

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

- 1.1 - Product identifier: LALGUARD AZA
- 1.2 - Identified and recommended use: Insecticide
- 1.3 - Supplier details: Danstar Ferment AG/LALLEMAND PLANT CARE
Poststrasse 30.
CH-6300 Zug, Switzerland
- Phone : +41 41 727 20 30
plantcare@lallemand.com
- 1.4 - Emergency telephone number: Contact your local doctor or hospital
- In EU: Call 112
- In USA and Canada: Call +1-535-5053 –Info Trac Chemical Response System (24hours)

SECTION 2 – HAZARD IDENTIFICATION

2.1 - Classification of the substance/mixture according to:

- Globally Harmonized System of Classification and Labelling of Chemicals (GHS section 1.5.2).
- Canadian Hazardous Product Act (HPA).
- US Occupational Safety and Health Administration (OSHA)
- Regulation 1272/2008/EC (CLP)

Classification: Skin Sensitizer (Category 1); Eye effects (Category 2A); Reproductive toxicity (Category 2); Flammable liquid (Category 4)

2.2 - Labelling according to the Globally Harmonized System (GHS) and to the Regulation 1272/2008/EC (CLP):

Signal Word: Warning

Hazard Pictogram:



Hazard Statements:

H317 – May cause an allergic skin reaction.
H319 – Causes serious eye irritation.
H361 – Suspected of damaging fertility or the unborn child.
H227 – Combustible liquid.

Precautionary Statments: P201 – Obtain special instructions before use.
P210 – Keep away from heat, sparks, open flames and other ignition sources.
P202 – Do not handle until all safety precautions have been read and understood.
P261 – Avoid breathing dust/fume/mist/vapours/spray.
P264 – Wash skin thoroughly after handling.
P272 – Contaminated work clothing should not be allowed out of the workplace.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P281 – Use personal protective equipment as required.

Precautionary Responses: P302 + 352 – IF ON SKIN: Wash with plenty of soap and water.
P370 + P378 – In case of fire: use dry sand, dry chemical or alcohol resistant foam for extinction
P333 + 313 – If skin irritation or rash occurs: get medical advice/ attention.
P363 – Wash contaminated clothing before reuse.
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.
P308+P313 – If exposed or concerned: Get medical advice/attention.

Precautionary Storage: P403+P235 – Store in well-ventilated place, keep cool
P405 – Store locked up

Precaution Disposal: P501 – Dispose of contents/container in accordance with national regulations.

2.3 - Other Hazards:

The substance is not considered as a PBT or VPVB substance.

SECTION 3 – COMPOSITION

| Substance name | CAS-, EC or index number | Concentration |
|----------------------------|--------------------------------|---------------|
| Azadirachtin A | 11141-17-6 | 6,0% |
| Azadirachtin B | 95507-03-2 | |
| Tetrahydrofurfuryl alcohol | 97-99-4 | 68,98% |

The other ingredients are not listed as they have no impact on classification.

SECTION 4 – FIRST AID MEASURES**4.1 - Description of First Aid Measures:**

| | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General protection: | Protection of rescue workers: Wear appropriate individual protective equipment (see Section 8). Transport the affected person into the open air. Remove contaminated shoes and clothing. |
| Inhalation: | In the event of inhalation, take into the open air. Do not allow the person to get cold. Keep the victim resting in a semi-seated position. In the absence of breathing, use artificial respiration. Consult a doctor. |
| Ingestion: | In the event of ingestion, rinse the mouth with water (only if the person is conscious). Consult a doctor if symptoms develop. |
| Contact with the skin: | Rinse thoroughly in running water and soap. Remove contaminated shoes and clothing. Consult a doctor if symptoms develop. |
| Contact with the eyes: | Rinse thoroughly in running water, with the eyelids opened for a sufficient length of time (protect uninjured eye). Consult a doctor if symptoms develop. |
| First aid facilities: | Ensure that automatic eye baths and safety showers are located close to the workstations. |

4.2 - Most important symptoms and effects, both acute and delayed:

| | |
|---------------|-------------------------------------------------------------------|
| Eye contact: | Causes irritation of the eyes. |
| Skin contact: | Prolonged or repeated contact with the skin may cause irritation. |
| Inhalation: | Causes respiratory tract irritation. |
| Ingestion: | May be harmful if swallowed. |

SECTION 5 – FIRE FIGHTING MEASURES

LALGUARD AZA is classified by OSHA as combustible (29 CFR1910.1200).

5.1 - Flammable Properties :

Flashpoint: 66.2 °C (151.6 °F) Closed Cup Method
Lower Flammable Limit: Data not available
Upper Flammable Limit: Data not available
Autoignition Temperature: Data not available

5.2 - Protective Equipment and Precautions for Firefighters:

If material on fire or involved in fire, do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.3 - Extinguishing Media:

Alcohol foam, carbon dioxide, dry chemical, water spray for dilution to nonflammable mixture.

5.4 - Unsuitable Extinguishing Media :

Solid streams of water.

5.5 - Decomposition Products under Fire Conditions:

Combustion produces carbon dioxide and carbon monoxide.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 - Personal precautions, protective equipment and emergency procedures:

Avoid contact with the eyes, skin and clothing. Avoid breathing vapours, mist or gas. Self-contained breathing apparatus should be utilized when responding to spills or heavy fumes. Clean up spills using appropriate protective equipment (see Section 8).

6.2 - Environmental precautions:

Prevent liquid from entering waterways or low areas.

6.3 - Method and materials for clean up:

Remove sources of heat sparks, flame, impact, friction, and electricity and use non-sparking tools and equipment. Use water spray to disperse vapors or to flush liquid away from fire exposure. Contain and recover liquid when possible. Dike spill. Collect liquid in an appropriate container or absorb with an inert material (i.e. vermiculite, dry sand, earth), and place in a chemical waste container (see section 13 for waste disposal).

US Regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of Reportable Quantities. Comply with all federal, state, and local regulations.

SECTION 7 – HANDLING AND STORAGE

7.1 - Precautions for safe handling:

Handling: Avoid contact with skin and eyes. Use localized ventilation system. Don't use empty container before it has been cleaned. Before making transfer operations, assure that there are not any incompatible residues in the containers.

Occupational hygiene: Wash hands thoroughly after handling. Do not eat, drink or smoke while working. Store work clothing separately. See section 8 for recommended equipment.

7.2 - Conditions for safe storage, including any incompatibilities:

Place of storage: Store in dry and well-ventilated place in its tightly closed original packaging, at temperature between 15°C and 25°C.
Keep away from flames and high temperature.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

| Ingredient Name | Exposure Limits |
|----------------------------|----------------------------------|
| Tetrahydrofurfuryl alcohol | OSHA PEL: Not established |
| | ACGIH TLV: Not established |
| | AIHA WEEL Guide: 2ppm (8hr TWA). |
| Azadirachtin A and B | OSHA PEL: Not established |
| | ACGIH TLV: Not established |
| | AIHA WEEL Guide: Not established |

- | | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.1 - Respiratory Protection: | Not necessary under normal conditions with sufficient ventilation. Required during exposure to high concentration of vapors. Use mechanical exhaust or laboratory fumehood to avoid exposure. If exposure is anticipated to be greater than applicable exposure limits, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges. |
| 8.2 - Skin Protection: | Chemical-resistant, impervious gloves should be worn at all times. Considering the parameters specified by the glove manufacturer, check during use that the gloves are retaining their protective properties. Additional protective clothing such as impervious boots, apron, or coveralls should be worn in areas of unusual exposure. |
| 8.3 - Eye/Face Protection: | Wear safety glasses with side-shields, or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area. |
| 8.4 - Hygiene Recommendations: | If clothing or shoes become contaminated, remove, thoroughly wash affected areas of the body, and launder contaminated clothing before reuse. |

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

9.1 - Information on basic physical and chemical properties:

| | |
|-----------------------------------------------|-------------------------------------------------|
| Physical State: | Transparent, non-viscous liquid |
| Appearance: | Golden brown |
| Odour: | Characteristic of neem (garlic and sulfur odor) |
| pH: | 4.6 |
| Melting point/Freezing point: | Not available |
| Initial boiling point and boiling range: | Not available |
| Flash point (closed cup): | 66.2 °C (151.6 °F) |
| Evaporation rate: | Not available |
| Flammability (solid, gas): | Not available |
| Upper/lower flammability or explosive limits: | Not available |
| Vapour pressure: | Not available |
| Vapour density: | Not available |
| Relative density (at 22°C+/-2°C): | 1.080 |
| Solubility in water: | Not available |
| Partition coefficient (n-octanol/water): | Not available |
| Auto-ignition temperature: | Not available |
| Decomposition temperature: | Not available |
| Viscosity (at 22°C+/-2°C): | 22.6 mPa.s |
| Explosive properties: | Not available |
| Oxidising properties: | Not available |

SECTION 10 – STABILITY AND REACTIVITY

Stable under recommended conditions of storage, use and transportation.

10.1 - Possibility of hazardous reactions:

None under normal processing.

10.2 - Conditions to avoid:

Heat, Flames and sparks

10.3 - Incompatible materials:

Strong acids, Strong oxidizing agents, Strong reducing agents, food, drink and animal feeding stuffs.

10.4 - Hazardous decomposition products:

Under recommended storage and use conditions, no hazardous decomposition products should appear.

Combustion produces carbon dioxide and carbon monoxide.

SECTION 11 – TOXICOLOGICAL INFORMATION**11.1- Information on toxicological effects:**

Acute toxicity: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|------------------------------------------------|----------------------------|----------------------|
| Acute toxicity | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| LD ₅₀ (oral, rat) | 1600 mg/Kg | >5000 mg/kg |
| LD ₅₀ (dermal, rat) | Not available | >2000 mg/kg |
| LD ₅₀ (intraperitoneal, rat) | 400 mg/Kg | No data available |
| LD ₅₀ (oral, mouse) | 2300 mg/Kg | No data available |
| LD ₅₀ (Intravenous, rabbit) | 725 mg/Kg | No data available |
| LD ₅₀ (oral, guinea pig) | 800 mg/Kg | No data available |
| LD ₅₀ (dermal, guinea pig) | 5 gm/Kg | No data available |
| LD ₅₀ (intraperitoneal, guinea pig) | 400 mg/Kg | No data available |

Skin corrosion/irritation: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|---------------------------|----------------------------|--------------------------------------------------------|
| Skin corrosion/irritation | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| Skin (rabbit) | Moderate irritation | Not irritating (may cause preliminary light reddening) |

Serious eye damage/irritation: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|-----------------------------------|----------------------------|----------------------|
| Serious eye damage/eye irritation | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| Eye (rabbit) | Moderate irritation | Mild irritation |

Respiratory or skin sensitization: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|-----------------------------------|----------------------------|----------------------------------|
| Respiratory or Skin sensitization | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| Guinea pig | No data available | Delayed contact hypersensitivity |

Germ cell mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive toxicity: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|-----------------------|----------------------------|----------------------|
| Reproductive toxicity | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| NOAEL | No data available | 50 mg/kg/day |

Specific target organ toxicity-single exposure: No data available

Specific target organ toxicity -repeated exposure: No data available.

Chronic toxicity: No data available for LALGUARD AZA. Refer to the following data for each ingredient:

| Ingredient Name | | |
|------------------|----------------------------|----------------------------------|
| Chronic toxicity | Tetrahydrofurfuryl Alcohol | Azadirachtin A and B |
| NOAEL | No data available | 100 ppm (90 days feeding to rat) |

Aspiration hazard: No data available

SECTION 12 – ECOLOGICAL INFORMATION

12.1 – Toxicity:

No data available for LALGUARD AZA.

12.2 - Persistence and degradability:

No data available.

12.3 - Bioaccumulative potential:

No data available.

12.4 - Mobility in soil:

No data available.

12.5 - Results of PBT and vPvB assessment:

No data available.

12.6 - Other adverse effects:

If the product has escaped into a water course, into a drainage system, or has contaminated the ground or vegetation in exceed quantities, notify the competent authorities.

SECTION 13 – DISPOSAL CONSIDERATIONS**13.1- Disposal methods:**

Do not reuse the container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Dispose of the rinsings in accordance with municipal, provincial/state, or Federal requirements.

2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with municipal, provincial, state or federal requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the appropriate regulatory agency. Contact the manufacturer and the appropriate regulatory agency in case of a spill, and for clean-up of spills.

SECTION 14 – TRANSPORT INFORMATIONS

UN Number: 1993

UN Proper Shipping Name: Flammable liquid, n.o.s.

Transport Hazard Class: Non-hazardous.

Subsidiary Class : Non-hazardous.

Environmental Hazards: Non-hazardous

Special Precautions for User: See sections 6, 7 and 8

Packing Group: III

Transport in Bulk: Flammable liquids in non-bulk packaging are not regulated by DOT- 49.CFR173.150

SECTION 15 – REGULATORY INFORMATIONS

Safety, health and environmental regulations specific for the product in question:

United States:

FIFRA Information

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

May cause an allergic skin reaction.

Causes serious eye irritation.

Suspected of damaging fertility or the unborn child.

Combustible liquid.

Canada

WHMIS Classification

Skin Sensitizer (Category 1); Eye effects (Category 2A); Reproductive toxicity (Category 2); Flammable liquid (Category 4)

SECTION 16 – OTHER INFORMATION

None

DISCLAIMER

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