SAFETY DATA SHEET

Abamectin Liquid Formulation

SECTION 1. IDENTIFICATION

Product name: Abamectin Liquid Formulation

Manufacturer or supplier's details
Company name of supplier: Merck & Co., Inc
Address: 2000 Galloping Hill Road
          Kenilworth - New Jersey - U.S.A. 07033
Telephone: 908-740-4000
Telefax: 908-735-1496
Emergency telephone: 1-908-423-6000
E-mail address: EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use
Recommended use: Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Acute toxicity (Inhalation): Category 4
Reproductive toxicity: Category 2
Specific target organ toxicity - repeated exposure (Oral): Category 1 (Central nervous system)
Specific target organ toxicity - repeated exposure: Category 2 (Central nervous system)

GHS label elements
Hazard pictograms: !

Signal Word: Danger

Hazard Statements:
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Precautionary Statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS
Substance / Mixture : Mixture

Components
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rape oil</td>
<td>8002-13-9</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>Abamectin (combination of avermectin B1a and avermectin B1b)</td>
<td>71751-41-2</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES
General advice : In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed:

- Harmful if inhaled.
- Suspected of damaging fertility. Suspected of damaging the unborn child.
- Causes damage to organs through prolonged or repeated exposure if swallowed.
- May cause damage to organs through prolonged or repeated exposure.

Protection of first-aiders:

- First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician:

- Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
- Water spray
- Alcohol-resistant foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media:

- None known.

Specific hazards during fire fighting:

- Exposure to combustion products may be a hazard to health.

Hazardous combustion products:

- Carbon oxides

Specific extinguishing methods:

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Use water spray to cool unopened containers.
- Remove undamaged containers from fire area if it is safe to do so.
- Evacuate area.

Special protective equipment for fire-fighters:

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- Use personal protective equipment.
- Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions:

- Discharge into the environment must be avoided.
- Prevent further leakage or spillage if safe to do so.
- Prevent spreading over a wide area (e.g., by containment or oil barriers).
- Retain and dispose of contaminated wash water.
- Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:

- Soak up with inert absorbent material.
- For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
- Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling: Do not breathe vapors or spray mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Keep container tightly closed. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage: Keep in properly labeled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations.

Materials to avoid: Do not store with the following product types: Strong oxidizing agents, Organic peroxides, Explosives, Gases.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rape oil</td>
<td>8002-13-9</td>
<td>TWA (mist - total)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (mist - respirable)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Abamectin (combination of avermectin B1a and avermectin B1b)</td>
<td>71751-41-2</td>
<td>TWA</td>
<td>30 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>300 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Engineering measures: Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections). All engineering controls should be implemented by facility...
design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). Minimize open handling.

**Personal protective equipment**

**Respiratory protection**: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**

**Material**: Chemical-resistant gloves

**Remarks**: Consider double gloving.

**Eye protection**: Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection**: Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.

**Hygiene measures**: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.

When using do not eat, drink or smoke.

Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**: liquid

**Color**: light yellow
### Odor
- Characteristic

### Odor Threshold
- No data available

### pH
- No data available

### Melting point/freezing point
- No data available

### Initial boiling point and boiling range
- No data available

### Flash point
- No data available

### Evaporation rate
- No data available

### Flammability (solid, gas)
- Not applicable

### Flammability (liquids)
- No data available

### Upper explosion limit / Upper flammability limit
- No data available

### Lower explosion limit / Lower flammability limit
- No data available

### Vapor pressure
- No data available

### Relative vapor density
- No data available

### Relative density
- No data available

### Density
- \(0.90 - 0.94 \text{ g/cm}^3\)

### Solubility(ies)
- Water solubility: Insoluble

### Partition coefficient: n-octanol/water
- Not applicable

### Autoignition temperature
- No data available

### Decomposition temperature
- No data available

### Viscosity
- Viscosity, kinematic: No data available

### Explosive properties
- Not explosive

### Oxidizing properties
- The substance or mixture is not classified as oxidizing.

### Molecular weight
- No data available

### Particle size
- Not applicable
SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Can react with strong oxidizing agents.
Conditions to avoid: None known.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity
Harmful if inhaled.

Product:
Acute oral toxicity: Acute toxicity estimate: 2,400 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: 2.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

Rape oil:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 3.26 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg

Abamectin (combination of avermectin B1a and avermectin B1b):
Acute oral toxicity: LD50 (Rat): 24 mg/kg

LD50 (Mouse): 10 mg/kg

LDLo (Monkey): 24 mg/kg
Symptoms: Dilatation of the pupil

Acute inhalation toxicity:
- LC50 (Rat): 0.023 mg/l
- Exposure time: 4 h
- Test atmosphere: dust/mist

Acute dermal toxicity:
- LD50 (Rat): 330 mg/kg
- LD50 (Rabbit): 2,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Components:

Rape oil:
- Species: Rat
- Result: No skin irritation

Abamectin (combination of avermectin B1a and avermectin B1b):
- Species: Rabbit
- Result: No skin irritation

Serious eye damage/eye irritation
Not classified based on available information.

Components:

Rape oil:
- Species: Rabbit
- Result: No eye irritation

Abamectin (combination of avermectin B1a and avermectin B1b):
- Species: Rabbit
- Result: Mild eye irritation

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Components:

Rape oil:
- Routes of exposure: Skin contact
- Species: Guinea pig
- Result: negative
Abamectin (combination of avermectin B1a and avermectin B1b):

Test Type: Maximization Test
Routes of exposure: Skin contact
Result: Not a skin sensitizer.

Germ cell mutagenicity
Not classified based on available information.

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):

Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)  Result: negative
Test Type: In vitro mammalian cell gene mutation test  Result: negative
Test Type: Alkaline elution assay  Result: negative

Genotoxicity in vivo:
Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity
Not classified based on available information.

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):

Species: Rat
Application Route: Oral
Exposure time: 105 weeks
Result: negative

Species: Mouse
Application Route: Oral
Exposure time: 93 weeks
Result: negative

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive toxicity
Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):

Effects on fertility:
- Test Type: Fertility
  - Species: Rat, male
  - Application Route: Oral
  - Result: Effects on fertility.

Test Type: Two-generation reproduction toxicity study
- Species: Rat
- Application Route: Oral
- Early Embryonic Development: NOAEL: 0.12 mg/kg body weight
- Result: Fetotoxicity.

Effects on fetal development:
- Test Type: Embryo-fetal development
  - Species: Mouse
  - Application Route: Oral
  - General Toxicity Maternal: NOAEL: 0.05 mg/kg body weight
  - Developmental Toxicity: NOAEL: 0.2 mg/kg body weight
  - Result: Cleft palate
  - Remarks: Adverse developmental effects were observed

Test Type: Embryo-fetal development
- Species: Rabbit
- Developmental Toxicity: LOAEL: 2 mg/kg body weight
- Result: Cleft palate, Teratogenic effects., Reduced embryonic survival
- Remarks: Adverse developmental effects were observed

Test Type: Development
- Species: Rat
- Application Route: Oral
- Developmental Toxicity: LOAEL: 1.6 mg/kg body weight
- Result: Teratogenic effects.

Reproductive toxicity - Assessment:
- Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Causes damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.
May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
Components:

Abamectin (combination of avermectin B1a and avermectin B1b):
Routes of exposure : Ingestion
Target Organs : Central nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):
Species : Rat
NOAEL : 1.5 mg/kg
Application Route : Oral
Exposure time : 24 Months
Target Organs : Central nervous system
Symptoms : Tremors, ataxia

Species : Mouse
NOAEL : 4.0 mg/kg
Application Route : Oral
Exposure time : 24 Months
Target Organs : Central nervous system
Symptoms : Tremors, ataxia

Species : Dog
NOAEL : 0.25 mg/kg
LOAEL : 0.5 mg/kg
Application Route : Oral
Exposure time : 53 Weeks
Target Organs : Central nervous system
Symptoms : Tremors, weight loss
Remarks : mortality observed

Species : Monkey
NOAEL : 1.0 mg/kg
Application Route : Oral
Exposure time : 14 Weeks
Target Organs : Central nervous system

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):
Ingestion : Symptoms: May cause, Tremors, Diarrhea, central nervous system effects, Salivation, tearing
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Rape oil:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 7.48 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 96.7 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants: EL50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Abamectin (combination of avermectin B1a and avermectin B1b):

Toxicity to fish:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 3.2 µg/l
  Exposure time: 96 h
- LC50 (Lepomis macrochirus (Bluegill sunfish)): 9.6 µg/l
  Exposure time: 96 h
- LC50 (Ictalurus punctatus (channel catfish)): 24 µg/l
  Exposure time: 96 h
- LC50 (Cyprinus carpio (Carp)): 42 µg/l
  Exposure time: 96 h
- LC50 (Cyprinodon variegatus (sheepshead minnow)): 15 µg/l
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Americamysis): 0.022 µg/l
  Exposure time: 96 h
- EC50 (Daphnia magna (Water flea)): 0.34 µg/l
  Exposure time: 48 h

Toxicity to algae/aquatic plants:
- EC50 (Pseudokirchneriella subcapitata (green algae)): 100 mg/l
  Exposure time: 72 h

Toxicity to fish (Chronic toxicity):
- NOEC (Pimephales promelas (fathead minnow)): 0.52 µg/l
  Exposure time: 32 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): 0.03 µg/l
  Exposure time: 21 d
- NOEC (Mysidopsis bahia (opossum shrimp)): 0.0035 µg/l
  Exposure time: 28 d
Toxicity to microorganisms: EC50: > 1,000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition

Persistence and degradability

Components:

Rape oil:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 67 %
Exposure time: 29 d
Remarks: Based on data from similar materials

Abamectin (combination of avermectin B1a and avermectin B1b):
Stability in water: Hydrolysis: 50 % (< 12 h)

Bioaccumulative potential

Components:

Rape oil:
Partition coefficient: n-octanol/water: log Pow: > 4
Remarks: Expert judgment

Abamectin (combination of avermectin B1a and avermectin B1b):
Bioaccumulation: Bioconcentration factor (BCF): 52
Partition coefficient: n-octanol/water: log Pow: 4

Mobility in soil

Components:

Abamectin (combination of avermectin B1a and avermectin B1b):
Distribution among environmental compartments: log Koc: > 3.6

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.
SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin (combination of avermectin B1a and avermectin B1b))
Class : 9
Packing group : III
Labels : 9

IATA-DGR
UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Abamectin (combination of avermectin B1a and avermectin B1b))
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964
Environmentally hazardous : yes

IMDG-Code
UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin (combination of avermectin B1a and avermectin B1b))
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
UN/ID/NA number : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Abamectin (combination of avermectin B1a and avermectin B1b))
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : yes (Abamectin (combination of avermectin B1a and avermectin B1b))
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Remarks: Above applies only to containers over 119 gallons or 450 liters., Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards:
- Acute toxicity (any route of exposure)
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)

SARA 313:
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>Code</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
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<td>71751-41-2</td>
<td>&gt;= 1 - &lt; 5 %</td>
</tr>
</tbody>
</table>

US State Regulations
Pennsylvania Right To Know
- Rape oil 8002-13-9
- Glycerides, mixed decanoyl and octanoyl 73398-61-5

California Prop. 65
WARNING: This product can expose you to chemicals including Abamectin (combination of avermectin B1a and avermectin B1b), which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Permissible Exposure Limits for Chemical Contaminants
- Rape oil 8002-13-9

The ingredients of this product are reported in the following inventories:
- AICS: not determined
- DSL: not determined
## SECTION 16. OTHER INFORMATION

### Further information

<table>
<thead>
<tr>
<th>NFPA 704</th>
<th>HMIS® IV:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flammability</strong></td>
<td><strong>HEALTH</strong></td>
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<tr>
<td>1</td>
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<tr>
<td><strong>Health</strong></td>
<td><strong>FLAMMABILITY</strong></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Instability</strong></td>
<td><strong>PHYSICAL HAZARD</strong></td>
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<tr>
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<td>0</td>
</tr>
</tbody>
</table>

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the """ represents the absence of a chronic hazard.

### Full text of other abbreviations

- **NIOSH REL**: USA. NIOSH Recommended Exposure Limits
- **NIOSH REL / TWA**: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

**AICS** - Australian Inventory of Chemical Substances; **ASTM** - American Society for the Testing of Materials; **bw** - Body weight; **CERCLA** - Comprehensive Environmental Response, Compensation, and Liability Act; **CMR** - Carcinogen, Mutagen or Reproductive Toxicant; **DIN** - Standard of the German Institute for Standardisation; **DOT** - Department of Transportation; **DSL** - Domestic Substances List (Canada); **ECx** - Concentration associated with x% response; **EHS** - Extremely Hazardous Substance; **ELx** - Loading rate associated with x% response; **EmS** - Emergency Schedule; **ENCS** - Existing and New Chemical Substances (Japan); **ErCx** - Concentration associated with x% growth rate response; **ERG** - Emergency Response Guide; **GHS** - Globally Harmonized System; **GLP** - Good Laboratory Practice; **HMIS** - Hazardous Materials Identification System; **IARC** - International Agency for Research on Cancer; **IATA** - International Air Transport Association; **IBC** - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; **IC50** - Half maximal inhibitory concentration; **ICAO** - International Civil Aviation Organization; **IECSC** - Inventory of Existing Chemical Substances in China; **IMDG** - International Maritime Dangerous Goods; **IMO** - International Maritime Organization; **ISHL** - Industrial Safety and Health Law (Japan); **ISO** - International Organisation for Standardization; **KECI** - Korea Existing Chemicals Inventory; **LC50** - Lethal Concentration to 50 % of a test population; **LD50** - Lethal Dose to 50% of a test population (Median Lethal Dose); **MARPOL** - International Convention for the Prevention of Pollution from Ships; **MSHA** - Mine Safety and Health Administration; **n.o.s.** - Not Otherwise Specified; **NFPA** - National Fire Protection Association; **NO(A)EC** - No Observed (Adverse) Effect Concentration; **NO(A)EL** - No Observed (Adverse) Effect Level; **NOELR** - No Observable...
SAFETY DATA SHEET

Abamectin Liquid Formulation

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Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative


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