

Section 1: Identification.

Product identifier used on the label and Other means of identification.

Product Name: Gemsei

Recommended use of the chemical and restrictions on use.
Biopesticide

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

Company: **Kemin Industries, Inc.**
Address: 2100 Maury Street, Des Moines,
City: Iowa 50317
Country: United States
Telephone: (515) 559-5100
E-mail: media@kemin.com
Web: <http://www.kemin.com/>

Emergency phone number: CHEMTREC 1-800-424-9300

Section 2: Hazard(s) Identification.

Classification of the chemical in accordance with paragraph (d) of §1910.1200

In accordance with The Hazard Communication Standard (HCS) (29 CFR 1910.1200):
Skin sensitizer, Category 1: May cause an allergic skin reaction.

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200.

Symbol(s):



Signal Word:

Warning

Hazard statement(s):

H317 May cause an allergic skin reaction.

Precautionary statement(s):

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P321 Specific treatment (see ... on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container to ...

Contains:
Garlic oil

Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

Section 3: Composition/Information on Ingredients.

Substances.

Not Applicable.

Mixtures.

Chemical name and concentration ranges of all ingredients that are classified as health hazards in accordance with paragraph (d) of §1910.1200 and that are present above their cut-off/concentration limits or ingredients that are below their cut-off/concentration limits and present a health risk:

| Identifiers | Name | Concentrate | (*)Classification | |
|---------------------------------------|------------|--------------|---|------------------------------|
| | | | Classification | specific concentration limit |
| CAS No: 8000-78-0 EC No: 232-371-1 | Garlic oil | 0.1 – 9.99 % | Acute Tox. 4, H302 - Eye Irrit. 2A, H319 - Flam. Liq. 3, H226 - Skin Irrit. 2, H315 - Skin Sens. 1, H317 | - |

(*)The complete text of the Hazard statement(s) is given in section 16 of this Safety Data Sheet.

Section 4: First-Aid Measures.

Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.

Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

Most important symptoms and effects, both acute and delayed.

It may cause an allergic reaction, dermatitis, redness or inflammation of the skin.

Indication of any immediate medical attention and special treatment needed.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. If the person vomits, clear the respiratory tract. Keep the person comfortable. Turn him/her over to the left side and stay there while waiting for medical care.

Section 5: Fire-Fighting Measures.

The product does not present any particular risk in case of fire.

Extinguishing media.

Suitable extinguishing media:

Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

Special hazards arising from the mixture.

Special risks.

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

Fire protection equipment.

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

Section 6: Accidental Release Measures.

Personal precautions, protective equipment, and emergency procedures.

For exposure control and individual protection measures, see section 8.

Environmental precautions: Prevent the contamination of drains, surface or subterranean waters, and the ground.

Methods and materials for containment and cleaning up.

Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations

Reference to other sections: for exposure control and individual protection measures, see section 8, for later elimination of waste, follow the recommendations under section 13.

Section 7: Handling and Storage.

Precautions for safe handling.

For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

Conditions for safe storage, including any incompatibilities.

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Section 8: Exposure Controls/Personal Protection.

8.1 Control parameters.


The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

Exposure controls.

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

| | |
|-----------------------|--------------|
| Concentration: | 100 % |
| Uses: | |

| Breathing protection: | | | |
|--|--|---------------------------|---|
| If the recommended technical measures are observed, no individual protection equipment is necessary. | | | |
| Hand protection: | | | |
| PPE: | Work gloves. | | |
| Characteristics: | «CE» marking, category I. Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. | | |
| Maintenance: | Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives. | | |
| Observations: | Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands. | | |
| Material: | PVC (polyvinyl chloride) | Breakthrough time (min.): | > 480 |
| | | Material thickness (mm): | 0,35 |
| Eye protection: | | | |
| PPE: | Face shield. | | |
| Characteristics: | «CE» marking, category II. Face and eye protector against splashing liquid. | | |
| Maintenance: | Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions. Make sure that mobile parts move smoothly. | | |
| Observations: | Face shields should offer a field of vision with a dimension in the central line of, at least, 150 mm vertically once attached to the frame. | | |
| | | |  |
| Skin protection: | | | |
| PPE: | Protective clothing. | | |
| Characteristics: | «CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements. | | |
| Maintenance: | In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer. | | |
| Observations: | The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use. | | |
| PPE: | Work footwear. | | |
| Characteristics: | «CE» marking, category II. | | |
| Maintenance: | This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people. | | |
| Observations: | Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident | | |

Section 9: Physical and Chemical Properties.

Information on basic physical and chemical properties.

Appearance: Liquid
 Colour: Yellow
 Odour: N.A./N.A.
 Odour threshold: N.A./N.A.
 pH (20°C): 6,45 ± 0,5
 Melting point/freezing point: N.A./N.A.
 Initial boiling point or boiling range: N.A./N.A.
 Flash point: > 60 °C
 Evaporation rate: N.A./N.A.
 Flammability (solid, gas): N.A./N.A.
 Lower Explosive Limit: N.A./N.A.
 Upper Explosive Limit: N.A./N.A.
 Vapour pressure: N.A./N.A.
 Vapour density: N.A./N.A.
 Relative density (20°C): 1,04 ± 0,05
 Solubility: N.A./N.A. Liposolubility: N.A./N.A.
 Hydrosolubility: N.A./N.A.
 Partition coefficient (n-octanol/water): N.A./N.A.
 Auto-ignition temperature: N.A./N.A.
 Decomposition temperature: N.A./N.A.
 Viscosity: N.A./N.A.

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

Other information.

Explosive properties: N.A./N.A.

Oxidizing properties: N.A./N.A.

Pour point: N.A./N.A.

Blink: N.A./N.A.

Kinematic viscosity: N.A./N.A.

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

Section 10: Stability and Reactivity.

Reactivity.

The product does not present hazards by their reactivity.

Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

Conditions to avoid.

Avoid any improper handling.

Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

Hazardous decomposition products.

No decomposition if used for the intended uses.

Section 11: Toxicological Information.

Information on toxicological effects.

There are no tested data available on the product.

a) acute toxicity;
Not conclusive data for classification.

Acute Toxicity:
Mixtures:
LD50 (Dermal) > 2000 mg/kg
LD50 (Oral) >2000 mg/kg
LC50 (Inhalation) > 5.107 mg/L

b) skin corrosion/irritation;
Skin: Not irritant

c) serious eye damage/irritation;
Eyes: Irritant cat 2A

d) respiratory or skin sensitisation;
Product classified:
Skin sensitizer, Category 1: May cause an allergic skin reaction.

e) germ cell mutagenicity;
Not conclusive data for classification.

f) carcinogenicity;
Not conclusive data for classification.

g) reproductive toxicity;
Not conclusive data for classification.

h) STOT-single exposure;

Not conclusive data for classification.

i) STOT-repeated exposure;
Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

Substances present in the composition listed in the National Toxicology Program (NTP) Report on Carcinogens (RoC):

This product does not contain substances listed in the National Toxicology Program (NTP) Report on Carcinogens (RoC).

Substances present in the composition listed in the International Agency for Research on Cancer (IARC) Monographs:

This product does not contain substances listed in the International Agency for Research on Cancer (IARC) Monographs.

Section 12: Ecological Information.

Ecotoxicity.

No information is available regarding the ecotoxicity of the substances present.

Persistence and degradability.

There is no information available on the degradability of the substances present.

No information is available regarding the degradability of the substances present. No information is available about persistence and degradability of the product.

Bioaccumulative potential.

No information is available regarding the bioaccumulation of the substances present.

Mobility in soil.

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

Other adverse effects.

No information is available about other adverse effects for the environment.

Section 13: Disposal Considerations.

Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of the Resource Conservation and Recovery Act (RCRA) and the Resource Conservation and Recovery Act Information (RCRAInfo) regarding waste management.

Section 14: Transport Information.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

In accordance with DOT

Not Dangerous Good.

Regulations Concerning the International Carriage of Dangerous Goods by Road (ADR)

Not applicable. Not applicable.

Not Dangerous Good.



Section 15: Regulatory Information.

Safety, health and environmental regulations specific for the product.

VVOC content (p/p): 0 %
VVOC content: 0 g/l
VOC content (p/p): 8.16 %
VOC content: 82.507 g/l
SVOC content (p/p): 0 %
SVOC content: 0 g/l
VVOC: Very volatile organic compounds.
VOC: Volatile organic compounds.
SVOC: Semi volatile organic compounds.

Information on the TSCA Inventory (Toxic Substances Control Act) USA:

| CAS No | Name | State |
|-----------|------------|-------------|
| 8000-78-0 | Garlic oil | Registered7 |

The product is not affected by the procedure established by the Rotterdam Convention, concerning the export and import of dangerous chemicals.

The Superfund Amendments and Reauthorization Act (SARA).

SARA Title III and it sets requirements for local and state emergency planning around hazardous chemicals, the right of the public to access information on chemical hazards in their community, and the reporting responsibilities for facilities that use, store, and / or release hazardous chemicals.

SARA Title III has four provisions (any facility with responsibilities under one section will likely have additional responsibilities under another section, consult SARA for more information):

- Emergency Planning (Sections 301-303)
- Emergency Release Notification (Section 304)
- Hazardous Chemical Storage Reporting Requirements (Section 311-312)
- Toxic Chemical Release Inventory (Section 313)

Information related to the product:

Section 302, Extremely Hazardous Substances (EHSs)(40 CFR part 355 Appendix A and Appendix B) and section 304, in the event of an accidental chemical release that exceeds minimal Reportable Quantity (RQ):

Not Applicable.

Section 311, Requires facilities with hazardous chemicals in quantities above certain thresholds (consult OSHA for more information) to provide copies of the SDSs for those chemicals to the State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC) and local fire department.

Section 312, Companies with chemicals in sufficient quantities to trigger obligations under Section 311 must also submit an annual emergency and hazardous chemical inventory form to the State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC) and local fire department

Section 313, requires facilities with 10 or more employees that use certain toxic chemicals in quantities above threshold levels to report annually on the use, release and disposal of those chemicals, substances identified in section 3:

Not Applicable.

Visit the EPA's website for the most up-to-date information on EPCRA and other environmental considerations.

Proposition 65 warnings

Information related to The Safe Drinking Water and Toxic Enforcement Act of 1986, (better known by its original name of Proposition 65):

There are no substances in section 3 present in the list of chemicals that can cause cancer, birth defects or other reproductive harm (Proposition 65 List).

Section 16: Other Information.

Complete text of the hazard statement(s) that appear in section 3:

| | |
|------|--------------------------------------|
| H226 | Flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |

Classification codes:

Acute Tox. 4 : Acute toxicity (Oral), Category 4
Eye Irrit. 2A : Eye irritation, Category 2A
Flam. Liq. 3 : Flammable liquid, Category 3
Skin Irrit. 2 : Skin irritant, Category 2
Skin Sens. 1 : Skin sensitizer, Category 1

Classification and procedure used to derive the classification for mixtures according to The Hazard Communication Standard (HCS) (29 CFR 1910.1200):

| | |
|-----------------------|-----------------------|
| Physical hazards | On basis of test data |
| Health hazards | Calculation method |
| Environmental hazards | Calculation method |

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

PPE: Personal protection equipment.

Key literature references and sources for data:

The Hazard Communication Standard (HCS) (29 CFR 1910.1200)

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

<https://www.osha.gov>

<https://www.epa.gov/>

<http://echa.europa.eu/>

The information given in this Safety Data Sheet has been drafted in accordance with The Hazard Communication Standard (HCS) (29 CFR 1910.1200) and United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Employers must ensure that the SDSs are readily accessible to employees for all hazardous chemicals in their workplace.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.