

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
 Product name. : ELEVATE<sup>®</sup> 50WDG FUNGICIDE  
 Other means of identification : EPA Registration Number 66330-35

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Fungicide.

**1.3. Details of the supplier of the safety data sheet**

Arysta LifeScience North America LLC  
 15401 Weston Parkway, Suite 150  
 Cary, NC 27513 - USA

**1.4. Emergency telephone number**

Emergency number : Exposure Calls (PROSAR): +1-866-303-6952 or +1-651-603-3432 (international)  
 Spill Calls (CHEMTREC) (Contract # CCN1779): +1-800-424-9300 or +1-703-527-3887

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS-US classification**

STOT RE 2 H373  
 Aquatic Chronic 2 H411

**2.2. Label elements****GHS-US labelling**

Hazard pictograms (GHS-US) :



GHS08

GHS09

Signal word (GHS-US) : Warning  
 Hazard statements (GHS-US) : H373 - May cause damage to organs through prolonged or repeated exposure  
 H411 - Toxic to aquatic life with long lasting effects  
 Precautionary statements (GHS-US) : P260 - Do not breathe dust  
 P273 - Avoid release to the environment  
 P314 - Get medical advice and attention if you feel unwell  
 P391 - Collect spillage  
 P501 - Dispose of contents/container in accordance with local and national regulations

**2.3. Other hazards**

No additional information available

**2.4. Unknown acute toxicity (GHS-US)**

No data available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixture**

Only components with health hazards above the applicable thresholds are shown. Specific composition withheld as trade secret.

Full text of H-phrases: see section 16

Name	Product identifier	%	GHS-US classification
Fenhexamid (main constituent)	(CAS No) 126833-17-8	48.5 – 52.2	Aquatic Chronic 2, H411
Lignosulfonic acid, sodium salt	(CAS No) 8061-51-6	20 – 30	STOT RE 2, H373

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting unless directed to do so by medical personnel. Sip water.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes damage to organs (upper respiratory tract, skin, and eyes.).
- Symptoms/injuries after inhalation : In high concentrations : Inhalation may cause: irritation, coughing, shortness of breath.
- Symptoms/injuries after skin contact : No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin contact. May cause moderate irritation.
- Symptoms/injuries after eye contact : No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of eye exposure. May cause slight irritation.
- Symptoms/injuries after ingestion : No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of ingestion.

#### 4.3. Indication of any immediate medical attention and special treatment needed

All treatments should be based on observed signs and symptoms of distress in the patient.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

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

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : No specific fire or explosion hazard.
- Explosion hazard : Dust may form explosive mixture in air.
- Reactivity : No dangerous reactions known.

#### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses. Minimize the amount of water used for fire fighting.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.
- Other information : In the event of a fire and/or explosion do not breathe fumes. Cool tanks with water spray. Use water spray to cool unopened containers.

### SECTION 6: Accidental release measures

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

- General measures : Avoid contact with skin and eyes. Avoid creating or spreading dust. Collect contaminated fire fighting water separately. It must not enter the sewage system. Shut off all ignition sources; no fires, smoking, or flames in the hazard area.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Dust impervious gloves. Wear suitable protective clothing and gloves. Chemical goggles or safety glasses. Do not breathe dust.
- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing and gloves. Dust impervious gloves. Chemical goggles or safety glasses.
- Emergency procedures : Ventilate area.

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### 6.2. Environmental precautions

Do not allow large quantities, as are, to spread into the environment. Do not discharge into drains or rivers. Do not contaminate water when disposing of rinse out or equipment wash water. Do not discharge into drains or the environment. Prevent dispersion.

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

For containment : Absorb and/or contain spill with inert material, then place in suitable container. Avoid generating dust. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Collect spillage. Minimize generation of dust. On land, sweep or shovel into suitable containers. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Following recovery, flush area with water. Clean surface thoroughly to remove residual contamination.

### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Keep away from sources of ignition - No smoking. Provide good ventilation in process area to prevent formation of dust.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container tightly closed. Store in a dry place. Do not store near food, foodstuffs, drugs, or potable water supplies.

Incompatible materials : None known.

Heat-ignition : Keep away from heat, sparks and flame.

Special rules on packaging : Keep only in original container.

### 7.3. Specific end use(s)

Fungicide.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Lignosulfonic acid, sodium salt (8061-51-6)

USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Inhalable particulates not otherwise specified) 3 mg/m <sup>3</sup> (Respirable particulates not otherwise specified)
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#### Fenhexamid (126833-17-8)

None established.

### 8.2. Exposure controls

Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Provide local exhaust or general room ventilation to minimize exposure to dust.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear dust impervious gloves.

Eye protection : In case of dust production: protective goggles.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. Where excessive dust may result, use approved respiratory protection equipment. Use air-purifying respirator equipped with particulate filtering cartridges.

Other information : Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Granular powder.

Colour : Beige.

Odour : Faint.

Odour threshold : No data available

pH : 8.3 in 1% solution of water

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Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 153 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: 295 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 0.000004 Pa @ 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Dispersable
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Dust may form explosive mixture in air.
Oxidising properties	: No oxidizing properties.
Explosive limits	: 90 g/m <sup>3</sup> lower limit

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use (52 weeks).

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Avoid creating or spreading dust. Keep away from sources of ignition. Heat.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

No dangerous decomposition products known.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

ELEVATE <sup>®</sup> 50WDG FUNGICIDE	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

Fenhexamid Technical (126833-17-8)	
LD50 oral rat	> 5000 mg/kg in both rats and mice
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 5057 mg/m <sup>3</sup> 4h (dust)

Lignosulfonic acid, sodium salt (8061-51-6)	
LD50 oral rat	> 12000 mg/kg

Skin corrosion/irritation	: Not classified Slightly irritating in rabbits, not sufficient for classification.
Serious eye damage/irritation	: Not classified Slightly irritating in rabbits, not sufficient for classification.

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Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
	Not mutagenic or genotoxic in a battery of in vitro or in vivo tests (fenhexamid technical).
Carcinogenicity	: Not classified
	Not carcinogenic in laboratory animals (fenhexamid technical).
Reproductive toxicity	: Not classified
	Did not cause reproductive toxicity in 2-generation study in rats (fenhexamid technical).
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (upper respiratory tract, skin, and eyes) through prolonged or repeated exposure
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: In high concentrations : Inhalation may cause: irritation, coughing, shortness of breath.
Symptoms/injuries after skin contact	: No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin contact. May cause moderate irritation.
Symptoms/injuries after eye contact	: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of eye exposure. May cause slight irritation.
Symptoms/injuries after ingestion	: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of ingestion.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

#### Fenhexamid Technical

LC50 fishes 1	1.34 mg/l 96 h Oncorhynchus mykiss
EC50 Daphnia 1	> 18.8 mg/l 48h

#### Lignosulfonic acid, sodium salt (8061-51-6)

LC50 fishes 1	361 ppm 96h Pimephales promelas
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### 12.2. Persistence and degradability

#### ELEVATE<sup>®</sup> 50WDG FUNGICIDE

Persistence and degradability : May cause long-term adverse effects in the environment.

#### Fenhexamid Technical (126833-17-8)

Persistence and degradability : Not rapidly biodegradable.

#### Lignosulfonic acid, sodium salt (8061-51-6)

Persistence and degradability	Biodegrades slowly.
Biochemical oxygen demand (BOD)	0.021 g O <sub>2</sub> /g substance (5 day/day); 0.043 g O <sub>2</sub> /g (30 day/days)

### 12.3. Bioaccumulative potential

#### Fenhexamid Technical (126833-17-8)

Log Pow	2.23 - 3.62 20 °C; pH 9-4 respectively
This product is not bioaccumulating.	
Bioconcentration factor (BCF)	132 – 185

### 12.4. Mobility in soil

#### Fenhexamid Technical (126833-17-8)

Slightly mobile in soil.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

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### SECTION 14: Transport information

In accordance with DOT

Not considered a dangerous good for transport regulations

#### Additional information

Other information : No supplementary information available.

#### ADR

Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (fenhexamid), 9, III, (E)  
Packing group (ADR) : III  
Class (ADR) : 9 - Miscellaneous dangerous substances and articles  
Hazard identification number (Kemler No.) : 90  
Classification code (ADR) : M7  
Danger labels (ADR) : 9 - Miscellaneous dangerous compounds



Orange plates :

Tunnel restriction code : E  
LQ : 5kg  
Excepted quantities (ADR) : E1

#### Transport by sea

UN-No. (IMDG) : 3077  
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (fenhexamid)  
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles  
Packing group (IMDG) : III - substances presenting low danger

#### Air transport

UN-No. (IATA) : 3077  
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (fenhexamid)  
Class (IATA) : 9 - Miscellaneous Dangerous Goods  
Packing group (IATA) : III - Minor Danger

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### fenhexamid (126833-17-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag Exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

##### Lignosulfonic acid, sodium salt (8061-51-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e., Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).

#### 15.2. International regulations

##### CANADA

##### ELEVATE<sup>®</sup> 50WDG FUNGICIDE

WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects

##### fenhexamid (126833-17-8)

Not listed on the Canadian DSL (Domestic Substances List) inventory.

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

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### Lignosulfonic acid, sodium salt (8061-51-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

### EU-Regulations

#### fenhexamid (126833-17-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

#### Lignosulfonic acid, sodium salt (8061-51-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

STOT RE 2 H373

Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

N; R51/53

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

#### 15.4. US EPA – FIFRA Regulations

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Signal word (FIFRA)	:	Caution
Hazard statements (FIFRA)	:	Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.
Environmental Hazards (FIFRA)	:	This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

## SECTION 16: Other information

Indication of changes	:	Updated transport description
Data sources	:	ACGIH 2000. European Chemicals Agency (ECHA) Registered Substances list. Accessed at <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> . Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at <a href="http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html">http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html</a> .

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Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists).  
ATE: Acute Toxicity Estimate.  
CAS (Chemical Abstracts Service) number.  
CLP: Classification, Labelling, Packaging.  
EC50: Environmental Concentration associated with a response by 50% of the test population.  
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).  
LD50: Lethal Dose for 50% of the test population.  
OSHA: Occupational Safety & Health Administration.  
TSCA: Toxic Substances Control Act.

Other information : None.

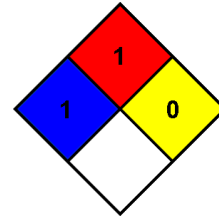
Full text of H-phrases: see section 16:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS US (GHS HazCom 2012)

**SDS prepared by:** The Redstone Group, LLC.  
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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*