | : USA. Workplace Environmental Exposure Levels (WEEL)                                       |
| 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 |
| OSHA P0 / TWA   | : 8-hour time weighted average  |
| OSHA P0 / STEL  | : Short-term exposure limit   |
| OSHA Z-1 / TWA  | : 8-hour time weighted average  |
| Syngenta / TWA  | : Time weighted average   |
| US WEEL / TWA   | : 8-hr TWA  |

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 Sub-

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stances 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 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

Revision Date : 03/21/2024

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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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