

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

Product form : Mixture
Product name : VACCIPLANT[®]
Other means of identification : EPA Reg. No 83941-2-66330

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

Use of the substance/mixture : Stimulant of defense reactions (fungal diseases)

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**

Eye Irrit. 2A H319

Full text of H statements : see section 16

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

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H319 - Causes serious eye irritation
Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P280 - Wear eye protection, protective gloves
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

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

2.38 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

3.2. Mixture

Name	Product identifier	% (w/w)	GHS-US classification
Co-formulant	(CAS No) trade secret	< 1.7	Skin Irrit. 2, H315 Eye Dam. 1, H318
Preservative 2	(CAS No) trade secret	< 0.7	Skin Irrit. 2, H315 Eye Dam. 1, H318
Preservative 1	(CAS No) trade secret	< 0.5	Eye Irrit. 2A, H319

*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 you feel unwell, seek medical advice (show the label where possible).
- 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 : Wash skin with mild soap and water. Remove contaminated clothing and shoes.
- 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 : Do NOT induce vomiting. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

- Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.
- Symptoms/injuries after skin contact : May cause moderate irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Like any product not designed to be ingested, this product may cause stomach distress if ingested in large quantities.

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 : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- 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. Exercise caution when fighting any chemical fire.
- 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : 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 : Ventilate area.

6.2. Environmental precautions

Do not discharge into drains or the environment.

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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. Never return spills to original container for re-use.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into 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 : Avoid contact with skin and eyes.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Do not store near food, foodstuffs, drugs, or potable water supplies. Keep only in the original container in a cool well ventilated place.
- Incompatible products : None known.
- Incompatible materials : metals.
- Storage area : Store out of frost (-10 °C).

7.3. Specific end use(s)

Stimulant of defense reactions (fungal diseases).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

VACCIPLANT [®]	
ACGIH	Not applicable
OSHA	Not applicable
Preservative 1 (trade secret)	
ACGIH	Not applicable
OSHA	Not applicable
Preservative 2 (trade secret)	
ACGIH	Not applicable
OSHA	Not applicable
Co-formulant (trade secret)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves. PVC. rubber.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing. Impervious clothing.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear appropriate mask.
- 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 : Liquid
- Colour : Beige brown
- Odour : Slight

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Odour threshold	: No data available
pH	: 3.6 - 4.1 (pure product)
Melting point	: No data available
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	: 1.048 - 1.062
Relative vapour density at 20 °C	: No data available
Solubility	: Soluble in water.
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. Product color changes with time, without effect on its properties.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid excessive heat or cold. Do not store product at a temperature above 40 °C or below -10 °C.

10.5. Incompatible materials

metals.

10.6. Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Skin and eye contact
Acute toxicity	: Not classified

Preservative 1 (trade secret)	
LD50 oral rat	4920 mg/kg
LC50 inhalation rat (mg/l)	> 5.15 mg/kg 4 h
ATE US (oral)	4920.000 mg/kg bodyweight
Preservative 2 (trade secret)	
LD50 oral rat	3730 mg/kg
ATE US (oral)	3730.000 mg/kg bodyweight
Co-formulant (trade secret)	
LD50 oral rat	> 5000 mg/kg

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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
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 inhalation	: Inhalation may cause: irritation, coughing, shortness of breath.
Symptoms/injuries after skin contact	: May cause moderate irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Like any product not designed to be ingested, this product may cause stomach distress if ingested in large quantities.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

No adverse effects expected on sewage plant. All components are degradable, biodegradable, or assimilable.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

Mixture components are completely soluble in water.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Do not dispose in household garbage. Dispose of in authorized waste collection plant.
Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Dispose of container in a licensed facility.

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

No additional information available

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15.2. International regulations

CANADA

No additional information available

EU-Regulations

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

Eye Irrit. 2 H319

Full text of hazard classes and H-statements : see section 16

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, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Environmental hazards

: 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 disposing of equipment wash water or rinsate.

Physical and chemical hazards

: FOR CHEMICAL EMERGENCY: spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

SECTION 16: Other information

Indication of changes

: GHS classification information.

Revision date

: 12/04/2015

Data sources

: European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
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.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Abbreviations and acronyms

: ACGIH (American Conference of Government Industrial Hygienists).

ATE: Acute Toxicity Estimate

CAS (Chemical Abstracts Service) number.

CLP: Classification, Labelling, Packaging.

GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).

OSHA: Occupational Safety & Health Administration

TSCA: Toxic Substances Control Act

Other information

: None.

Full text of H-statements:

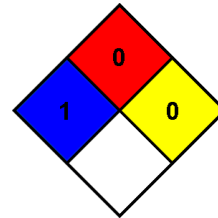
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation

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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

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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