

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : BIOMITE
 Other means of identification : EPA Reg. No. 70057-1

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

Recommended use : Insecticide
 Restrictions on use : No additional information available

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
 T 1-866-761-9397

1.4. Emergency telephone number

Emergency number : Exposure calls (PROPHARMA): 1-866-303-6952 or +1-651-603-3432 (international)
 Spill calls (CHEMTREC) (Contract # CCN179): +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

Eye Irrit. 2A H319
 Skin Sens. 1B H317

Full text of hazard classes and 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) : H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 Precautionary statements (GHS-US) : P261 - Avoid breathing mist, spray, vapours.
 P264 - Wash hands thoroughly after handling.
 P272 - Contaminated work clothing must not be allowed out of the workplace
 P280 - Wear eye protection, protective gloves.
 P302+P352 - If on skin: Wash with plenty of soap and water
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 - Specific treatment (see First aid measures on this label)
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS-US classification
geraniol	(CAS-No.) 106-24-1	< 0.5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317
Nerolidol	(CAS-No.) 7212-44-4	< 0.5	Eye Irrit. 2A, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Farnesol	(CAS-No.) 4602-84-0	< 0.5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
Citronellol	(CAS-No.) 106-22-9	< 0.5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317

*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 : Assure fresh air breathing. Allow the victim to rest.
- 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 skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/effects after skin contact : May cause an allergic skin reaction. May cause slight irritation.
- Symptoms/effects after eye contact : Causes serious eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

- Fire hazard : No particular fire or explosion hazard.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all eye and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.

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Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place.

Incompatible products : Strong bases. Strong acids. Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BIOMITE	
ACGIH	Not applicable
OSHA	Not applicable
geraniol (106-24-1)	
ACGIH	Not applicable
OSHA	Not applicable
Nerolidol (7212-44-4)	
ACGIH	Not applicable
OSHA	Not applicable
Farnesol (4602-84-0)	
ACGIH	Not applicable
OSHA	Not applicable
Citronellol (106-22-9)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Avoid splashing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable gloves resistant to chemical penetration.

Eye protection : Safety glasses with side shields. tightly fitting safety goggles.

Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

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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 : Liquid
Colour : light brown
Odour : pleasant
Odour threshold : No data available
pH : 5.74 (1%)
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : > 93 °C
Relative evaporation rate (butylacetate=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 : 0.951 @ 20 °C
Relative vapour density at 20 °C : No data available
Solubility : Miscible with 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 : 16.41 cSt @ 40 °C
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

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

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LD50 oral rat	3573 mg/kg female ; 5,242 mg/kg male
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BIOMITE	
LD50 dermal rabbit	5050 mg/kg
ATE US (oral)	3573 mg/kg bodyweight
ATE US (dermal)	5050 mg/kg bodyweight

Nerolidol (7212-44-4)	
LD50 oral rat	> 2610 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l

Farnesol (4602-84-0)	
LD50 oral rat	6000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE US (oral)	6000 mg/kg bodyweight

Citronellol (106-22-9)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation	: Not classified (Slightly irritant but not relevant for classification)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
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/effects after skin contact	: May cause an allergic skin reaction. May cause slight irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Nerolidol (7212-44-4)	
LC50 fish 1	1.43 mg/l 96 h
EC50 Daphnia 1	510.3 µg/l 48 h

Farnesol (4602-84-0)	
LC50 fish 1	1.8 mg/l 96 h
EC50 Daphnia 1	2.2 mg/l 48 h

Citronellol (106-22-9)	
LC50 fish 1	14.66 mg/l 96 h

12.2. Persistence and degradability

BIOMITE	
Persistence and degradability	Not established.

Nerolidol (7212-44-4)	
Biodegradation	70 - 80 % 28 d

12.3. Bioaccumulative potential

BIOMITE	
Bioaccumulative potential	Not established.

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Nerolidol (7212-44-4)	
Log Pow	4.5

12.4. Mobility in soil

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Additional information

Other information : No supplementary information available.

Transport by sea

IMDG

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

Marine pollutant : No

Air transport

IATA

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

Marine pollutant : No

SECTION 15: Regulatory information

15.1. US Federal regulations

geraniol (106-24-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Nerolidol (7212-44-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Farnesol (4602-84-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Citronellol (106-22-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
FIFRA Labelling	
EPA Registration Number	70057-1
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..	
FIFRA Signal Word	Warning
FIFRA Human Health Hazards	Causes substantial but temporary eye injury. Causes skin irritation. Harmful if swallowed.
FIFRA First Aid	Do not get on skin, in eyes or on clothing. Wear coveralls over long-sleeved shirt and long pants, socks, shoes, chemical resistant gloves and protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothing before reuse.

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FIFRA Labelling

FIFRA Environmental Hazards

For terrestrial uses: Do not apply directly to water, or to areas where the 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.

15.2. International regulations

CANADA

No additional information available

Nerolidol (7212-44-4)

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

Farnesol (4602-84-0)

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

Citronellol (106-22-9)

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

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision date : 03/29/2018

Data sources : ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. Manufacturer Information. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th 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>.

Other information : None.

Full text of H-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

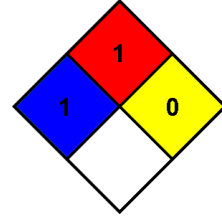
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

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- NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
- NFPA fire hazard : 1 - Materials that 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:

Physical and chemical properties. Classification.

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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