

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Product name	: ORTHENE 97% SOLUBLE GRANULE SYSTEMIC INSECTICIDE
Synonyms	: ORTHENE® ULTRA 97% SG
Other means of identification	: EPA Reg. No. 66330-360 PMRA Reg. No. 29499

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

Use of the substance/mixture	: Insecticide
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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

Arysta LifeScience
400 Michener Road, Unit 2
Guelph, Ontario
N1K 1E4

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 (international)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Acute Tox. 4 (Oral) H302
Carc. 2 H351

Full text of H statements : see section 16

2.2. Label elements

GHS labelling

Hazard pictograms (GHS)



Signal word (GHS)

: Warning

Hazard statements (GHS)

: H302 - Harmful if swallowed
H351 - Suspected of causing cancer

Precautionary statements (GHS)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear eye protection, protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor if you feel unwell
P308+P313 - If exposed or concerned: Get medical advice/attention
P330 - Rinse mouth
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

Other hazards not contributing to the classification

: Combustible dust.

2.4. Unknown acute toxicity (GHS)

1.46 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

1.46 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	% (w/w)	GHS classification
Acephate Technical (Main constituent)	(CAS No) 30560-19-1	97.2	Acute Tox. 4 (Oral), H302 Carc. 2, H351
Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone	(CAS No) 25086-89-9	1.455	Comb. Dust, H232

Full text of H-statements: see section 16

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. Get medical advice/attention if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash with plenty of soap and water.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Drain stomach by gastric lavage under qualified medical supervision.

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

- Symptoms/injuries : Suspected of causing cancer.
- Symptoms/injuries after skin contact : May cause moderate irritation.
- Symptoms/injuries after eye contact : May cause slight irritation.
- Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

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

Treat symptomatically. Antidote : atropine.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry chemical. Water fog. Water spray. fog. Foam.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes.
- Explosion hazard : Dust may form explosive mixture in air.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Move containers away from the fire area if this can be done without risk. Cool adjacent structures and containers with water spray to protect and prevent ignition.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid creating or spreading dust. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

- Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
- Emergency procedures : Evacuate unnecessary personnel. Keep upwind.

6.1.2. For emergency responders

- Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
- Emergency procedures : Stop leak if safe to do so. Ventilate area. Keep upwind.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage. Stop the flow of material, if this is without risk.
- Methods for cleaning up : Minimize generation of dust. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. On land, sweep or shovel into suitable containers. Store away from other materials.

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 : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Do not store near food, foodstuffs, drugs, or potable water supplies.
- Incompatible products : Acids. Alkali.
- Incompatible materials : Heat sources.
- Heat and ignition sources : Keep away from heat, sparks and flame.
- Prohibitions on mixed storage : Keep away from incompatible materials.
- Storage area : Store in dry, cool, well-ventilated area. Keep out of reach of children.

7.3. Specific end use(s)

Insecticide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ORTHENE 97% SOLUBLE GRANULE SYSTEMIC INSECTICIDE	
ACGIH	Not applicable
OSHA	Not applicable
Acephate Technical (30560-19-1)	
ACGIH	Not applicable
OSHA	Not applicable
Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone (25086-89-9)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Use only outdoors or in a well-ventilated area.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves. natural rubber gloves.
- Eye protection : In case of dust production: protective goggles.
- Skin and body protection : Long sleeved protective clothing.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Use self-contained breathing apparatus.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : White.
- Colour : Off-white
- Odour : strong

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Odour threshold	: No data available
pH	: 4.2 @ 23 °C
Melting point	: 86.9 - 91 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: 1.35
Relative vapour density at 20 °C	: No data available
Density	: 0.656 g/ml @ 22 °C
Solubility	: Soluble in water. Ethanol: Moderately soluble Acetone: Moderately soluble Organic solvent: Slight-moderately soluble
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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 under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Ignition sources when dusting occurs.

10.5. Incompatible materials

Acids. Alkali.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes. Thermal decomposition generates : Nitrogen oxides. Phosphoric acid. Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Oral: Harmful if swallowed.

ORTHENE 97% SOLUBLE GRANULE SYSTEMIC INSECTICIDE	
LD50 oral rat	688 mg/kg males
LD50 dermal rat	> 2000 mg/kg
ATE US (oral)	688.000 mg/kg bodyweight

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Acephate Technical (30560-19-1)	
LD50 oral rat	1030 mg/kg female; 1,447 mg/kg male
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 15 mg/l/4h
ATE US (oral)	1030.000 mg/kg bodyweight

Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone (25086-89-9)	
LD50 oral rat	> 5000 mg/kg

Skin corrosion/irritation	: Not classified (Slightly irritating to skin)
Serious eye damage/irritation	: Not classified (Slightly irritant but not relevant for classification)
Respiratory or skin sensitisation	: Not classified (No sensitizing reaction was observed for guinea pigs)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after skin contact	: May cause moderate irritation.
Symptoms/injuries after eye contact	: May cause slight irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Acephate Technical (30560-19-1)	
LC50 fish 1	1725 ppm 96 h Black bass; 2,050 ppm 96 h Bluegill; 2,230 ppm 96 h Catfish; 6,650 ppm 96 h Mosquito fish; 750 ppm 120 h Crayfish
LC50 other aquatic organisms 1	0.05516 mg/l 48 h Daphnia
LC50 fish 2	9550 ppm 96 h Goldfish

12.2. Persistence and degradability

Acephate Technical (30560-19-1)	
Biodegradation	Half life 4.5 - 32 days depending on soil type

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

Acephate Technical (30560-19-1)	
Ecology - soil	Expected to be highly 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

Department of Transportation (DOT)

In accordance with DOT

Not considered a dangerous good for transport regulations

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

IMDG

Transport hazard class(es) (IMDG) : Not applicable

Air transport

IATA

Transport hazard class(es) (IATA) : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Acephate Technical (30560-19-1)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone (25086-89-9)

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

15.2. International regulations

CANADA

Acephate Technical (30560-19-1)

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

Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone (25086-89-9)

Listed on the Canadian DSL (Domestic Substances List) inventory

EU-Regulations

Acephate Technical (30560-19-1)

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

National regulations

Acephate Technical (30560-19-1)

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

Acetic acid ethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone (25086-89-9)

Polymer exempt from EINECS

15.3. US State regulations

Acephate Technical (30560-19-1)

U.S. - New Jersey - Right to Know Hazardous Substance List

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

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Hazard statements (FIFRA)	: Harmful if swallowed.
Environmental hazards	: This pesticide is toxic to birds. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

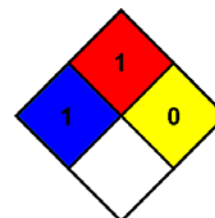
SECTION 16: Other information

Revision date	: 02/25/2016
Data sources	: ACGIH (American Conference of Government Industrial Hygienists). National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. NIOSH Occupational Health Guide for chemical Substances - Vol. II, September, 1978. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html .
Abbreviations and acronyms	: 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. LD50: Lethal Dose for 50% of the test population. GHS: Globally Harmonized System (of Classification and Labeling of Chemicals). NOEC: No Observable Effect Concentration. OSHA: Occupational Safety & Health Administration. TSCA: Toxic Substances Control Act.
Other information	: None.

Full text of H-statements:

H232	May ignite spontaneously if exposed to air
H302	Harmful if swallowed
H351	Suspected of causing cancer

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.



Indication of changes:
Transport information.

Redstone SDS USCAN (GHS) for Arysta

SDS Prepared by: The Redstone Group, LLC.
6077 Frantz Rd
Suite 206
Dublin, Ohio, USA 43016
614.923.7472
www.redstonegrp.com

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