

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

Product form : Mixture
 Product name : ALOFT® GC G
 Other means of identification : EPA Reg. No. 66330-367

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

Use of the substance/mixture : Insecticide

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 (international)

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

Carc. 2 H351
 Full text of H-statements: see section 16

2.2. Label elements
GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H351 - Suspected of causing cancer
 Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P280 - Wear eye protection, protective gloves
 P308+P313 - If exposed or concerned: Get medical advice/attention
 P405 - Store locked up
 P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

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

SECTION 3: Composition/information on ingredients
3.1. Substance

Not applicable

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3.2. Mixture

Name	Product identifier	% (w/w)	GHS-US classification
Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (Main constituent)	(CAS No) 210880-92-5	0.1 – 0.5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[[1Z]-2-chloro-3,3,3-trifluoroprop-1-en-1-yl]-2,2-dimethylcyclopropanecarboxylate (Main constituent)	(CAS No) 82657-04-3	0.1 – 0.2	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Sens. 1B, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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. If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Artificial respiration and/or oxygen if necessary. Call a poison center or a doctor if you feel unwell.
- First-aid measures after skin contact : Take off contaminated clothing. Wash skin thoroughly with mild soap and water.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Sip water. Do NOT induce vomiting unless directed to do so by medical personnel. Call a physician immediately.

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

- Symptoms/injuries : Suspected of causing cancer.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : May cause slight irritation. Tingling sensation.
- Symptoms/injuries after eye contact : May cause slight irritation.
- Symptoms/injuries after ingestion : May be harmful if swallowed. Vomiting. Nausea.

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

Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Small fires: Foam. Carbon dioxide. Dry chemical. Large fires: Water fog.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Do not allow run-off from fire fighting to enter drains or water courses.
- 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.

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.

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6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Avoid generating dust.
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

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. Avoid contact with skin, eyes and clothing. Do not breathe dust.
Hygiene measures : Always wash your hands immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Protect from sunlight. Do not store near food, foodstuffs, drugs, or potable water supplies.
Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Insecticide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ALOFT® GC G	
ACGIH	Not applicable
OSHA	Not applicable
Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
ACGIH	Not applicable
OSHA	Not applicable
bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro-3,3,3-trifluoroprop-1-en-1-yl]-2,2-dimethylcyclopropanecarboxylate (82657-04-3)	
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 : Use rubber gloves.
Eye protection : Chemical goggles or safety glasses.
Respiratory protection : None under normal use.
Environmental exposure controls : Prevent leakage or spillage.
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 : Granules
Colour : Gray
Odour : Odourless
Odour threshold : No data available
pH : 7 - 8
Melting point : No data available

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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	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 0.85 g/ml
Solubility	: Negligible
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

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat. Direct sunlight.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

ALOFT® GC G	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 2.05 mg/l/4h
Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
LD50 oral rat	> 5000 mg/kg 389-465 mg/kg mice
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 6.14 mg/m ³
ATE US (oral)	500.000 mg/kg bodyweight
bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro-3,3,3-trifluoroprop-1-en-1-yl]-2,2-dimethylcyclopropanecarboxylate (82657-04-3)	
LD50 oral rat	74.9 mg/kg

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bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)	
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	0.8 mg/l/4h
ATE US (oral)	74.900 mg/kg bodyweight
ATE US (vapours)	0.800 mg/l/4h
ATE US (dust,mist)	0.800 mg/l/4h

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 Clothianidin - no mutagenic activity was observed in laboratory studies on animals Bifenthrin - evidence of mutagenic effects from exposure to bifenthrin is inconclusive
Carcinogenicity	: Suspected of causing cancer. Bifenthrin – possible human carcinogen
Reproductive toxicity	: Not classified Clothianidin/Bifenthrin - No adverse effects noted in a battery of tests
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
NOAEL (oral, rat, 90 days)	27.9 mg/kg bodyweight/day

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)	
NOAEL (oral, rat, 90 days)	5 mg/kg bodyweight/day

Aspiration hazard	: Not classified.
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: May cause slight irritation. Tingling sensation.
Symptoms/injuries after eye contact	: May cause slight irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed. Vomiting. Nausea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Harmful to aquatic life with long lasting effects.
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Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
LC50 fish 1	> 100 mg/l 96 h Bluegill, Rainbow trout, Sheepshead minnow
EC50 other aquatic organisms 1	40 mg/l 48 h Water flea
LC50 fish 2	0.053 mg/l 96 h Mysid

12.2. Persistence and degradability

ALOFT® GC G	
Persistence and degradability	May cause long-term adverse effects in the environment.

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
Biodegradation	DT50 > 140 days

12.3. Bioaccumulative potential

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
Log Pow	0.7 @ 25 °C

12.4. Mobility in soil

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)	
Ecology - soil	Expected to be highly mobile in soil.

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bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)

Ecology - soil

Immobile in soil.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

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

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)

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

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)

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

15.2. International regulations

CANADA

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)

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

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)

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

EU-Regulations

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)

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

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro- 3,3,3-trifluoroprop-1-en-1-yl]- 2,2-dimethylcyclopropanecarboxylate (82657-04-3)

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

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

Aquatic Chronic 3 H412

Full text of classification categories and H statements : see section 16

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National regulations

Clothianidin [(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine] (210880-92-5)

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

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro-3,3,3-trifluoroprop-1-en-1-yl]-2,2-dimethylcyclopropanecarboxylate (82657-04-3)

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

15.3. US State regulations

bifenthrin (ISO); (2-methylbiphenyl-3-yl)methyl rel-(1R,3R)-3-[(1Z)-2-chloro-3,3,3-trifluoroprop-1-en-1-yl]-2,2-dimethylcyclopropanecarboxylate (82657-04-3)

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
Hazard statements (FIFRA)	: Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist or vapor. Avoid contact with skin, eyes or clothing.
Environmental hazards	: This product is extremely toxic to fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Sweeping any product that lands on a driveway, sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. This product is toxic to bees exposed to treatment and for more than 5 days following treatment. Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

SECTION 16: Other information

Indication of changes	: Original Document.
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/tscaiinventory/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.

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Full text of H-statements:

Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Skin Sens. 1B	Sensitisation — Skin, category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H301	Toxic if swallowed
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H331	Toxic if inhaled
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

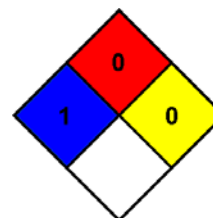
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

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



Redstone SDS US GHS for Arysta

SDS Prepared by:

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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